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Integrating ICT to a Multisensory Approach: Applied in the learning Process of Kindergarten Students of an English as a Foreign Language Class

Integración de las TIC a un enfoque multisensorial: aplicado en el proceso de aprendizaje de niños de segundo nivel de transición en una clase de inglés como lengua extranjera

Tesis para optar al grado de Magister en Educación con mención en Informática Educativa

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ABSTRACT

The investigation begins by stating the existing problem of English language teaching in Chile. In a study done by EFI EPI (2016), the students in Chile demonstrated a low level of English proficiency. The results of this study were alarming to the Ministry of Education, since there has been a great amount of financial investments in this area, such as the English open doors programs and student exchange scholarship opportunities. Now, in primary school the problem is more apparent. It has become an ever-expanding field of English teaching with little support from the Ministry of Education. For this reason, the investigation seeks to analyze if the use of a didactic strategy design, which integrates ICT and a multisensory approach, improves the learning experience of boys and girls in an English as a foreign language kindergarten class of children. The study selected a mixed methodology design with a exploratory level, by using two different groups of children in kindergarten from Antilen School of Rengo. Before the four interventions, the student's preschool teacher was interviewed, a pre-diagnostic test was conducted on the children and a questionnaire was implemented on the parents of the participating children. During the interventions, the classes designed were recorded for visual data collection and field notes were taken by the investigator. Finally, a post-diagnostic test was conducted on the children of the language learnt throughout the interventions. The results from this study resulted in favor of the new didactic strategy designed, for it improved the learning experience of the children. After the analysis of the total data collected, the didactic strategy demonstrated to be inclusive and engaging for the children. Also, the results showed an increase in language input within each session and a growth in target vocabulary learnt. Finally, a future projection of this study is to further elaborate on the design of the didactic strategy proposed.

KEYWORDS: Technology, Early years, EFLT

ABSTRACTO

La investigación comienza al establecer el problema existente de la enseñanza del idioma inglés en Chile. En un estudio realizado por EFI EPI (2016), los estudiantes en Chile demostraron un bajo nivel de dominio del inglés. Los resultados de este estudio fueron alarmantes para el Ministerio de Educación, ya que hubo una gran cantidad de inversiones financieras en esta área, como los programas de puertas abiertas en inglés y las oportunidades de becas de intercambio estudiantil. Ahora, en la escuela primaria, el problema es más evidente. Se ha convertido en un campo de enseñanza del inglés en constante expansión con poco apoyo del Ministerio de Educación. Por esta razón, la investigación busca analizar si un diseño de estrategia didáctica, que integra las TIC y un enfoque multisensorial, mejora la experiencia de aprendizaje en una clase de niños y niñas en segundo nivel de transición de inglés como lengua extranjera. El estudio contiene un diseño de metodología mixta con un nivel exploratorio, mediante el uso de dos grupos diferentes de niños en el jardín de infantes de la Escuela Antilen de Rengo. Antes de las cuatro intervenciones, se entrevistó al parvulario de los cursos participantes, se realizó a los niños una prueba de diagnóstico previo y se implementó un cuestionario a los padres de los niños participantes. Durante las intervenciones, las clases diseñadas se registraron para la recopilación de datos visuales y el investigador tomó notas de campo. Finalmente, se realizó una prueba posterior al diagnóstico en los niños del idioma aprendido a lo largo de las intervenciones. Los resultados de este estudio resultaron en favor de la nueva estrategia didáctica diseñada, ya que mejoró la experiencia de aprendizaje de los niños. Después del análisis de la información total recopilada, la estrategia demostró ser inclusiva y motivadora para los niños. Además, los resultados mostraron un aumento en las oportunidades de exposición del idioma dentro de cada sesión y un aumento en el vocabulario aprendido. Finalmente, una proyección futura de este estudio es profundizar en el diseño de la estrategia didáctica propuesta.

PALABRAS CLAVES: Tecnología, Enseñanza temprana, EFLT

To my husband and son

And our families

For all their unconditional support.

