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**Facultad de Filosofía, Letras y Ciencias de la Educación**  
**Carrera de Lengua y Literatura Inglesa**

**“Analyzing Students` Writing Development Through the use of Digital Comic  
Apps Based on Several Applied Studies”**

Trabajo de investigación previo a la  
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## Resumen

El presente trabajo fue desarrollado a fin de proveer herramientas innovadoras de enseñanza para el desarrollo de las destrezas de escritura. Considerando que la tecnología, en este caso el internet, está tomando un rol más importante en la educación, fue clave buscar nuevas herramientas que este recurso ofrece. Como resultado, las aplicaciones digitales cómicas fueron seleccionadas para el proceso de enseñanza-aprendizaje, especialmente para el área de escritura. Para esta presente investigación, cinco aplicaciones digitales cómicas fueron seleccionadas: Storybird, Toondoo, Bitstrips for Schools, Digital Storytelling y Boomwriter. Como la principal meta fue proveer hechos sobre las ventajas y limitaciones del uso de estas aplicaciones en el desarrollo de las destrezas de escritura basado en diferentes estudios aplicados, fue importante hacer un análisis exhaustivo de cada uno. Tomando esto en cuenta, se utilizó el método de investigación bibliográfica para escoger una de ellas como la más útil para las destrezas de escritura en referencia a estas 5 aplicaciones, así como también obtener conclusiones y recomendaciones de la investigación.

Palabras claves: destrezas de escritura, aplicaciones digitales cómicas, Storybird, Toondoo, Bitstrips for Schools, Digital storytelling, Boomwriter.



## Abstract

The present research was developed in order to provide innovative tools of teaching for the development of writing skills. Considering that technology, in this case the Internet, is taking a more important role in education, it was key to search for new tools that this resource provides. As a result, digital comic apps were selected for the learning-teaching process, especially in the writing skills area. For this investigation, five digital comic apps were selected: Storybird, Toondoo, Bitstrips for Schools, Digital Storytelling and Boomwriter. As the main goal was to provide facts about the advantages and limitations of using these apps in the development of writing skills based on several applied studies, it was important to do an in-depth analysis of each. Taking into account this, the bibliographic research method was used in order to select one from the five different apps as the most useful for writing skills, as well as to obtain conclusions and recommendations from the investigation.

*Keywords:* writing skills, digital comic apps, Storybird, Toondoo, Bitstrips for Schools, Digital Storytelling, Boomwriter.



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## **Dedication**

I dedicate this research to the most important people in my life who are my family especially my parents Ariosto and Alejandrina, and my siblings Felipe, Gabriela and Gustavo. You have always been supporting me to achieve this goal. You are my biggest inspiration to go ahead in my studies.

By: Andrea Alexandra González Amendaño



## **Dedication**

To my family: Thank you for all you have done for me during these 24 years. I could never have accomplished this without your support, encouragement and especially for being my strength and motivation to achieve this work.

By: Leidy Cecibel Lituma Medina



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## Introduction

Currently, it has been found that English is becoming increasingly important in education. New methods and tools can be observed, as well as strategies for the teaching-learning process have been gradually developed for English as a Foreign Language (EFL) courses.

English is important in various fields, such as in technology, science, politics, and education. Nonetheless, the level of English in our society has not accomplished the English proficiency level in the development of the four skills (reading, listening, speaking and writing). Among these four skills, writing is considered the most challenging skill for EFL students since they need to be aware of various aspects, such as orthography, lexicon, and syntax in order to write rightly (Solano et al., 2014).

It is hoped that students improve their English proficiency level especially in the writing skills area. There are many techniques and methods that have been developed in order to acquire this skill. As teachers, they should find the most suitable methods to achieve this goal in their particular classrooms. Since its beginning, the Internet has contributed significantly to education. The Internet allows communication between teacher-students to be increased considerably regardless of time or place. It also provides educational opportunities that allow students to manage, analyze, criticize and transform that information into usable knowledge (Lui, 1997).

Also, the Internet has become indispensable due to its speed, ease and efficiency for both students and teachers. The Information and Communication Technologies method (ICT) facilitates another option for teaching and helps students obtain a meaningful learning experience with up to date online





resources. This research is focused on one of the four language skills: writing. It is centralized on the use of technology as an educational tool to improve teaching-learning experiences of young people and also on comic app studies done by researchers that have implemented them in their courses. The result of this will be a general description of the comic apps and the presentation of the advantages and limitations of each.

At present, creativity has taken a major role in education. In the 21st century, students need to be taught to develop their creativity in order to become creators of their own knowledge. Moreover, comic apps give way to this because they allow students to create their own stories and extend their imagination with no limitations.

As it was stated before, the present paper is focused on one of the four skills, writing and the implementation of digital comic apps for its acquisition. Taking this in consideration, this work will be composed of five chapters as follows:

- Chapter one presents the problem, description of the problem, critical analysis, prognosis, research question, background, justification and objectives of the research.
- Chapter two presents the research history, basis of the research, writing skill in an EFL context, pedagogic theories and the use of technology for the learning-teaching process, the Internet in the classroom and digital comic apps in education.
- Chapter three presents the methodology used in the research.
- Chapter four describes the analysis and interpretation of the research.

Based on previous studies each selected comic app is analyzed.



- Chapter five contains the conclusions and recommendations.

Finally, it is expected that this investigation can contribute to the creative writing of young students by means of the application of digital comics.



## CHAPTER I

### The Problem

#### 1.1 Topic

This research will provide information about the advantages and limitations of using digital comic apps in the development of writing skills.

#### 1.2 Description of the problem

##### 1.2.1 Contextualization

The acquisition of English has been necessary for many years because this language is used as a lingua franca. It facilitates communication in various fields. For this reason, the English language is an important part of the educational curriculum in Ecuador. However, the level of English in our society has not achieved the proficiency level that is required by the English National Curriculum. According to Ureña (2014), "Ecuador was ranked 46 out of 60 countries, having one of the lowest English language proficiencies" (p. 2). Learning a foreign language fosters students to develop receptive and productive skills (listening, reading, speaking, and writing) through the implementation of a variety of activities. Barkaoui (2007) states that one of the skills that tends to be the most difficult for students to acquire in a foreign language is writing. Taking this in consideration, this research focuses on the improvement of this skill. The reasons for this problem could be the following:

- First, students are taught by the traditional method. This refers to the teacher as the only person who can provide knowledge and the students' role is to receive that knowledge, avoiding a mutual interaction among teacher and students.



- The students are not motivated to improve their writing skills. Writing requires more time for its development because this skill is not acquired in a natural way. It needs formal instructional settings for its acquisition. At the beginning, writing can be very hard to learn because of grammar rules. Teacher's role is very important. If the teacher does not provide activities that encourage students to go ahead in their learning process, how they can feel motivated for learning the language (Myles, 2002).
- Finally, another reason of this problem could be because of the resources used by the teacher in classes. Some of them or most of them are not enough for students in the development of their writing skills. The textbooks that are used in Ecuadorian schools possess activities for all skills. However, these activities are not enough to help students in their learning. They need more resources that encourage them to improve all their skills, especially writing. Teachers should employ resources that get the attention of students in order to improve the teaching-learning process.

### **1.2.2 Critical analysis**

One of the teachers' main purposes is to provide an education of quality in order to form students with strong levels of knowledge. However, this is a difficult challenge that requires mutual teacher and student efforts. Teachers should research new methods that help them facilitate their teaching process, as well as students should realize that the acquisition of new knowledge is not easy, and it requires work. Besides, if the teacher finds a significant tool that can help them in their classes, the outcome will normally be beneficial for students learning as well.



### **1.2.3 Prognosis**

The use of digital comic apps to teach the English language could be a new tool that aids teachers in the development of their classes specially to improve students' writing skills. If students continue to learn by means of the traditional methodology, the level of the English language will continue to be low. This will be unfavorable for students because they will have to take the English language as a part of their studies, thus they will have the same problems to develop this skill.

The teaching-learning process is not only to provide new topics to students; teachers should know how to share these topics in order to make their classes meaningful to students.

### **1.2.4 Research Question:**

What are the advantages and limitations of using digital comic apps in developing the writing skills in a foreign language?

## **1.3 Background**

Society is evolving continuously and technology has contributed significantly to education. Currently, classrooms are equipped with a variety of technological tools: smart boards, projectors, or computers (Wang, 2014). The main goal of these tools is to facilitate the teaching-learning process.

Bonder and Waller (2011) mention that a significant difference exists between traditional and current education. In the case of traditional education, the teacher was the center of the class who shared knowledge and participated most of the time. Education was role learning, in other words, the student's role was being the receiver of information as a passive agent. The resources used

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by the teacher for the development of the class were limited. A board and a textbook were the only resources utilized by the instructor. However, education has changed over the years, and new methods have been developed to assist the teaching and learning process. This is the case of the implementation of technology in the educational process. One of the main challenges for teachers is that all students achieve academic success. Thus, most teachers attempt to be creative in the development of their classes by applying a broad spectrum of educative apps.

Comic apps are an engaging way to encourage students to improve their writing skills. Comics have existed for years in a printed form such as in newspapers, books, or magazines. When people think about comics, they immediately think about pictures, colors, and short texts. With the implementation of technology, people can understand that digital comics not only provide fun and interesting stories. Also they can provide activities that help students in the development of writing skills as is the creation of their own stories (Plasq Company, 2015).

#### **1.4 Justification**

According to Andre (2016), the comic book is a strong combination of skills, artistic creativity, and expression. Similarly, Versaci (2001) discovered that comics are more convincing to encourage students to participate in discussions than using books.

Moreover, Yang (2003) mentioned that people have a natural inclination towards pictures. Comics tend to get learners attention making them feel motivated. At the same time, comics can be developed through apps because



according to Yunus et al. (2012), today young people are immersed in technology with the use of the Internet. Due to the huge increase and the great importance of technology in our society, comic apps provide advantages to education in creating an engaging learning environment.

As cited in Yunus et al (2012), Bledsoe in his study “Comic Life in Education” found out that many students read fluently, but they had difficulty in writing. Students had the idea, but they did not know how to express it in a writing form. Writing is described as “a unique mode of learning” involving an active participation of both the left and right hemispheres of the brain so its acquisition is very important (Emig, 1977, p. 2). Yunus et al. (2012) deduced that comic apps offer them a new publishing medium to create stories and improve their writing skills.

## **1.5 Objectives**

### **1.5.1 General Objective:**

To provide facts about the advantages and limitations of using digital comic apps in the development of writing skills based on several applied studies.

### **1.5.2 Specific Objectives:**

- ✚ To search for case studies that have used digital comic apps for writing development.
- ✚ To analyze and describe each of the digital comic apps selected.
- ✚ To provide conclusions and recommendations from the research.



## CHAPTER II

### Theoretical framework

#### 2.1 Research History

After concluding with the research, some studies related to the proposed topic were found. However, the researchers found that this new tool has not been applied in Ecuadorian schools. Therefore, it is important to provide significant facts about the pedagogical use of digital comic apps in English classes and to encourage teachers to apply them to enhance students' writing skills.

#### 2.2 Bases of the Research

The present research was developed under the direction of three bases which explain different problems in Ecuador such as the importance of English in Ecuador, theories that encourage the use of technology in the acquisition of the English language in schools and suggestions of possible solutions for the improvement of education in Ecuador.