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INTRODUCTION

The topic of English teaching has become of great importance within the Education in Chile, for it has been proven to be the only country in Latin America that has an institutional framework for English teaching, as mentioned by Cronquist & Fiszbein (2017) in the study “English teaching in Latin America” and educational establishments have decided to start to impart English at a young age, making it a subject of great importance and an incentive for parents to select their establishment to enroll their child. In 2011, the amount of elementary schools imparting English were 1700 and, by 2013, that figure incremented to 4,300 schools, as stated by the chief of the unit curriculum and evaluations in MINEDUC, Loreto Fontaine, in an interview (Améstica, 2013).

In consequence, the law 20.710 passed in 2015 by the government of Chilean president Piñera, has established the completion of kindergarten as a requirement to impart first grade and initiate basic schooling. Naturally, preschool education has increased its enrollments by 6% in 2014 in comparison to the previous years. This law also included a free financial system for the most vulnerable children to start preschool, which helped increase children enrollment, as well. After this law, preschool became an important step of transition and preparation for formal schooling years and teaching English to young learners became a heavily discussed subject within the English as a foreign language (EFL) community.

On the other hand, another important subject in Chilean education is the use of ICT tools in the teaching and learning process of young learners. Most parents believe the use of technology at a preschool level can support learning and promote a fundamental ground. A survey done on Latin American parents of young children by Erik Institute in 2016 established that “56 percent of parents believed that their child’s use of technology promotes school readiness and 54 percent associate technology use with having an impact on success in school”. Also, the use of ICT tools in English teaching can provide a rich foreign language environment and vast amount of language input during formal sessions (UNESCO, 2004).

For this reason, the following study focuses in analyzing if a didactic strategy design that integrates ICT and a multisensory approach improves learning in an English as a foreign language kindergarten class at Antilen School, Chile. Accordingly, the specific objectives of this study are first to identify specific digital resources and design classes using an efficient strategy, to later be implement, and undergo a process of data analysis. The methodology of the study has an exploratory limitation, since it focuses only to analyze the information collected through a thick description technique and data triangulation. It has a dual contribution, as it provides a practical solution to the apparent problem at hand and contributes valuable theoretical information.

The following document is divided into four main chapters. The first chapter is the introduction, where the problem will be described, and the study will be justified with empirical studies from different points of view, such as, the convenience, social relevance, practical implications, theoretical value, methodological value, and viability. To continue, the general objective, specific objective and main investigation questions will be established. To later move on to, the theoretical framework, where the concepts of young learners, ICT curricular integration, English language teaching, multisensory approach, communicative language teaching and educational digital resources are defined with a rich number of recognized authors and investigations. After, the contextual background is established in detail and similar study results, to compare, will be presented. The second chapter contains the methodology that is to be followed in the investigation. The design of the study, type of investigation, procedure, selection of the sample, instruments, resources, chronogram of activities, and techniques of data analysis, and the design of the experimental model are all included in this chapter. The third chapter mentions the analysis of the data and results of the instruments designed. Finally, the last chapter includes the general conclusions and future projections of the study.

CHAPTER I: PROBLEM AND JUSTIFICATION

1.1 Problem

The present investigation related to the integration of ICT with a multisensory approach to improve second language teaching in preschool students has been developed on the bases of diverse predicaments in Chilean education. These problems are associated with the low levels achieved by students in skills needed in the 21st century, the lack of information and guide for preschool English teachers, and the misconceptions of parents towards young children using technology.

First, the undergoing advancement of technology and globalization has greatly influenced the impact of the English language. According to the British Council (2013) in the report “The English Effect”, “It is spoken at a useful level by some 1.75 billion people – a quarter of the world’s population. As the language of communications, science, information technology, business, entertainment and diplomacy, it has increasingly become the operating system for the global conversation.” (p.5) It is for this reason that the results of the EFI EPI study (2016), in where they measured the basic level of English that Chileans have and ranked a low position 42 out of 72 countries, were alarming to the educational community. Specially, since, it is a discipline that has had much support by the Chilean government through a programme, which started in 2004, called, “English Open doors” (PIAP), where many different projects are implemented throughout the country to promote the use of the English language, such as, online courses, summer and winter camps, workshops for teachers, exchange programs, among others.