##### 2.2.1 Philosophical Basis

Throughout time the English language has become a prominent world language because it is used by people of different countries to communicate with each other (Verghese, 1989). In recent years, the English language has become an essential subject in the education of children and young adults. According to the Ministerial Agreement 210-11 of Ministerio de Educación del Ecuador (2011), the Ministry of Education has aimed its efforts toward the enhancement of the English language curriculum. For this reason, the Ministerial Agreement No. 746 dated March 09, 2000 confirmed the amount of





hours of the English language per week is five hours for the eighth, ninth and tenth years of basic education and the following three years of high school.

Considering this information, it can be said that in the teaching-learning process, teachers use different methods and techniques to help students in the learning of English language especially in the writing skills area. However, not all methods are effective. Teachers should take into account that society is changing constantly and new inventions appear. One of these inventions is the creation of technological devices (Larsen-Freeman & Anderson, 2011).

Nowadays, the implementation of technology in society has been of great significance. Therefore, teachers should consider it as a new teaching-learning resource that can improve not only the teaching-learning process but also the students' English language skills. That is why this research will cover significant facts about the most popular comic apps that teachers can use and incorporate to develop the writing skill. In addition to this, other investigators can use one of these apps to incorporate it in their educational process in order to obtain their own result and to see its effect on students learning.

### **2.2.2 Educational Psychology Basis**

The present research is based on several studies related with the topic and a description of the theories that support the use of ICT in education. The essential theories, in which this research is based, comprise Jean Piaget and Lev Vygotsky's constructivism, Vygotsky's the zone of proximal development (ZPD), Prince and Whipple's active learning and Gilpford and Skinner's theory of creativity.

### **2.2.3 Sociological Basis**

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According to a survey conducted by the National Institute of Statistics and Census, the level of poverty has decreased from 2006 to 2014. Despite the efforts made to overcome poverty in Ecuador, this problem still exists, especially in rural areas (Webmaster, 2016). One of the solutions to continue reducing poverty is education. According to UNESCO, "Education is widely recognized as an important component in reducing poverty and a key to wealth creation" (as cited in Carter, J., DeClerk, F., & Rumbaitis, C., 2012, p. 13). This is why education plays an important role and it is seen as a way out of this current situation. Therefore, the teachers' role is also to inspire and promote students to advance in their education and to become contributing members to society.

## **2.3 Basic Categories**

This research is organized in the following basic categories:

- Writing skill in an EFL context
- Pedagogic theories and the use of technology for the learning-teaching process
- The Internet in the classroom
- Digital comic apps in education

### **2.3.1 Writing Skill in an EFL Context**

#### **2.3.1.1 Conceptualization**

As it is known, the native language in Ecuador is not English. However, the acquisition of this language has become necessary because English is used



as a common language by people of different countries for several purposes. Due to this, in 1992, English teaching was incorporated to the Ecuadorian English curriculum:

The Foreign Language Administration was established in 1992 under an agreement signed between the Ministry of Education and Culture (MEC) and the British Council. This project named CRADLE (Curriculum Reform Aimed at the Development of the Learning of English), is the result of a bilateral technical cooperation agreement between the governments of Ecuador and the United Kingdom, for the curricular reform in the English area in public and semi-public schools in Ecuador. The main purpose of the CRADLE project is to grant secondary students firm basis in the handling of English, and thus offer them a starting point for their future. (Haboud, 2009, p. 66)

In Ecuador, the English language is taught as a foreign language. Teachers need to have a clear idea about English as a Foreign Language (EFL) in order to understand the teaching process in their environment. According to Solano (2016), English "is acquired mainly through social interaction in the environment in which that language is predominant (e.g. native Spanish users living in the US develop English out of necessity from living in a predominantly English speaking society" (p. 67). Kate Bell (as cited in Oxford University Press ELT, 2011) states that ESL refers to the acquisition of the English language by pupils from different nationalities and cultures that are in a country where the dominant language is English. Besides, Ostler (2010) mentions that ESL occurs in a country which has two or more official languages so, learners need to



acquire more than one language. On the other hand, EFL refers to the acquisition of the English language as a subject. It refers that the native language of learners is not English so the exposure to this language is limited (Solano, 2016).

Based on the definitions mentioned before, it is clear that the English language in Ecuador is taught as a foreign language. The acquisition of this language can be seen difficult for learners because they practice it only in classes due to the fact that English is not spoken in their country and learners do not have the opportunity to use the new language (Solano et al., 2014). However, it does not mean that students cannot have success in their learning. If instructors use creative tools to get the attention of learners, the limited time that students are exposed to the new language can be significant for them. Sparks (as cited in Banks, 2008) mentioned that "all types of learners can be successful in language classes, given the right stimuli and assessments" (p. 9).

According to Richards and Renandya (2002), there are some important points that should be taken into account to improve the learning-teaching process. First, teachers should realize that each learner has a different learning style in order to acquire a foreign language. Second, teachers should see the great importance of the development of a good teaching-learning process to facilitate the acquisition of the foreign language. Third, teachers should be able to make students to recognize the importance of learning a foreign language such as English. In addition to this, teachers should look for new approaches which help in the learning of English.



In the acquisition of a foreign language like English, students develop four skills: speaking, listening, reading and writing. All of them are important, but this research will be focused on the development of the writing skills in an EFL classroom. According to Braine and Yorozu (as cited in Muhammad, Wu Xiao, & Saima, 2013) among the four skills, the writing skill tends to be the most difficult to develop.

### **2.3.1.2 Importance of Writing**

Writing is an essential part of people's lives because it allows us to keep information that the human brain tends to forget, and it is a good way to express our experiences (Brookes & Grundy, 1998). Another important aspect of writing is that "it is an instrument of both communication and self-expression. Most people, however, especially when writing in a foreign or second language, use it primarily to communicate with other members of their own community or the wider world" (Pincas, Hadfield & Hadfield, 1984, para. 1). Besides, "it is a form of problem-solving in which the writer is faced with two main tasks: generating ideas and transferring those ideas into a written text" (Hamp-Lyons & Heasley, 2006, p. 11) that permits them to communicate correctly. That is to say that the message should be clear to avoid any misunderstandings by the reader (2006).

Homstad and Thorson (1996) stated that related with the learning of a foreign language, the writing skill has not been considered important for many years by instructors of beginner and intermediate courses because they consider that there are some factors that interfere in the development of this skill. First, students do not possess enough knowledge of the new language when they begin to write, so it can be discouraging for them. Second, most



learners tend to repeat the same errors when they are writing so this can be a problem because students cannot internalize some of these errors. Third, teachers have to check students' tasks which is hard work for instructors because these tasks have a lot of errors. In consequence, instructors think that writing skills should be taught only in the most advanced classes. They went on to apply surveys to teachers and students to discover their attitudes towards writing in a foreign language. Based on the survey results, they concluded that writing does not have to be frustrating if both teachers and students take into account the following advice:

First, we must recognize that there are different types of writing (writing-to-learn, writing as a support skill, writing for communication, academic writing) and that each of these has a place in the foreign language classroom. Second, we must include process-oriented approaches to writing, peer editing, and group conferencing in the foreign language curriculum. Third, language teachers must realize that writing competence is more than just improving vocabulary and mastering grammar. (p. 13-14)

In conclusion, it can be seen that the development of the writing skill is important at any level. Learners can improve their writing skills and be successful in their learning by developing different activities and identifying the different types of writings that exist.

### **2.3.1.3 EFL Students' Difficulties in the Acquisition of Writing Skills**

In the learning of a foreign language such as English, learners acquire different skills like reading, listening, speaking and writing. Barkaoui (2007)

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mentions that one of the skills that is considered to be the most difficult to develop is writing. Writing has been a big challenge for students for several reasons.

One of these reasons is related with the rules of grammar, because of this, learners tend to be confused when they are trying to write something in a foreign language. It is normal that learners make mistakes when they are learning to write. However, students can feel frustrated. Writing skills are composed of elements that need to be taken into account in order to write correctly, but it does not mean that good writing is only focused on its form, it should also be focused on its meaning. That is to say, students should try to write correct sentences knowing what they are writing and why they are writing in order to make their writing meaningful for them (Rod, 2003).

Another problem that students have in the development of the writing skill is how to plan and organize their ideas. When students have to write a task, usually they do not know what to write. Probably one of the main reasons for this problem is that students do not have enough materials that encourage them to write something. Materials which awake the creativity of students (Richards & Renandya, 2002).

Besides, in Beardsmore's work it is stated that students find it difficult to write correctly because of the interference of their native language. Most students tend to write as if they were writing in their native language (as cited in Bhela, 1999). It is well known that there are some features that are different between the Spanish and English language. However, there are some similarities, too. Teachers should take advantage of these similarities and try to



look for innovative activities to overcome the problems that exist in learning the differences between the two languages for the development of writing in a foreign language (Solano et al., 2014).

To conclude, Brookes and Grundy (1998) stated that the acquisition of writing skills in a foreign language can be hard to acquire, but it can be considered easy if learners use activities that encourage them to get ahead in their learning process.

### **2.3.2 Pedagogical Theories and the Use of Technology for the Learning-Teaching Process**

#### **2.3.2.1 Constructivism**

For several years, numerous theories and approaches have been created to give rise to a new mode of teaching and learning. One of them is the constructivism approach. Constructivism is based on learning by oneself in order to construct one's own knowledge. The theory of constructivism aims to create self-learning prompting students to investigate, analyze and arrive at conclusions by themselves from what they have researched, but not through what the teacher has given them. This theory introduces a new way of teaching where the students are the researchers and the owners of their own construction of knowledge. Here students are potentially active learners and the teacher becomes a guide for them (Twomey, 2004).

There are several authors that have contributed significantly to constructivism, and who have given rise to the creation of this theory, but it is worth mentioning two authors who are: Jean Piaget and Lev Vygotsky (Pinter, 2011).





Jean Piaget contributed to constructivism based on his own experiences with his children and created the theory of child development. This is based on the fact that from a very young age, children are active and exploratory and that allows them to be in contact with themselves and their environment (Pinter, 2011).

When interactive with the environment, children create mental structures schemes (Piaget and Inhelder, 1956). These schemes are being created all the time and they are also combined to make ever more complex schemes. This is the process of *organization*. At the same time, children need to compare and adjust their developing schemes to match what they encounter in their environment. This process of adjusting is referred to as *adaptation*. Adaptation actually consists of two sub-processes: *assimilation* and *accommodation*. The first process refers to interpreting new knowledge in term of old models / schemes they already possess, and the second process refers to modifying these existing structures to fit the new knowledge. These processes work together to further cognitive growth. (as cited in Pinter, 2011, p. 8)

Another author who contributed significantly is Lev Semionovich Vygotsky. He contributed with his proposal of the zone of proximal development (ZPD) which describes the difference between what the learner can do without any adult help and what the learner can do with help. Unlike Piaget, Vygotsky holds 2 processes. The first one is the intermental process which believes firmly in the interaction of the adult with the child so the child can build knowledge. And with the help of the intermental process the child will learn and understand new knowledge that will result in the intramental process (Pinter, 2011).



Constructivism has contributed to the improvement of teaching during the course of the years. Currently teachers who have implemented constructivism in their classrooms have seen important results, since the point of view of the students has been more noticeable. They have become researchers and creators of their own learning (Larochelle, Bednarz, & Garrison, 1998).

Richardson (2005) describes constructivist teaching as "meaning making" (p.3), it means that the students by themselves re-discover and create their own concepts and meanings based on what they already know with what they are going to know. For Richardson (2005) constructivism is more a descriptive theory of learning than a prescriptive theory of learning. That is to say, that constructivism in education is based on doing.

According to Prince's work, active learning is when students learn by doing. While passive learning, which is clinging to the traditionalist school, implies that the learners follow instructions of the teacher without being neither analytical nor creative learners. Active learning has the purpose of changing the direction of a passive education to a more active education, transforming learners into creators of their own knowledge, putting into practice what they have learned (Layne & Lake, 2014). Besides, he defined active learning as "any instructional method that engages students in the learning process. In short, active learning requires students to do meaningful learning activities and think about what they are doing" (as cited in Layne & Lake, 2014, p. 256). And as a Chinese proverb says, "I hear and I forget. I see and I remember. I do and I understand" (Hai-Jew, 2009, Foreword, para. 3).

Another author who shares the development of active learning is William Whipple who states that:

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“...conceives of knowledge not as something that is transferred in an authoritarian structure from teacher to student but rather as something that teacher and students work interdependently to develop. Thus it fosters active learning over passive learning, cooperation over competition, and community over isolation.” (as cited in Miller, 2009, p.112)

In an educational aspect, many investigations have shown that active learning has contributed a lot to the development of the academic advancement of students. But in other studies they have not been able to give the desired results as is the case of Carlson and Winqvist` work, who conducted a long investigation to check if active learning promotes an active education. During their research, they found several shortcomings that avoided a better introduction of active learning such as attitudes, time and dedication. But at the end of the research, the results showed a positive change (as cited in Layne & Lake, 2014).

Nowadays, the use of technology as an educational tool in the learning-teaching process can build effective learning, they can also allow students to expand their abilities becoming creative and active learners (Hernandez, 2008). Besides, it can be mentioned that “The new generations of students are said to prefer receiving information quickly, relying on communications technologies, often multitasking and having a low tolerance for lectures, preferring active rather than passive learning” (Jones & Shao, 2011, p.3).

### **2.3.2.2 The Theory of Creativity**

Creativity may be defined as the creation of something new and innovative, but there are many authors with extensive and different concepts of



what creativity means. Paul Gilford, one of the pioneers in the development of creativity defines creativity as "divergent thinking" (as cited in Pritzker, 1999, p.11) because divergent thinking enables a person to create, to use imagination, and to produce new ideas.

In reference to this, Skinner states the following:

Creative thinking is largely concerned with the production of "mutations" ... mutations are familiar to writers, artists, composers, mathematicians, scientists, and inventors. Either the setting or the topography behavior may be deliberately varied. The painter varies his colors, brushes, and surfaces to produce new textures and forms. The composer generates new rhythms, scales, melodies, and harmonic sequences, sometimes through the systematic permutation of older forms, possibly with the help of mathematical or mechanical devices. The mathematician explores the results of changing a set of axioms. (as cited in O`Donohue & Ferguson, 2001, p. 229)

Currently, creativity has taken an important role in education. In the 21st century students need to be taught to develop their creativity and become creators of their own knowledge. In Bill Lucas´ work, he argues that including creativity in the 21st century helps participatory students and it increases the collaborative pedagogy. Craft´s research also shares the need for implementing creativity in education to innovate and to improve it. On the other hand, in Woods´ investigation, he states that creativity, reading and writing go hand in hand becoming the best way to develop creativity and at the same time, he considers reading as support, thus showing reading and writing very enriching to the learning process (as cited in Harris, 2016).

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Similarly, Tizón (2008) mentioned that the best way to develop creativity in the educational field is the use of ICT as a methodological resource which allows students to expand their knowledge and their creativity. Technology can not only be used to improve students learning, but it is also useful for teachers allowing them to find new educational materials.

### **2.3.3 The Internet in the Classroom**

For many years, instructors have used different technological materials for the development of their classes such as the use of "film strips, audio, and video recording and playback equipment" (Larsen-Freeman & Anderson, 2011, p. 199).

As it is well known, technology is not static; it is evolving all the time. One of the results of its evolution is the creation of computers. Computers have become a part of the daily activities of people for different purposes such as to research a topic, to communicate with each other, to know what is happening around the world, among others (Henderson, 2009).

Computers were invented to "compute": to solve "complex mathematical problems," as the dictionary still defines that word". They still do that, but that is not why we are living in an "Information Age." That reflects *other* things that computers do: store and retrieve data, manage networks of communications, process texts, generate and manipulate images and sounds, fly air and space craft, and so on" (Ceruzzi, 2003, p.1).

Henderson (2009) indicated that the first computer was created by John Atanasoff with the help of his student named Clifford Berry at the Iowa State College. They created the ABC (Atanasoff-Berry Computer). The development

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of this invention was during the 1940s (see Fig.1). "The digital (binary) ABC was designed to solve systems of up to 29 simultaneous linear equations" (Reilly, 2004, p. 48). Thanks to this invention, other inventors could continue with the creation of more sophisticated computers.



According to Uchenna (2015), in the 1990s the use of computer communications and the Internet became popular. Its popularity made teachers see them as new resources to prepare their classes. However, Mevarech and Light's work mentioned that during that time there were controversial concepts about the use of computers as a pedagogical tool because it was thought that computers would take away the "teacher's job" (as cited in Uchenna, 2015, p. 195).

From this idea two broad categories were born that relate to the use of technology for educational purposes, also known as ICTs (information and communications technology):



- ICTs for Education: refers to the development of information and communications technology specifically for teaching-learning purposes.
- ICTs in Education: involves the adoption of general components of information and communication technologies in the teaching/learning process. (Uchenna, 2015, p. 195)

### **2.3.3.1 The Internet as a Classroom Tool**

As noted in Andersons' research, many years ago, the implementation of computers in the classroom was limited because of the expensive costs of these machines. However, for the past few years, many educational institutes have been equipped with computers because of the low prices that these machines have nowadays. People can find all kinds of computers, from the cheapest to the most expensive, depending on the computer quality (as cited in Huang, Kinshuk, & Price, 2015). In the same way, the use of the internet was limited, too. But, now people enjoy affordable prices for this service (Odlyzko, 2000).

Considering that new generations are born in an environment filled with technological advances like the internet, which provide a huge list of applications that young people enjoy, teachers ought to take advantage of this and use the internet as a tool for the development of their classes. Teachers should see the internet as a new aid which can provide them material to facilitate their teaching process. In the same way, it is clear that learners see education in a different manner if this is compared with traditional education (Jones & Shao, 2011).

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After applying some case studies in some primary and secondary schools using ICT for educational purposes, Harris' work stated that the use of technology in education is a good resource for the teaching-learning process. He stated that in a world where everything is related to technology, it is important to incorporate technology as a pedagogical tool (as cited in Uchenna, 2015).

The use of technology as a tool in the classroom can be a good choice. In the case of the development of the writing skills, students can improve significantly. Through technology, students can understand how language works. It means that using technology learners can develop "the ability to use grammar structures accurately, meaningfully, appropriately, and creatively as well" (Larsen-Freeman & Anderson, 2011, p.201).

In their work *Supporting Struggling Writers Using Technology: Evidence-Based Instruction and Decision-Making* (2007), Peterson and Parette include a report made by the National Commission on Writing; National Writing Project & Nagin that state the following:

Among national organizations considering writing outcomes, there is widespread acceptance that writing has moved from a paper and pen activity to one that is technology driven. Technologies are recognized as having potential both to support writing and the teaching of writing, and to represent new venues for writing itself. (as cited in Peterson & Parette, 2007, p. 3)

Before using a technological tool, teachers should know the correct use of it in order to avoid any misunderstanding by their learners and any wasting of

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time in the development of the classes (Larsen-Freeman & Anderson, 2011). In a research conducted by Pacheco (2011) using technology in his classes, he stated that in order to guide learners appropriately, "Classes should be well-planned and structured" (p.29).

In recent times, new terms have appeared in civilization because of technological evolution. As it was previously stated, the computer has been one of the greatest creations incorporated into society. From this invention, new programs and applications have emerged. Regarding education, these new creations not only provide information to learners, they also provide resources which promote creativity, making them improve in the development of their ideas (Jones & Shao, 2011).

### **2.3.3.2 The Writing Process and Incorporation of Technology**

According to Peterson and Parette (2007), in order to make new knowledge meaningful, it is important to have a sequence. Teachers should follow a process to enhance their writing instruction. For the development of writing skills there are many formats that provide steps that should be followed by writers. In relation to the use of technology for writing development there are some steps that they can follow, such as:

- **Planning (generating ideas, setting goals, and organizing):** also known as pre-writing. Here writers generate ideas through the use of different activities such as brainstorming, making a list of different topics, using pictures that encourage them to awake their creativity to write, among others. After they have some ideas, they organize them.



- **Transcription (turning Plans into written language):** Also known as drafting, it is the production of words or sentences in written form. After writers have produced some ideas, they write them down. In this phase, writers do not pay attention to sentence structure, punctuation and so on.
- **Revising:** In this phase, writers read what they have written in order to check for errors that they could make during the transcription of their ideas.
- **Editing:** In this phase, writers make the last changes that they consider are important in order to conclude with their writing task.
- **Publishing:** After writers have finished their writings, they can share them. Thanks to technology, writers have the opportunity to share their work with their teacher and classmates. In this case, they can share their work using a website.

### 2.3.3.3 Digital Equity

Regarding technology and education, the idea of digital equity arises. It is supposed that the creation of technology is for the development of humanity where all people should have the same rights for its accessibility, but unfortunately this is not a reality. There are people who do not have internet access for different factors. This inequity is known as "digital divides" (Robinson, 2009, p. 163). According the International Society for Technology in Education's work (ISTE), digital equity refers to "equal access and opportunity



to digital tools, resources, and services to increase digital knowledge, awareness and skills” (as cited in Robinson, 2009, p. 163)

Based on these definitions, teachers should try to be creative for different situations that can occur in their classes. It means that there are several problems that can impede all learners having access to computers. For example, when there is a large number of students and each of them cannot use a computer. Here the teacher must try to find solutions to overcome this kind of problem, such as to form groups in order to ensure that all students have access to these technological resources (Pacheco, 2011).

Besides, ISTE’s work states that it is not new that problems or difficulties can appear in the use of technological tools. It highlights that these difficulties can be eliminated if instructors work hard on the research of possible solutions (as cited in Robinson, 2009).

#### **2.3.4 Digital Comic Apps in Education**

The beginning of comic books happened in the 1930s. The first comic book introduced into America was about a superhero called Superman in 1938. Then in 1939 another comic called Batman appeared. These comic books became popular because they “offered entertainment and inspiration to readers of all ages” (Dent, 2014, From Initial Prints to Digital Impact, para. 2). From these comic books, new characters were created. Comic books, also known as comic strips, consist of the presentation of fun short stories divided into panels. Many generations have grown up reading comic strips (2014). In Hayman and Pratt’s work, a comic strip is defined “as a sequence of discrete, juxtaposed pictures



that comprise a narrative, either in their own right or when combined with text”(as cited in Yunus et al., 2012, p.3462).