Second, the development of ICT skills has become fundamental in all aspects of life, even in the way teenagers socialize and explore their identity (Hernández et al, 2014). Thus, the Ministry began to give prominence to this area, as well, by cause of the last results of SIMCE TIC (2013), which showed that only 1.8% of 11,185 students from 492 schools of Chile have an advanced level of ICT skills by measuring the four dimensions of these skills (information, communication, ethic and social impact, and functional use of ICT). Likewise, another study by Halpern (2016), 7,825 students from grade 5 to grade

12 presented a high number of hours spent with technology daily with an overexposure of 20%. The results of these studies, demonstrate the high use of technology by the students, do not favor the development of the ICT skills. These statistics come into understanding, when a survey of 1000 parents of Latin America showed that the use given to technology is mainly recreational (Erikson Institute, 2016). This can be seen in Figure 1.

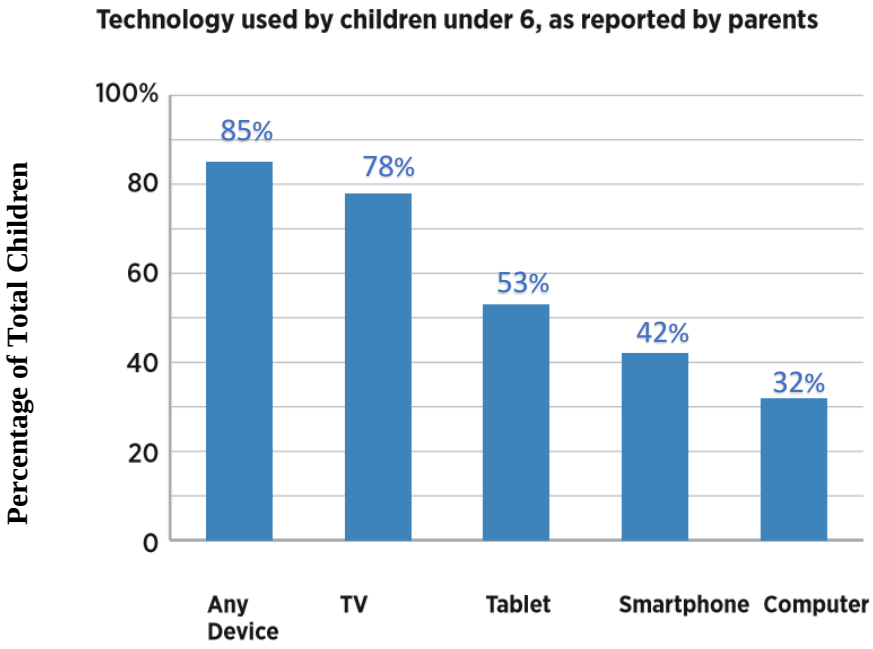

Figure 1 Technology used by children under 6 (Adapted from Erikson Institute survey in 2016)

From the previous studies, it can be inferred that students are not being properly educated in the use of technology. Children are unceasingly exposed to technological devices, generating misconceptions of the use of technology at a young age. Many parents, in Latin America, believe that technology causes a negative effect in

a child's social interactions skills. These concerns can be seen in Figure 2, which was taken from a survey done by Erik Institute, in 2016.