As it is mention in Symeon’s work, the first use of comic strips as an educational tool happened in the United States in the middle of the 20<sup>th</sup> century. From that idea, many instructors have used comic strips in their classes as a pedagogical tool in some countries (as cited in Yunus et al., 2012). Dent (2014) mentions that now people can find digital comics. Teachers can see the influence of technology on students. Digital comic apps are one of the options that technology offers instructors to incorporate into their classes.

Digital comics are electronic comic books that are composed of colorful pictures and short texts. These apps can be downloaded onto computers, smartphones, or tablets. Now, a variety of comic apps are available, but teachers must select the most suitable comic apps related with the skill that they want to achieve (Jeffrey, 2015).

### **2.3.4.1 Storybird**

#### **2.3.4.1.1 Conceptualization**

Storybird (see appendix 1) is an electronic media tool which provides users with the opportunity to read stories made by others and to create their own stories using a set of images that they can choose according to their necessities. It contains a database of images which allow the user to choose among different styles and to compose texts based on the chosen images. Also, it allows writers to publish and to share their stories with other people who have an account on this app. These stories can be shared publicly or privately. When stories are shared publicly, other users can vote and comment on these stories.

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Besides, these stories can be shared on social networks. Another important point is that this application is completely free (Blogger, 2012). Gillispie (2014) states that one of the most relevant Storybird features is that negative comments or stories using inappropriate words are not allowed, making this application safe for all users.

Based on personal experiences using this app, the following features can be found:

- It allows people to create stories in an individual or collective manner.
- It develops the imagination of users through the use of different images.
- It encourages users to write their own stories.
- It allows users to read stories already made by others.
- It improves vocabulary, reading and writing.

#### **2.3.4.2 Toondoo**

##### **2.3.4.2.1. Conceptualization**

Toondoo is a comic app where students can create their own ideas using images on any topic (see appendix 2), with the characters, scenes and objects it provides. Furthermore, if students want to create their stories using their own pictures, they can do it using this app because it allows users to upload their own photos. In addition, another interesting part of this app is that users can change the expression of the face and body of the selected characters (Ivers & Barron, 2015).

Through the use of this app, the following features could be found:

- It is easy to register to the site.



- It is free.
- It is an online app
- It has lots of designed panels to develop the cartoon.
- If the text is extensive, the tool allows users to join several stories in one book.
- It can create a library of several comic books and post them to a Blog or Web page.

### **2.3.4.3. Bitstrips for Schools**

#### **2.3.4.3.1. Conceptualization**

This is an application that allows students to create comic strips in a fun and easy way (see appendix 3). It encourages students in their learning and creativity. It also promotes writing and reading, so students learn easier visually. Using this application, the teacher can monitor student's activities registering the teacher first and then students can access the platform with the master code provided to them (Booth, 2009).

#### **2.3.4.3.2. Characteristics**

- It has several subjects, not only English.
- It allows the students create their own characters.
- It has several layouts.
- It has different scenes.

### **2.3.4.4. Digital Storytelling**

#### **2.3.4.4.1. Conceptualization**

Digital Storytelling is an application that helps teachers and students improve and create digital stories (see appendix 4). It can be used for people of all ages (who know how to write). This application is composed of different



images and sounds that are used to create stories. Its elements inspire learners to communicate their ideas through writing. As its name states, storytelling is an application where students or people who use this application can tell a story through writing. The storytelling application provides users with the opportunity to share their ideas with others (Smith & Kumi, 2015).

In their book *Digital Storytelling: In and Out of the Classroom* (2006), Teehan states the following:

Digital Storytelling is a tool that was created to integrate the newest technology in the classroom. It has proven to be a powerful tool indeed. I believe the reason for its power lies with the type of students we teach each day in our schools. Students today are multi-taskers, creative and visual learners. They have grown up in a world of multimedia and respond to audio-visual in positive ways. Given the opportunity to tell their stories using digital storytelling models, they are transformed into self-motivated information consumers (Teehan, 2006, p.3).

Besides Teehan (2006) mentions that storytelling can help learners to overcome barriers that tend to appear when they have to write. One of these barriers occurs when students do not know what to write. Through the use of images provided by the storytelling app, students' ideas can flow easier.

When using this app as an educational tool, teachers should know the following:

- To learn the skills on how to use this app.
- To foster the desire to teach lessons that use the media that most of our students are already using.



- To invoke the creativity to make learning more interesting, stimulating, and fun. (Teehan, 2006, p. 11)

### **2.3.4.5. BoomWriter**

#### **2.3.4.5.1 Conceptualization**

It is a free application created by Chris Twyman, Ian Garland, Ken Haynes in 2010 to help teachers and students develop creativity and the improvement of reading and writing in students (see appendix 5). Unlike applications mentioned before. This app is a group writing tool. That is to say, that the first part of the story is written by the teacher and then the students have to be creative and continue with the story. After students have finished their part of the story, they read their classmate's stories and choose the best ideas for completing the story. When this story is finished, it can be transformed into a published book (Salomon & Schrum, 2014).

Salomon and Schrum (2014) mention some characteristics of this application such as:

- It provides a safe environment for students to be creative, because all stories are created in a close digital environment.
- Teachers can go online to monitor their student's progress and to provide them with feedback.
- It can be used in a variety of academic settings, including special education.
- It lets students develop their reading, writing, and assessment skills as they create and share stories while also assessing the work of their peers.





- It lets students write creatively, and so on. (Salomon & Schurm, 2014, p.261)



## CHAPTER III

### METHODOLOGY

#### 3.1 Research Methodology

As this research is based on the analysis of different applied studies, the appropriate approach that best suits it is the bibliographic research method. According to Lopez de Prado (2009), for general research (thesis, dissertations, etc.), the bibliographic research method pretends to obtain the necessary knowledge to carry out a wider investigation process about a specific topic. The use of this approach helps search for several case studies that are related with the topic under study in order to analyze and to describe them, as well as to interpret the results of the five digital comic apps that were selected with the goal of providing facts about the advantages and limitations of each app. In addition to this, this approach is used also to get a deeper understanding about the topic itself.

#### 3.2 Consideration of Extraneous Variables

During the development of this research, one of the extraneous variables that appeared was the limited information about the topic. Since the use of digital comic apps as an educational tool is new, it appeared in only a few investigations related to the topic under study. In the case of Ecuador, there had not been any evidence of the use of this new invention in schools.

#### 3.3. App Analysis

In this research, five digital comic apps were selected. With the use of different applied studies related to the topic, data was collected and was explained in an interpretative manner, providing relevant information.

For the present analysis in chapter four, several steps were followed such as:



- Description of each applied study.
- To select the most important features of each one.
- To make a comparison among the applied studies.
- To choose the most useful based on the provided information.



## CHAPTER IV

### RESULTS

#### ANALYSIS AND INTERPRETATION

#### 4.1 RESULTS – ANALYSIS AND INTERPRETATION

##### 4.1.1 Case Studies

According to Cherry (2016), "a case study is an in-depth analysis of one person, group or event" (para.1). She states that case studies provide relevant information about a research. Besides, she mentions that they can contribute in different fields. Case studies are subjective, that is to say that the results taken from these case studies cannot be generalized. However, the information supplied by them can encourage other researches to apply them in order to get their own results.

##### **4.1.1.1 Writing skill enhancement when creating narrative texts through the use of collaborative writing and the Storybird Web 2.0 tool**

This research was conducted at Universidad Francisco Jose de Caldas by Yeison Edgardo Herrera Ramirez, who followed several steps to develop this research. First, the inquiry was developed with the intervention of two groups; the first group consisted of 15 students, eight women and seven men who were between 18 and 24 years old. Thirteen of them were undergraduate students and two of them were independent workers. They received classes from October to November of 2010. The second group included 10 students, seven women and three men, from 23 to 27 years old. Four of them were undergraduate students and six of them were workers. They received classes from March to April of 2011 (Herrera, 2013).



Second, these students received 27 hours of classes within a period of two months where the Storybird app was used (see appendix 6). The first week, the researcher gave the students instructions on how they would work the following weeks; additionally, they were given a pre-test to evaluate their English level. The first group had problems organizing their ideas, and demonstrated low knowledge of the English language. The second group showed that they were able to write stories correctly, but had limited vocabulary that restricted them from telling longer stories.

After the first week of instruction, students worked on developing a story following some steps: “pre- writing, drafting, revising and editing” (Herrera, 2013, p.171). They developed their story by taking classes; there were two hours of online teaching, which consisted of looking for a topic for their story and selecting pictures in the Storybird app, and two hours in-class. For their second week, students met with the tutor to receive some feedback and do reinforcement activities, taking five hours of classes that week divided into three hours of online teaching and two hours of in-class teaching.

In their third week, students worked on the creation of a second story, developing it in the same amount of time, two hours face-to-face and two hours online. For their fourth week, students received five hours of classes in the same manner as the previous weeks, taking classes online with feedback and reinforcement activities.

In their fifth week, the students developed their third and final story with the same number of class hours, and used the sixth week for feedback and reinforcement activities. For their seventh week, the instructor applied a post-test.



Group One showed minimal improvement in regards to the use of punctuation; this group needed to further strengthen their understanding of grammatical structures, as well as expand their vocabulary through reinforcement.

In contrast, Group Two had significantly improved on both organizing ideas and increasing their vocabulary, allowing them to communicate more effectively. In the post-test, it could be seen that they “used more complex language forms and new vocabulary. Most ideas were organized adequately and they used linkers and an adequate range of structure and vocabulary” (Herrera, 2013, p.175). The participants stated that Storybird supplied them a variety of images, which helped them learn new words as well as expand their stories to include complex language.

#### **4.1.1.1.1 Analysis & Interpretation**

In this case study, the use of the Storybird app for writing skills demonstrated several advantages. Although Group One had minimal changes, the overall result was positive because students improved their sentence structure; that is to say that through the use of images, students realized that a sentence required a subject, a verb, and an object in order to write correctly. While the students were writing, they used the name of their character, the action that the character was doing and the setting where the action was happening.

Group Two also demonstrated positive results, as well as they expand their sentences. Additionally, Group Two revealed satisfactory results in their vocabulary growth. While students were writing their stories, they used different images which were composed of various objects. This was a good method for



learning new words, because some of these objects were new for students, making them increase their lexicon.

Another important benefit of applying the Storybird app was that it produced motivation in both groups because this app provided several illustrations that made the two groups of students more eager to begin writing, and their ideas flowed with greater ease. Moreover, there was cooperative learning; students worked in groups to create their stories, providing them the opportunity to exchange ideas with each other to write their stories. As this app has a limited number of images, students were required to talk with each other in order to select an appropriate image to suit the text.

In addition to this, Storybird allowed for positive students-teacher interactions. With the use of this app and collaborative writing, the students and teacher could “negotiate meaning, vocabulary, and content. The negotiation process made them reflect on their written language and produce more ideas to write their stories” (p.177). Students also wrote longer sentences; they took risks to expand their sentences thanks to the images provided by this app.

Before using the app, one of the biggest problems that students displayed in their writing was that they did not know what to write; by incorporating images provided by this app, students overcame this problem and demonstrated great creativity. The Storybird illustrations provided the students an opportunity to create their own stories about different topics. Eventually, students ended up working by themselves. Since students had the freedom to select a set of images for their stories, they began to work with less teacher assistance, leading them to a constructivist learning, where students construct their own knowledge.