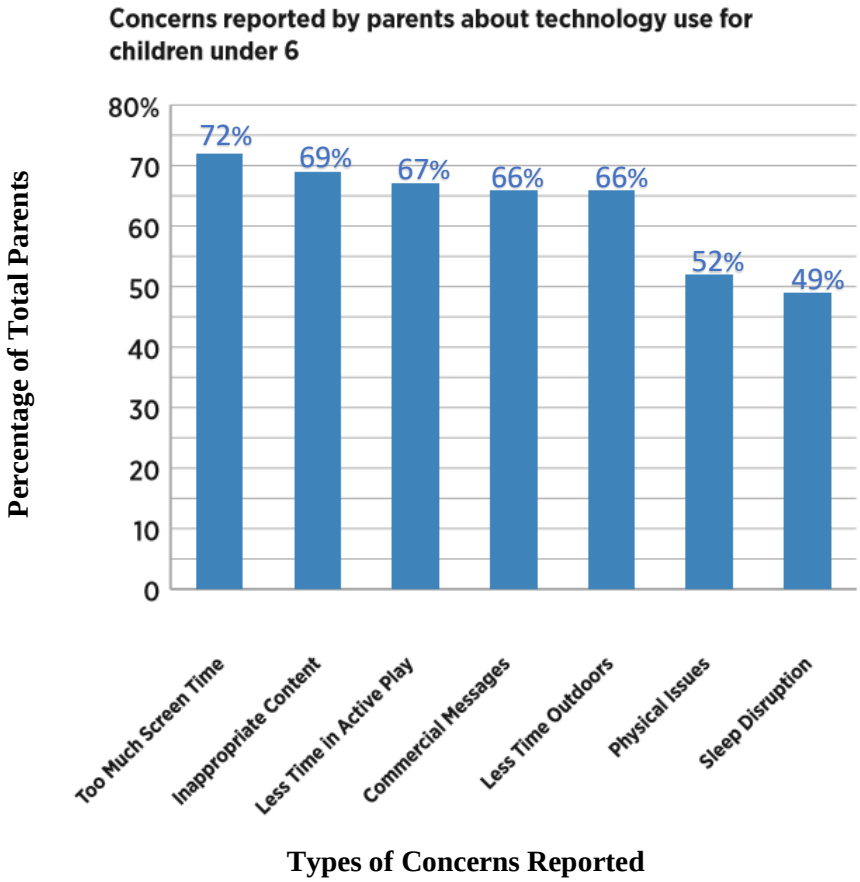

Figure 2 Concerns reported by parents about technology use for children under 6 (Adapted from Erik Institute survey in 2016)

Also, Jaramillo et al., (2015) has analyzed systematically the present investigations about the integration of ICT in education, this study concluded that "The reviewed research largely refers to the field of ICT measurement, comparison and skills analysis (64% of the revised literature), especially in school education. Despite the above, although the analysis models used manage to gather evidence of the impact of ICT in learning, there is little evidence to show the effective use of these technologies in the classroom. In our view, the single Incorporation of technologies into education is not enough to bring about changes in education. Therefore, it is necessary to focus research

on the elements involved in educational practices that bring about effective changes when ICTs are used as learning enablers" (p.229). Overall, there is an existent need to improve the way ICT is being used in the classroom. The amount of investment and time of use are not efficient and do not provide the learning results desired.

Consequently, the preschool curriculum also makes an emphasis in the need for innovation and defines the integration of ICT as a tool to achieve this. For this reason, MINEDUC, in 2016, has provided preschools with a new project, where the students are given tablets as an educational resource. Unfortunately, many of these tablets are not being used. Many efforts have gone into inserting ICT in education but have failed to achieve gratifying results.

Third, there is a lack of information in the field of preschool second language teaching in Chile. There are no current specific educational policies or programs that support English teaching in preschool, some exist that can only be adapted to second language teaching. The segment, which has been recently modified in the preschool educational curriculum, states that communication is,

> *"un proceso central mediante el cual niños y niñas desde los primeros años de vida intercambian y construyen significados con los otros. La interacción con el medio, a través de los diferentes instrumentos de comunicación, permite exteriorizar las vivencias emocionales, acceder a los contenidos culturales, producir mensajes cada vez más elaborados y ampliar progresivamente la comprensión de la realidad"* (p.56)

This definition of communication can be followed and interpreted to second language teaching. Now, in the curriculum there isn't any objectives directed to specifying English language teaching. Therefore, teachers are obligated to improvise and adapt methodologies and content, according to their own criteria by following the main objectives established for first language acquisition, which is "to communicate sensations, experiences, emotions, feelings, needs, events and ideas through the progressive and adequate use of non-verbal and verbal language, by expanding vocabulary, enriching linguistic structures and initiating reading and writing, through relevant and meaningful words and texts " (MINEDUC, 2016, p.59).

In addition, as stated by Marzolo (2017) close to 37 universities teach English pedagogy in Chile, but majority of the curricular proposals specialize in high school education. In other words, many English teachers do not have the proper preparation to teach young students of the age of 16 and under, leaving a deficit in English teaching for the primary educational level. Many English teachers reject working with young learners, for all the main reasons previously described. There is an empty area in this field that has not been covered by the Chilean's Ministry of Education.

1.2 Justification

In the following section the study will be justified through six different criteria, the convenience, social relevance, practical implications, theoretical value, methodological value, and viability. These criteria will sustain the motive and reason as to why this investigation is of great significance to carry out.

1.2.1 Convenience

The study seeks to analyze a didactic strategy, which serves to improve EFL teaching in young learners. At a micro level, the investigation serves as a support for EFL teachers in the school selected. This will guide the educators and serve as a basis for their daily planning. Also, at a macro level, there is very little investigation in Chile, that is focused in teaching preschool children. Furthermore, the study can offer introductory findings and a background, as to how to confront English teaching in a Chilean preschool classroom in an era of technological children. It benefits as a basis for an introduction to modify the preschool national curriculum.

1.2.2 Social Relevance

The main participants of the study, in this case the students, will benefit from the intervention and results, as it seeks to improve and facilitate their teaching-learning process. Apart from this, in Tollefson (2000) it stated that with the comprehension of English “people worldwide gain access to science, technology, employment, and mass culture . . .” (p. 9). For this reason, an improvement in English teaching will help students learn a second language, which will help obtain a solid base for first grade. Also, English educators in Chile, also benefit from the study, for it proposes a model of teaching in a Chilean context. Finally, the EFL community benefit from the results of this study whether successful or not, for it provides information of the interaction students have with ICT tools.

1.2.3 Practical implications

From the problems described previously, the study was designed to intervene and offer important evidence, that can demonstrate the deficits existing today in this country. It is intended to provide background research, for future investigations in this field of education. Since, throughout Chile, many preschools have started to teach English without set standards from the national educational curriculum, it has become an alluring area of interest.

Moreover, SIMCE English, a standardized national test, was implemented to students in grade 11 in 2010, to measure the results from previous policies, that aimed to improve English proficiency in Chile. This test was composed of reading and listening comprehension in English, based on the TOEIC bridge test. The results showed that one out of ten students have an elementary level of English. Now, this test stated the following factors influencing the results (Educarchile, 2011).

- Some students began to learn English earlier than other students.
- They had more hours of English lessons at school.

- Their teachers spoke in English during the classes.
- They attended English classes during out-of-school time.

One of these factors is the initial stage of English learning, which, in the long term, directly affects the overall results of English proficiency. Therefore, the results from the present investigation, serves as support in an important field (preschool) for long term comprehension and use of a second language.

1.2.4 Theoretical Value

The investigation has risen based on different theoretical proofs. These proofs focus on the age the students could be exposed to ICTs and the number of hours recommended, the process of second language acquisition and the positive effects that learning a second language has on children of a young age, and an existent approach observed through teacher experiences and cognitive development of young children to establish the best methods of teaching to achieve positive learning outcomes. They have provided the support for the design of the didactic strategy presented in this investigation. It aims to validate these theories implicitly, since they are taken into consideration in the design and selection of the participants. Because of this investigation, it will encourage future studies to work over the design presented.

1.2.5 Methodological Value

The methodology of this investigation has been considered from the results of previous investigations analyzed in this field (Solomonidou et al., 2004; Drigas et al., 2013; Ramírez, 2015). A study done on a control and experimental group helps to analyze the different reactions of the children when presented with distinct teaching strategies. It profoundly supports the definition of the mixed methodology, as it benefits the investigation to capture the overall image of the participants and manages to collect important data from different types of instruments.

1.2.6 Viability

In a more general aspect, in Chile, the enrollments in kindergarten has increased from 41% to 83% between the years of 2005 and 2013. Plus, the Chilean government has increased its investment to 1% of its national PIB. A high average of 82% of the public resources of Chile go to early education, in comparison to the average 78% of OCDE, a foundation composed of 35 countries (OCDE, 2015). For this reason, this makes the present investigation viable. It aids in the attainment of facts, according to a specific intervention, to further advance in the innovating methodologies of teaching young learners a second language.