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On the other hand, the study had some limitations. First of all, the number of students could be considered a limitation, because in Group One there were 17 students while in Group Two there were 10 students. According to Rhalmi (2013), the number of students can influence their learning progress because large classes tend to demand more teacher effort in comparison to smaller classes. He further states that, in large classes, teachers need more time for the development of their classes, because they need to understand students' needs in order to help them overcome any obstacle that can interfere with their learning. In addition, teachers must manage classroom noise to ensure attention to tasks.

A second limitation was that the two groups had different levels of English. The skill level in Group Two was higher than Group One; therefore, Group Two found it easier to tell stories using the Storybird app compared to Group One. Third, the age of the participants presented some challenges; Group One was younger than Group Two and this may have prevented better results. Finally, the researcher mentioned that one of the big problems with this app is the limited range of pictures, which can restrain the students' creativity and motivation.

Considering all this information, the Storybird app can be an effective tool for the improvement of writing skills working with small groups of students. These groups should have an intermediate to high level of English, because as was noted in the case study, Group One had a lower level of English from the beginning of the study. In spite of the use of the Storybird app in their writing activities, they exhibited minimal improvement.





#### **4.1.1.2. Online Comic in Mandarin Chinese's Vocabulary Learning: A Case Study of Budi Utama Multilingual School in Yogyakarta, Indonesia**

This app was utilized by Nuning Catur Sri Wilujeng and Yu-Ju Lan in the Budi Utama Multilingual School. It was carried out with the participation of 25 fifth grade student volunteers between nine and ten years of age. The study lasted two weeks, with seven periods of Mandarin classes; each period lasted 40 minutes, with the goal of improving students' Mandarin vocabulary (see appendix 7). The investigators conducted their research by dividing the students into three groups; the first was a control group consisting of 16 students, 11 girls and five boys. The second was an experimental group of individuals that consisted of 14 students, seven girls and seven boys. And the last group was the collaborative experimental group of 16 students, six boys and ten girls.

The research included both qualitative and quantitative data analysis. Qualitatively, the examiners recorded the activities being carried out in the classroom with the groups, and made observations using a checklist. Quantitative data analysis consisted of using a pretest to identify the level of vocabulary knowledge students had, as well as a post-test to determine how much knowledge they had acquired after using the ToonDoo app.

The Control Group was taught to create comics based on books without online resources, and they created their own individual stories. The second and third experimental groups both used the app; however, the second individual experimental group had to create comic stories by themselves, while the third collaborative experimental group created comics while working as a collective unit.



Once the groups were defined, the teacher began to apply teaching tools to use the app. Using their lesson plan, the instructor took the following steps:

First, the instructor created an example for students to create their own stories; the teacher gave Group One a sheet of paper and asked them to create a comic (see appendix 8). The second group was asked to go to the computer lab and use the Toondoo app to create their comic individually (see appendix 9). Finally, the third group was divided into small groups to go to the computer lab and make their comic using the digital app (see appendix 10). The students developed their comic during seven class periods, and at the end the post-test was given, which showed the following results:

The first group did not show a very noticeable improvement of their vocabulary; the second group exhibited slightly better results compared to the first group, but the third group displayed a surprising improvement in their vocabulary acquisition. Students presented a better attitude and willingness to work on the task without being distracted by anything else. Moreover, the qualitative analysis noted that men preferred to use more animal characters, but women used more female characters. It was also noted that men used more interjections (wow, ohh, ggrr, etc) than women (Sri & Lan, 2015).

#### **4.1.1.2.1. Analysis and Interpretation**

As can be seen from the results of the post-test (see appendix 11), students showed better results when they worked in groups rather than individually, because the third group had the most improvement compared to the control group and individual work group. This happened because working collaboratively or in groups allowed for a greater exchange of ideas. Although the second group created their comic using the app, they obtained lower results



than the first group that created their comic using pencil and paper. Additionally, the use of this app provided participants a cooperative learning experience; it increased students' vocabulary and improved their writing skills. It also provided encouragement from teachers to students to write, because there was student-teacher interaction and this allowed the creativity of students to appear. Another benefit of this app was that it motivated participants to write more stories at home by themselves.

Despite several advantages, this app showed few limitations during the development of the research; for example, the students' schedule did not allow them enough time to create longer comics. Another limitation was that students who used the Toondoo app had problems with the internet connection that prevented them from moving forward with the creation of their comics, and they had several problems while typing the characters and words in Mandarin, which required the help of a teacher.

Considering all the provided information, it is advisable that teachers could use this app for the improvement of writing skills for children and different levels of English. In spite of this, it can be said that working in groups using the Toondoo app leads to better results than working individually, taking into account time management in order to complete a project with students.

#### **4.1.1.3. Bitstrips and Storybird: Writing Development in a Blended Literacy Camp**

This study was conducted at the University of Cincinnati by Jessica A. Wertz, where a literacy program initiative took place for three weeks. Twelve participants from the fifth and sixth grade were volunteers; this investigation was based on blended learning, which means both face-to-face and online classes.



Twelve students were divided into three groups and were rotated among three stations. The first station was teaching face-to-face guided reading, the second was face-to-face guided writing, and the third was dedicated to improving phonetic skills and vocabulary development through online chat. Each of these stations was visited by the groups once daily (Wertz, 2014).

At the start of this process, the students were given an iPad as well as a computer, so they could create their comics. Because of time constraints, and at the request of the school district, teachers focused on persuasive writing, in which digital comics were applied to a new written genre. For the study of persuasive writing, students watched videos and read websites to learn various types of persuasive writing. Finally, the themes were selected by the groups: relationships between siblings, bullying, and playing sports to stay healthy. As the weeks passed, students practiced using the application and its functions (see appendix 12). The students began to write their own comics using their persuasion maps, and at the end of the day each student had to show their comic and read it to their classmate (see appendix 13).

Later, they performed another kind of writing, the narrative, in which they discussed the different types of narratives. Students began to narrate experiences in their lives or created fictional stories. They were given some time to write down all the information they needed to create their new comics; after that, students began to create their stories using another application (Storybird). During the three weeks that they were taking classes, the students worked both individually and collaboratively using Bitstrip for school the first two weeks and using Storybird the third week. At the end of the research, the investigator could notice that the students demonstrated proficiency in writing such as grammar,



spelling and word usage as well as their motivation toward writing improved. Besides, the researcher stated that working both individually and collaboratively using the two apps can be effective for the improvement of the writing skill.

#### **4.1.1.3.1 Analysis and Interpretation**

It can be deduced that through the literacy classes in this case study, students improved their skills by participating in face-to-face guided reading, face-to-face guided writing, and online chat, as well as utilizing apps for story development. Students improved their writing skills, enhanced their vocabulary and pronunciation, and learned to narrate stories correctly.

Additionally, they were motivated to create stories. Although this application was carried out in cooperation with another application (Storybird), and there was no quantitative information that showed which app worked better, at the end of summer literacy program camp, students showed favorable results in their motivation and writing, because students learned to manage the apps easily, take risks to expand their stories and organize their ideas. In addition to this, students stated that they enjoyed being part of this program.

After analyzing this app, a few conclusions were reached. This app can be beneficial for students of different ages. In accordance with the researcher, these apps can be used by children and teenagers. Furthermore, these apps can be appropriate for working with both small and large classes, taking into account that if the teacher works with large classes, it would be better to form groups to facilitate the teaching-learning process. Additionally, these apps are excellent for students from a basic to intermediate level, because they are easy to manage.

#### **4.1.1.4 Crafting an Agentive Self: Case Studies of Digital Storytelling.**

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Hull and Katz (2006) conducted a study at Community Center DUSTY (Digital Underground Storytelling for Youth) with "two individuals - a young man 24 years of age named Randy, and a 13-year-old girl named Dara" (p.1). The purpose of this study was to study the effects of this app on these students' subjects and their agentive selves.

Randy was a man who was accused of possessing marijuana. He was given two choices: going to a "program that was part of the city's diversionary penal system or going to jail" (p.8). At the same time, DUSTY was offering writing classes and digital storytelling workshops in the same building Randy was attending, so he decided to take part in these classes. There, Randy was able to improve different aspects of his life, such as developing high motivation for writing, creativity and so on. Randy came from an insecure place; he wanted to change his life and saw DUSTY as a way of correcting it.

Hull and Katz (2006) mentioned that while using the storytelling app, "Randy learned to combine his words and music with visual images to create digital stories; he was able to author an identity in very powerful ways, enacting the kind of agentive self " (p.12) that is considered to be important for people who want to have "second chances to redefine their life trajectories" (p.12). Randy stated that he loved to write before attending this program, but he mentioned that it was difficult for him to share what he wrote. However, with the help of DUSTY, he could do it. In one of his digital stories called "Life-N-Rhyme" (p. 15), Randy showed good "control of poetic and other techniques, conventions and genres" (p. 16). Through the use of images, words, music, and other elements, Randy could express all his feelings in a better way.



Additionally, Randy's writing organizational skills also improved. He stated that for him, it was difficult to write because his ideas were not well-organized. Also, he mentioned that he had negative experiences when he studied before. One of these experiences was that his teacher did not provide him materials which could help him to improve his writing skills.

In the case of Dara, before being a participant in the DUSTY project, she saw schools as places that only assign tasks. In one of Dara's stories using storytelling, she narrated a story about a girl who hated school. Through this presentation, her instructor realized that Dara did not like school.

At the beginning, Dara was a very shy girl who did not feel comfortable in the development of her tasks. However, during her participation in the DUSTY project, she showed significant changes, such as becoming a master of managing the application, as well as becoming a good writer. Additionally, during this project the teaching-learning process was a mutual interaction between both the instructor and Dara. It is thought that all of this "supported Dara's development sense of herself as a competent and knowledgeable writer" (p. 32). As it could be seen in both cases, the two participants became independent and they improved in different aspects.

#### **4.1.1.4.1 Analysis & Interpretation**

The use of Digital Storytelling in this study presented some advantages; for instance, it elicited motivation to write. Before using this app, both participants had negative opinions about writing. Although, when the two participants worked using the app, they exhibited a positive change in their attitudes towards writing. Moreover, using this app, they were willing to create their own stories. Taking into consideration this advantage, it can be said that



students` attitudes towards education might depend on the materials applied by the teacher. If instructors take their time to look for new ways of teaching, students` learning can improve.

Furthermore, the use of this app helped students improve sentence structure. Also, the two participants improved in the organization of their ideas. One of the participants not only learned how to organize sentences, the use of this app helped him write poetry, allowing him to learn another type of writing. In his digital story, Randy demonstrated "his control of poetic and other literary techniques, conventions, and genres." (Hull & Katz, 2006, p. 16).

In addition, it increased students' vocabulary. Both members learned new words while they were managing the app; the use of different images and elements provided by this app enabled participants to acquire new vocabulary.

Another benefit of this case study was that the use of this app provided participants a cooperative learning experience. Before using the app, one of the participants had problems working in groups; this participant, nevertheless, overcame this problem using Digital Storytelling. As she became a master of managing this app, she began to help her classmates create digital stories. Instructors should take this feature into account, because students have different styles of learning; some teachers may consider this strategy when one of their students has problems while working in groups. For this reason, teachers should stay up-to-date on new strategies they can incorporate to help support their students in the learning process; one of these strategies could be the use of Digital Storytelling.