Furthermore, in the field of English teaching, it has been predicted in Warschauer (2000) that “The shift toward a global informational economy will intensify as well, integrating more countries and regions into the global market and further spurring the need for workers worldwide in diverse occupations, from Webmaster to food server, to learn English. The most far-reaching changes will come in the area of technology, with the Internet becoming ubiquitous in the developed world and commonplace in urban areas” (p. 529). That is to that the importance of this language will continue to increase and the demand to learn it will increment vastly.

Also, the investigation requires little resources and is designed to be implemented for a short period of time. Therefore, it is feasible for the researchers. Additionally, the school selected has easily approved and permitted the implementation of a methodology and the collection of the data needed.

1.3 General Objective

Analyze if the use of a didactic strategy design, which integrates ICT and a multisensory approach, improves the learning experience of boys and girls in an English as a foreign language kindergarten class of children.

1.4 Specific Objectives

- Identify and select the appropriate technological resources focused in language input.
- Design English classes with an educational methodology that integrates a multisensory approach with ICT to improve language learning.
- Implement English classes with an educational methodology that integrates a multisensory approach with ICT in preschool children to improve language learning.
- Observe the attitude and learning outcomes of the children, throughout the interventions to evidence language learning.
- Analyze the attitude and learning outcomes of the children to evidence alterations in their language learning experience.

1.5 Investigation Question

Does the use of a didactic strategy that integrates ICT with a multisensory approach improve the learning experience of boys and girls in an English as a foreign language kindergarten class?

CHAPTER II: THEORITICAL FRAMEWORK

The following theoretical framework is presented to have a better understanding of the new pedagogical methodology proposed in the following investigation. A description of the concept of the multisensory approach is presented and associated to language teaching. Later, the steps of an appropriate integration of information and communication technology (ICT) are described, as to understand the manner, in which they will later be integrated to the multisensory approach for English as a foreign language classes for preschoolers. Furthermore, a brief explanation of the characteristics of students, who are part of the generation alpha will be included, as to provide the reader with a better comprehension of the educational needs the students in preschool have. To continue, an examination of different educational digital resources will be included to permit the conception of efficient and suitable resources for the achievement of the specific English as a foreign language learning objective. Finally, English language teaching methodologies will be reviewed, and the topic of language acquisition will be discussed to give a better understanding of the learning process of young learners.

2.1 Multisensory Approach

The multisensory approach is the process of learning new subject matter using two or more senses. This may include combining visual, auditory, tactile-kinaesthetic, and/or even olfactory and taste (Scott 1993, in Kumar et al., 2015). “It is also known as VAKT (visual-auditory-kinesthetic-tactile) implies that students learn best when information is presented in different modalities” (Mercer & Mercer 1993, in Murphy, 1997, p.1). In other words, it is an approach focused on the integration of the senses to improve learner outcomes. In Kumar et al. (2015) a model of 7 steps to appropriately integrate a multisensory approach in education is described and was found to be effective in students’ learning outcomes. The 7 steps are the following:

1. Relating new information to prior knowledge

2. Focusing attention to the information
3. Developing sensory connection
4. Organizing the information
5. Expanding sensory images
6. Structuring the information
7. Practicing Recall

The initial studies of this concept were first established by Ayres (1972). She formulated the theory of sensory integration, through various studies done on children. In Smith, et al. (2002) it is explained that “Ayres trusted that the innate drive of the individual to learn and grow emerged when provided with the optimal environment, a fun and playful motivation to engage, and “just-right” challenges” (p. 1). And “she noted that perceiving and knowing are essential to an individual’s ability to pay attention, learn, plan, and do things; or in other words, engage in functional, meaningful, adaptive behaviors or occupations” (p. 3). These two conclusions made by Ayres are considered to correctly design a class, which integrates a multisensory approach. Also, the environment in class is an important factor to properly apply a multisensory approach in the teaching-learning process. According to Bundy et al. (2002, in Smith et al., 2007) “learning is dependent on the ability to take and process sensation from movement and the environment and use it to plan and organize behavior” (p. 5).