Although this app had several advantages, it revealed limitations, too. First, the students` schedule did not allow them enough time to develop





complex projects. One of the challenges related to this app is that it is composed of several elements. Randy used a combination of photos in his digital story, utilized the moviemaker element to present his story as a kind of video, and used a microphone to record his narration. Considering this information, it can take students a long time to complete a project if they use all the elements of this app. Secondly, it does not have control of content. Students have the freedom to use any kind of vocabulary to create their stories, because this app cannot control content automatically like other apps. Due to this, the teacher should take this into account and provide students enough instructions for the development of their tasks.

Taking into account all the provided information, this app can be appropriate for the improvement of writing skills for students of different ages and levels of English. However, the instructors should be careful with time management in order to complete a project with their students. As this app is composed of several elements, the teacher can ask students to use only the elements that they consider necessary, according to the skill that the instructor wants to improve.

#### **4.1.1.5 The impact of digital storytelling on fourth grade students’.**

This research was developed by Chelsea LoBello at St. Louis School. The purpose of this study was “to investigate the improvements in both student writing and motivation with the use of digital literacy” (LoBello, 2015, p. 3). For the development of this research, there were three fourth-grade participants, two boys and one girl. Each student is mentioned using numbers.

“Child one has a very creative mind. He is currently reading and writing at grade level” (LoBello, 2015, p.12). He can understand text and ideas. However,



he exhibits some trouble with his writing. His ideas are not well-developed. When he is asked to write, he writes too fast, without organizing his ideas.

Child two is a girl who has a great creativity and enjoys art activities like drawing and painting. One of the problems related with this participant is that she suffers from sensory issues which interfere in her writing development. Because of this problem, she cannot focus on her writing tasks, her ideas are not well organized, and she cannot write details. Besides, she has poor handwriting. In consequence of this, she cannot understand her own writing, making her feel frustrated (p.12).

Child three has a good level of reading and vocabulary. However, he has problems in his writing, as he writes too fast and he does not focus on the organization of his ideas. As a result, he makes some grammatical mistakes. Although, his teachers state that he is a good student (p.12).

To obtain data, the researcher began his investigation using an oral interview with the teacher to talk about the students' motivation towards writing and their writing levels. In reference to the students, the investigator applied a writing attitude assessment which contained 28 questions (see appendix 14) where the students had to choose "one of the four Garfield images that best matched their feelings towards the question" (LoBello, 2015, p. 5). The researcher also used an oral interview with each participant. During the first week, the students started working on traditional writing assignments. In this week, the researcher collected data through observations and by reviewing the students' assignments. The second week, students were introduced to the storytelling application. When the students learned to manage the application, they were asked to do a writing assignment using it. Here, the researcher



collected data through the same methods. To conclude, the investigator used the same assessment and interview used at the beginning.

Making a comparative analysis using the compiled data, the investigator obtained relevant information. In the case of Child one, the assessment applied at the beginning of the research showed that this student got the lowest score, as well as having unfavorable points of view towards writing. Through observations, it was noticed that the student's motivation was low using the traditional writing assignment. On the other hand, when the student worked using the application, he showed considerable changes; his motivation and grades improved significantly (see appendix 15).

In the case of Child two, most of her survey answers showed negative opinions towards writing. Her traditional writing assignment was not finished and it was difficult to understand its content because of her bad handwriting. Besides, she often asked for help during the development of her task. On the contrary, when she worked using storytelling, her attitudes towards writing changed in a positive manner. She was more excited and her grades improved a lot (see appendix 16); furthermore, her ideas when writing became more organized.

Child three initially exhibited a mixture of bad and good opinions towards writing. When he was asked to write a story, he was eager to do it. In spite of his eagerness, his desire for writing disappeared while he was writing. With the use of storytelling to write a story, student three showed relevant changes. His grades were good from the beginning. However, after using the application his grades became excellent. Moreover, his point of view of writing turned to a positive attitude (see appendix 17).



#### **4.1.1.5.1 Analysis and Interpretation**

The use of this app helped students in several aspects related to their writing skills. To begin with the analysis and interpretation of this case study, it is important to mention that the three participants had problems with the organization of their ideas when writing, and each one of them had a different level of English. However, the three participants demonstrated positive results in the improvement of their writing skills using Digital Storytelling. The use of images provided by this app helped them write correctly; that is to say, students realized that a sentence is composed of subject, verb, and an object.

Additionally, students became independent; before using this app, Child two often asked for help during her writing task. When she began to work using the app, most of the time she worked alone. Considering this information, it can be stated that this app could be excellent for students because they can construct their own knowledge.

Moreover, this app could be useful for all students; among the three participants, Child two had sensory issues. According to the SPD Foundation (2016), people who suffer from sensory issues have problems receiving messages from their senses, so it is very common for them to present difficulties in response to these messages. Children who possess this sensory disorder have problems with their learning. When Child two was asked to do a writing task using the traditional method (handwriting), she often refused to do it because it was difficult for her. However, the participant who suffered from this problem could improve in her writing skills using Digital Storytelling; for instance, organizing her ideas, expanding her sentences and feeling motivated about a writing task.



In addition to this, the use of this app can change traditional education, helping students learn in a different manner. One of the biggest problems in traditional writing is when students have to write long stories. Child three presented this problem using the traditional method. When this student was asked to write a story, he was eager to do it; nevertheless, his desire for writing decreased while he was writing. Writing long stories can be frustrating for students, because they can become tired and lose interest. However, when this student used this app, his desire to write did not decline.

After analyzing this case study, it is considered that this app could be used by students of different levels and ages, as well as students who possess some learning disabilities. Besides, the use of this app can facilitate students and teacher work; students will not become tired from typing long stories, because it is easier compared to traditional writing. Teachers will save time reviewing students tasks by using this app.

#### **4.1.1.6 Boomwriter´s application for creative writing.**

The present research was developed at Pierce School by Hen Hayes (Anonymous. (n.d.)). This research was applied to 20 sixth grade students. For this investigation, the researcher took different aspects into account which motivated her to use Boomwriter software. She believed it could help change traditional education, by including technology in education; she also wanted to find something accessible for students without investing money.

The researcher decided to create a story using the Boomwriter app, considering it a good tool to develop writing skills. This story was composed of some chapters related to a mystery. To introduce the project, she wrote the first chapter. Then she divided the group of participants into four teams. After that,



each team had to write the second chapter using the app. While students were writing their stories, the researcher noticed their excitement using the application. Once students had finished their stories, they created an Avatar in order to vote for their favorite story anonymously. The best chapter was going to be the winner, and would be attached to the first chapter to complete the story. Concluding the investigation, the researcher stated that “learners enjoyed getting their story published” (p.2). She also mentioned that some students liked to compete with each other. In addition to this, most of the students agreed that the application was “very easy to use and they wanted to compete again” (p.2). Another important thing to mention was that this application was a success, prompting schools all around the State of Massachusetts to begin using this software.

#### **4.1.1.6.1 Analysis and interpretation**

Boomwriter is a good resource to elicit students` motivation in writing. The researcher observed students` interest while they were working on their task using the app. In addition, it increased learners` vocabulary; while students were working in groups on the creation of their story, they learned new words. They also began to produce ideas in order to write the story. As they were working in groups, they could exchange information, which enabled them to acquire new terms. Because this app was created specially to work in groups, its use created an effective cooperative learning experience. As a result, the researcher stated that students did not present problems while working in groups.

Another important feature to mention is that this app brought out students` creativity. Although each group of students wrote the second part of



the same story, each group presented different content in their stories. Moreover, students ended up working by themselves. In the research, the teacher only provided the first part of the story. After that, she gave instructions to students and then she assigned them a task. The rest of the time, the instructor only observed how her students worked towards constructivist learning.

On the other hand, the use of this app in the educational process indicated one limitation: the teacher had to provide the first part of the story. This was considered a disadvantage because students did not have the freedom to select a topic according to their interests. The story provided by the teacher was a mystery. However, some students might have wanted to write about another type of story.

After analyzing this information, several conclusions were reached. First, this app can be beneficial for working with large classes, because it was created especially for group work and assisting instructors with classroom management. Second, it would be appropriate for students with an intermediate to high level of English since this app is for writing more elaborate content, such as paragraphs. Finally, it can be used by students of different ages for various writing purposes.



## CHAPTER V

### CONCLUSIONS AND RECOMMENDATIONS

#### 5.1 Conclusions

This research compared five digital comic apps: Storybird, Toondoo, Bitstrips for Schools, Digital Storytelling and Boomwriter. In order to offer enough information about the research, it was necessary to research case studies related to the use of these apps for writing skill enhancement. Each application was directed at students of different levels and ages, as well as varying classroom sizes.

After reading and analyzing these studies, several advantages and limitations were identified. The five applications explained in the previous chapter had many common features, such as increasing motivation towards writing, nurturing student independence, creating a more dynamic classroom, encouraging students to expand their stories, and improving organization as well as sentence structure. However, different apps proved more appropriate in different situations. The Storybird app was considered to be appropriate for working with small groups of students who have an intermediate to high level of English. The Toondoo app was ideal for students of different levels of English; however, this app was more effective when working in groups rather than individually. On the other hand, the Bitstrips for Schools app was shown to be an effective tool for students of different levels and ages, with small or large classes, in groups or individually. The Digital Storytelling app was good for students of different levels and ages, as well as for students with learning disabilities; however, this app was applied only to small groups of students.

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Finally, the Boomwriter app proved to be a good tool for working with large classes, especially in groups. However, students´ should have an intermediate to high level of English, because this app is intended for the creation of more complex content, such as paragraphs and long stories.

In conclusion, it can be noted, the five digital apps have proved to be a good option for the development of the writing skills in a foreign language. However, Bitstrips for Schools proved to be more flexible for various students and classroom situations, presenting itself as the most recommended from the five apps that were selected for this research.



## 5.2 Recommendations

The results of this research have shown that the use of the Internet can help improve student's English skills, it must be noted that technology has contributed in the acquisition of the writing skill, therefore it is important to plan and include this medium in the learning process.

English teachers should take advantage of ICT's and their vast educational resources such as comic apps, which offers multiple engaging writing materials making this experience more motivating and meaningful. They also need to be trained on how to use this technological tool and how to develop and present them to students in their classes.

From a researcher's point of view, it is essential to continue studying the uses of comic apps in general but especially in our country because after consulting several libraries and online websites there were no studies found. It would be also important to see if digital comic apps can be used for different purposes other than enhancing the writing skill.

This study could serve as a guide for teachers who work or would like to work with comic apps in their classes. Opening an account in order to use these apps does not cost money, so there would be no excuse for teachers who want to use them as an educational tool.

The Bitstrips for Schools app is highly recommended because, based on the results of this research, this app was considered to be ideal for English courses in general.



As a final point, it can be stated that a teacher's responsibility is not only to provide knowledge, but also to inspire students to overcome all types of obstacles that can interfere with their learning. A teacher's role is an essential part of a changing society; therefore, they should work together with their students on developing writing skills and communicative competences that will allow them to effectively face the challenges of the 21st century.



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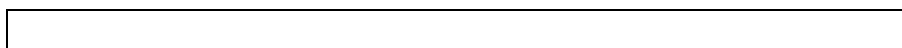
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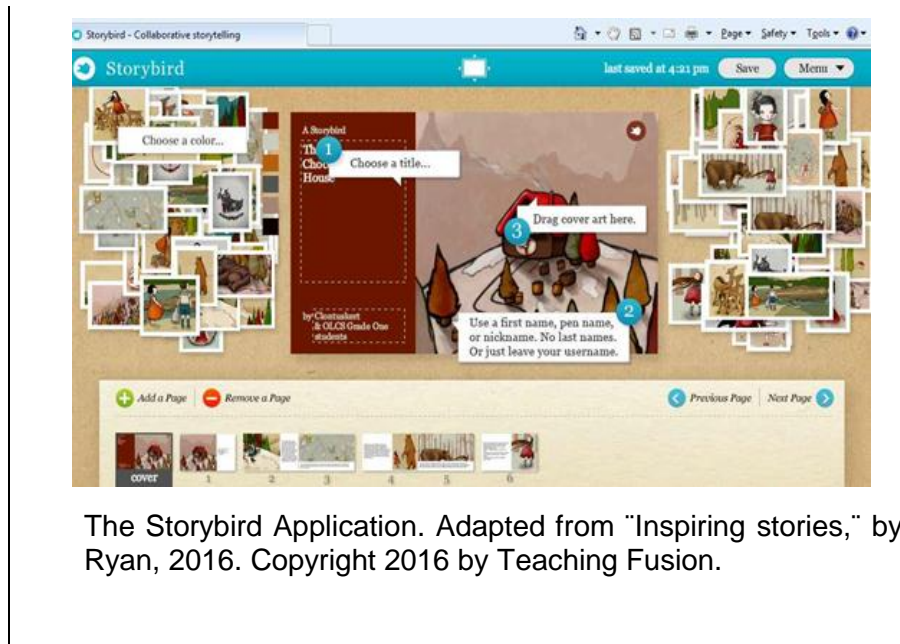
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## Appendices

### Appendix 1: Storybird

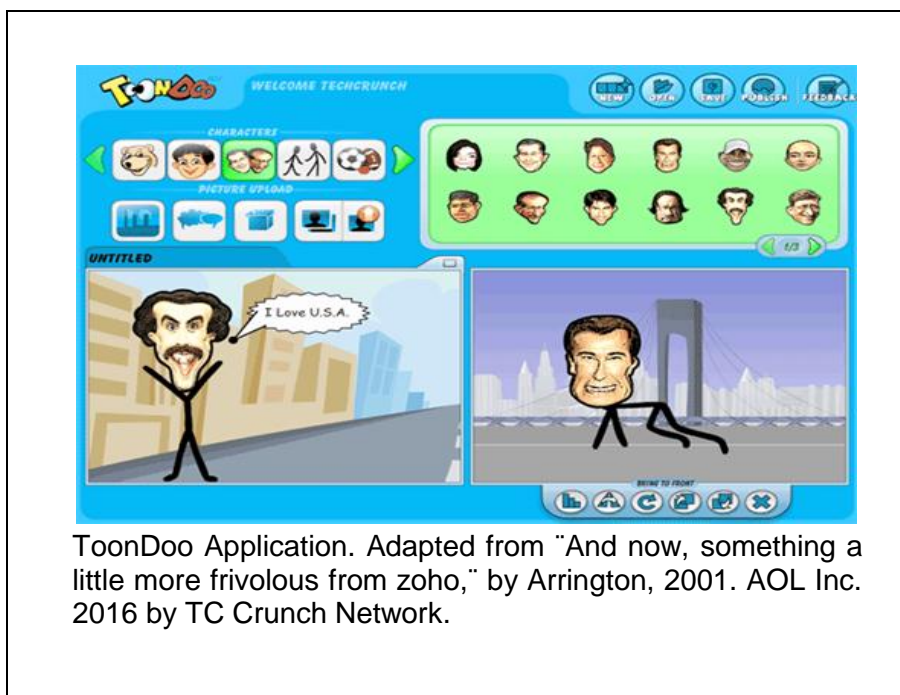


Autores: Andrea Alexandra González Amendaño



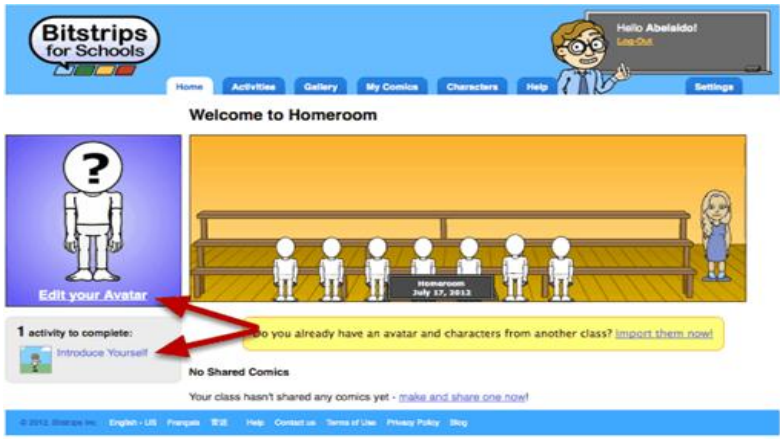
The Storybird Application. Adapted from "Inspiring stories," by Ryan, 2016. Copyright 2016 by Teaching Fusion.

## Appendix 2: Toondoo




ToonDoo Application. Adapted from "And now, something a little more frivolous from zoho," by Arrington, 2001. AOL Inc. 2016 by TC Crunch Network.

### Appendix 3: Bitstrips for Schools



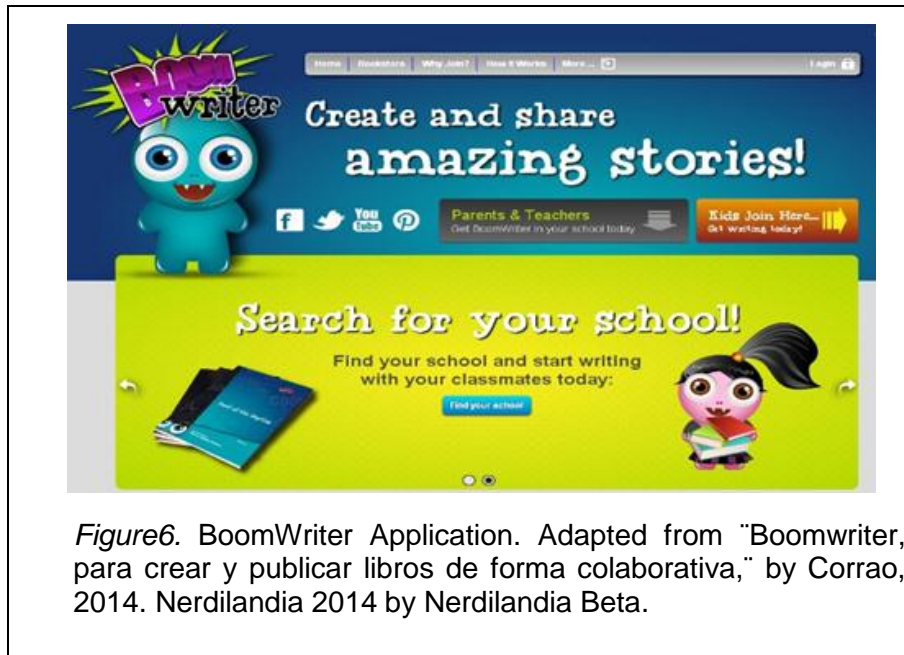
Bitstrips for schools Application. Adapted from "Logging your students in for the first time," by Bitstrips Inc., 2012.

### Appendix 4: Digital Storytelling



Digital Storytelling Application. Adapted from "Herramientas efectivas para la enseñanza y el aprendizaje: efectivas para la enseñanza y el aprendizaje: Cuenta cuentos digitales," by Cousera Inc. 2016 by Univeristy of Houston System.

## Appendix 5: BoomWriter





## Appendix 6: Action plan-Storybird

**Table 1.** Action plan.

Week	Activities	F2F Session	Virtual session	No. of hours
Previous Week	Instruction week Pre – test	X		
First Week	Writing our First Story	X	X	4
Second Week	Feedback, Consolidation and Reinforcement activities	X	X	5
Third Week	Writing our Second Story	X	X	4
Fourth Week	Feedback, Consolidation and Reinforcement activities	X	X	5
Fifth Week	Writing our Third Story	X	X	4
Sixth Week	Feedback, Consolidation and Reinforcement activities	X	X	5
Seventh Week	Post - test Presentation Final Report	X		Total: 27 h

Action plan. Adapted from “Methodology” by Y. Herrera., 2013, *Writing skill enhancement when creating narrative texts through the use of collaborative writing and the storybird web 2.0 tool*, p. 171, Copyright 2013 by Yeison Herrera.

**Appendix 7: Students' Profile-Toondoo**

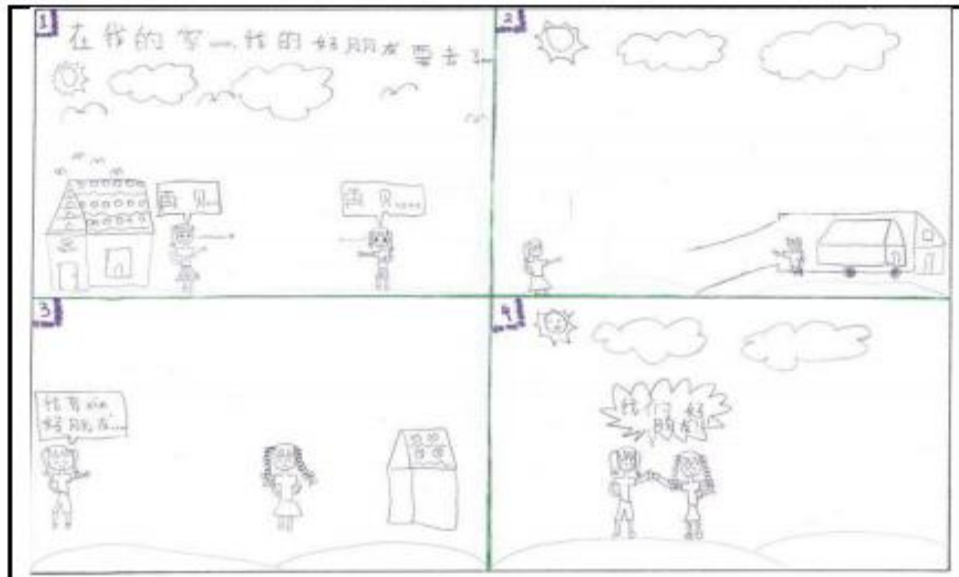
Table 3. Students' Profile

Items	Criterion	Control Group (N=16)	Individual Comics (N=14)	Collaborative Learning (N=16)
Gender	M	5	7	6
	F	11	7	10
Age	(in average)	10.07 yrs.	9,79 yrs.	10,1 yrs.
Have computer, tablet, or smart phone	Yes	16	12	16
	No	0	2	0
Experience in using computer, tablet or smart phone in learning Mandarin	Yes	1	6	7
	No	15	8	9

Students' Profile. Adapted from "Online Comic in Mandarin Vocabulary Learning-Participants", by N. C. Sri and Y. Lan, 2015, *Online Comic in Mandarin Chinese's Vocabulary Learning: A Case Study of Budi Utama Wilujeng and Yu-Ju Lan*



### Appendix 8: Writing Rubrics-Control Group-Toondoo



Writing Rubrics	
Content/ Idea Development	The plot of the unclear scene is delivered. The female student wanted to tell that after her friend left. She met a new friend. They became close friends.  They used 我的 xin* instead of 新.
Organization	Opening, development, and closing is developed, although was so limited.
Vocabulary/ Word Choice	There was no feeling of expression (難過·開心)
Language Use/ Grammar	搬到.....*
Mechanics	All sentences were written using Chinese characters (except for the word xin*)

Example of Control Group's Comic Creation. Adapted from "Comic Creation", by N. C Sri and Y. Lan, 2015, *Online Comic in Mandarin Chinese's Vocabulary Learning: A Case Study of Budi Utama Multilingual School in Yogyakarta, Indonesia*, p. 42, Copyright 2015 by Nuning Catur Sri Wilujeng and Yu-Ju Lan.

### Appendix 9: Writing Rubrics-Individual-Toondoo



Writing Rubrics	
Content/ Idea Development	The student is a female student. The idea is not about 搬家, but rather 旅行. 新家破* should be 新加坡.
Organization	There is no completed story.
Vocabulary/ Word Choice	The student mixed 要 and 有; mentioned 新加坡, 真的啊, but no other vocabulary words.
Language Use/ Grammar	我也有去* should be 我也要.
Mechanics	There is no development in the story. It is also impossible for people to say goodbye when too close to the aircraft.

Example of Individual Comics' Creation. Adapted from "Comic Creation", by N. C. Sri and Y. Lan, 2015, *Online Comic in Mandarin Chinese's Vocabulary Learning: A Case Study of Budi Utama Multilingual School in Yogyakarta, Indonesia*, p. 43, Copyright 2015 by Nuning Catur Sri Wilujeng and Yu-Ju Lan.

### Appendix 10: Writing Rubrics-Collaborative Learning-Toondoo



#### Writing Rubrics

Content/ Idea Development	The main character is chosen by a male student Story can be developed a bit longer Some exclamation word was not written in Mandarin such as "yipi" or "uh"
Organization	There is an opening, development, but still needs a closing
Vocabulary/ Word Choice	There is no feeling expression (開心·難過)
Language Use/ Grammar	No related story between picture 4 and 5
Mechanics	More Chinese characters are applied in the comics

Example of Collaborative Learning's Comic Creation, Adapted from "Comic Creation", by N. C. Sri and Y. Lan, 2015, *Online Comic in Mandarin Chinese's Vocabulary Learning: A Case Study of Budi Utama Multilingual School in Yogyakarta, Indonesia*, p. 44, Copyright 2015 by Nuning Catur Sri Wilujeng and Yu-Ju Lan.











**Appendix 11: Pre-test and Post-test results**

Table 5. The Mean and Standard Deviation (SD) of Pretest and Posttest's Score

Test	Control Group (N=16)		Individual Comics (N=14)		Collaborative Learning (N=16)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Pretest	60.68	17.12	60.00	12.61	60.25	13.65
Posttest	63.43	19.57	62.21	15.64	68.18	11.37

Pre-test and Post-test results, Adapted from "Comic Creation", by N.C. Sri and Y. Lan, 2015, *Online Comic in Mandarin Chinese's Vocabulary Learning: A Case study of Budi Utama Multilingual school in Yogyakarta, Indonesia*, p. 40, Copyright 2015 by Nuning Catur sri Wilujeng and Yu-Ju Lan.

## Appendix 12: Graphic organizer-Bitstrips for Schools

PERSUASIVE STRATEGY DEFINITIONS	
Definition	Example
Claim - your main point 	Older brothers should be nicer to little brothers
Big Names - experts and important people that support your side of the argument 	+ Le Jackson 5
Logos - using logic, numbers, facts, and data to support your argument 	
Pathos - appealing to your audience's emotions 	Anger sad
Ethos - making yourself seem trustworthy and believable 	we have big brothers
Kairos - building a sense of urgency for your cause 	
Research - using studies and information to make your argument seem more convincing: you can use words, graphs, tables, illustrations 	

Example of a graphic organizer completed with an iPad, Adapted from "Writing Persuasive Comic Strips", by J.A.Wertz, 2014, *Bitstrips and Storybird: Writing Development in a Blended Literacy Camp*, p. 26, Copyright 2014 by Jessica A. Wertz.



### Appendix 13: Example of Digital Comics-Bitstrips for Schools

**Big Brothers**

Older brothers should be nice to younger brothers.

Older brothers should teach younger brothers how to play new games.

Older brothers should be good role models for younger brothers.

Older brothers should be nice to younger younger brothers because they could accidently hurt them, they should teach them new things and be good role models.

**Group 3**

Older brothers might hurt their little brother.

I'm sorry. Don't tell Mom or Dad!

Wait! Get my seat!

Do you want to play?

Yes!

Here, Max, you can have my seat. Charlie, get up!

Why don't you pick on someone your own size!

I'm sorry for being mean to you. Do you forgive me?

Yes, I do.

www.bitstripsforschools.com

















Digital comic strip created by 5th- and 6th-grade students, Adapted from "Writing Narratives as Digital Storybooks", by J.A.Wertz, 2014, *Bitstrips and Storybird: Writing Development in a Blended Literacy Camp*, p. 29, Copyright 2014 by Jessica A. Wertz.

## Appendix 14: Elementary Writing Attitude Survey

**Elementary Writing Attitude Survey**

Name \_\_\_\_\_ Grade \_\_\_\_\_ School \_\_\_\_\_

Please circle the picture that describes how you feel when you read a book.

















1.	How would you feel writing a letter to the author of a book you read?
	   
2.	How would you feel if you wrote about something you have heard or seen?
	   
3.	How do you feel writing a letter to a store asking about something you might buy there?
	   
4.	How would you feel telling in writing why something happened?
	   

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Survey designed by Dennis J. Kear, Wichita State University

Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students` motivation to write," by LoBello, 2015, p. 42.

Please circle the picture that describes how you feel when you read a book.

5.	How do you feel about spending free time reading?			
				
6.	How would you feel keeping a diary?			
				
7.	How do you feel writing poetry for fun?			
				
8.	How would you feel writing a letter stating your opinion about a topic?			
				

















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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students` motivation to write," by LoBello, 2015, p. 43.



Please circle the picture that describes how you feel when you read a book.

















9.	How do you feel if you were an author who writes books?				
10.	How do you feel if you had a job as a writer for a newspaper?				
11.	How do you feel about becoming an even better writer than you already are?				
12.	How do you feel about writing a story instead of doing homework?				

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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students' motivation to write," by LoBello, 2015, p. 44.

Please circle the picture that describes how you feel when you read a book.

13.	How do you feel about writing a story instead of watching TV?				
14.	How would you feel writing about something you did in science?				
15.	How would you feel writing about something you did in social studies?				
16.	How do you feel if you could write more in school?				

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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students' motivation to write," by LoBello, 2015, p. 45.

Please circle the picture that describes how you feel when you read a book.

17. How do you feel about writing down the important things your teacher says about a new topic?



18. How do you feel writing a long story or report in school?



19. How do you feel writing answers to questions in science or social studies?



20. How do you feel if your teacher asked you to go back and change some of your writing?



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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students' motivation to write," by LoBello, 2015, p. 46.

Please circle the picture that describes how you feel when you read a book.

21. How do you feel if your classmates talked about making your writing better?



22. How would you feel writing an advertisement for something people can buy?



23. How do you feel keeping a journal for class?



24. How do you feel writing about things that have happened in your life?



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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students' motivation to write," by LoBello, 2015, p. 47.

Please circle the picture that describes how you feel when you read a book.

25. How do you feel about writing about something from another person's point of view?



26. How do you feel about checking your writing to make sure the words you have written are spelled correctly?



27. How do you feel if your classmates read something you wrote?



28. How do you feel if you didn't write as much in school?



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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students' motivation to write," by LoBello, 2015, p. 48.

**Elementary Writing Attitude Survey Scoring Sheet**

Student Name \_\_\_\_\_

Teacher \_\_\_\_\_

Grade \_\_\_\_\_ Administration Date \_\_\_\_\_

<b>Scoring Guide</b>	
4 points	Happiest Garfield
3 points	Slightly smiling Garfield
2 points	Mildly upset Garfield
1 point	Very upset Garfield

Item scores:	Item scores:
1. ____	15. ____
2. ____	16. ____
3. ____	17. ____
4. ____	18. ____
5. ____	19. ____
6. ____	20. ____
7. ____	21. ____
8. ____	22. ____
9. ____	23. ____
10. ____	24. ____
11. ____	25. ____
12. ____	26. ____
13. ____	27. ____
14. ____	28. ____

Full scale raw score ..... \_\_\_\_

Percentile rank ..... \_\_\_\_

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Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students' motivation to write," by LoBello, 2015, p. 49.



### Appendix 15: Results of Child One

Question Asked	Student Initial Response	Student Final Response
What do you like about writing?	"I hate it totally"	"making characters and making fun parts in my story that people will love"
What do you dislike about writing?	"I get scared"	"holding my pencil too long that is hurts my fingers"
Do you think you are good at writing? Why or why not?	"no, I'm not a good writer"	"I'm an ok writer because I'm good at making stories"
If I told you to write a story how would you feel?	"Scared, and nervous!"	"good!"
<b>Garfield Writing Attitude Survey: Raw Score</b>	48	69

Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students` motivation to write," by LoBello, 2015, p. 19.

### Appendix 16: Results of Child Two

Question Asked	Student Initial Response	Student Final Response
What do you like about writing?	That if I get a good grade I will get more confident	sharing my stories and digital stories!
What do you dislike about writing?	It can be hard	It can be hard sometimes
Do you think you are good at writing? Why or why not?	No, because I am not good at it I think no because I always get a bad grade	yes well I am very good at digital stories I am a good story writer but I am still a bad writer when I write with my pencil. I think this because I made a good story and my friends liked it
If I told you to write a story how would you feel?	I would feel nervous and scared	Smart and happy
<b>Garfield Writing Attitude Survey: Raw Score</b>	57	74

Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students` motivation to write," by LoBello, 2015, p. 23.

**Appendix 17: Results of Child Three**

<b>Question Asked</b>	<b>Student Initial Response</b>	<b>Student Final Response</b>
What do you like about writing?	I don't know	I like writing when I can be creative. I like writing with the iPad and showing my friends my story
What do you dislike about writing?	How it hurts my hand. How it is so boring and long.	How it hurts my hand when I use my pencil
Do you think you are good at writing? Why or why not?	Ok, I don't like writing but ill do it	Yes. Everyone liked me story I made a good story
If I told you to write a story how would you feel?	No....!	I would do it again because I like it
<b>Garfield Writing Attitude Survey: Raw Score</b>	57	74

Elementary Writing Attitude Survey. Adapted from "The impact of digital storytelling on fourth grade students` motivation to write," by LoBello, 2015, p. 26.