Furthermore, in the context of learning a new language, it is necessary for students to express the way in which they think. It is a form of communication, where personal opinions are implied in each class with the learning of different vocabulary topics. The author Knight (2004, in Petrovici, 2013, p. 148) states that every person has his own way of thinking. Respectively, these are:

- visual, which means that a person thinks in images; ideas, memories and thoughts are represented as mental images (for example, the image of a cup of coffee);

- auditory, which implies that a person thinks in sounds. These can be voices or noises, rustles, among others. (for example, the sound produced by coffee when it is poured into a cup);

- kinaesthetic/sensitive, the person “thinks” in sensations, either internal emotions, or physical touch. Here we can include taste and smell (such as the taste of the coffee or its flavour).

Consequently, when educators can understand the way students think, they will be able to design classroom activities that will be more comprehensible. Therefore, a class designed with the insertion of different kinds of activities that are based on the distinct types of senses has the possibility to include all types of learners (Petrovici, 2013).

In concordance, the preschool curriculum defined different principles, that relate to the main ideas of a multisensory approach. In MINEDUC (2001) these are the following:

- *Principio de actividad: La niña y el niño deben ser efectivamente protagonistas de sus aprendizajes a través de procesos de apropiación, construcción y comunicación. Ello implica considerar que los niños aprenden actuando, sintiendo y pensando, es decir, generando sus experiencias en un contexto en que se les ofrecen oportunidades de aprendizaje según sus posibilidades, con los apoyos pedagógicos necesarios que requiere cada situación y que seleccionará y enfatizará la educadora.*
- *Principio del significado: Una situación educativa favorece mejores aprendizajes cuando considera y se relaciona con las experiencias y conocimientos previos de las niñas y niños, responde a sus intereses y tiene algún tipo de sentido para ellos. Esto último implica que para la niña o el niño las situaciones educativas cumplen alguna función que puede ser lúdica, gozosa, sensitiva o práctica, entre otras.*
- *Principio del juego: Enfatiza el carácter lúdico que deben tener principalmente las situaciones de aprendizaje, ya que el juego tiene un sentido fundamental en la vida de la niña y del niño. A través del juego, que es básicamente un proceso en sí para los párvulos y no sólo un medio, se abren permanentemente posibilidades para la imaginación, lo gozoso, la creatividad y la libertad.*

2.2 Curriculum Integration of ICT

The concept of curriculum integration of information and communication technology (ICT) can be defined by Sanchez (2003) as “a process of being part of the curriculum as part of a whole, permeating them with the educational principles and didactics that make up the learning gear. This fundamentally implies a harmonious and functional use for a specific learning purpose in a curricular domain or discipline” (p. 53). In other words, the purpose of integrating ICT to the curriculum is to make ICT invisible and create a natural environment for the learning process.

Also, different aspects influence an effective integration of ICT as stated by Sanchez (2007), these aspects are:

- teacher training
- curriculum
- pedagogy
- evaluation of students

The same author makes it clear that ICT, use of methodologies and content are three factors that need to be in harmony to achieve a significant change in learning outcomes.

In early childhood teaching, Bolstad (2004) established three reasons as to why ICT matters, “First, ICT already influences the people and environments that surround young children’s learning. Second, these technologies offer new opportunities to strengthen many aspects of early childhood education practice. Third, there is support and interest across the whole education sector for the development and integration of ICT into education policy, curriculum, and practice.”

Furthermore, Luke (1999) explains how children’s development has changed due to the influence of technology. He states that “…children’s cognitive, behavioural, and emotional development can no longer be assumed to fit unproblematically into traditional lock-step developmental stages. Today, children’s early literacy and play experiences are shaped increasingly by electronic media” (p. 97). Additionally, Brooker (2003) states “...there is increasing evidence that some of the most exciting and appropriate uses of

ICT are to be found in early year settings, where there is less pressure to meet strict targets and more opportunity to experiment with child-centred practice…" (p. 261). Consequently, these uses have been categorized into different levels. Starting from a level where technology is seen as an isolated object to a full immersion of technological tools in the daily educational practice. As shown in Table 1, the levels of quality of ICT use in an early childhood education setting are interactive and educators fulfill the role of a guide.

Table 1 Levels of quality of ICT use in an early childhood education setting
(adapted from Brooker, 2003, Sheridan and Pramling Samuelsson (2003) in Boldstad (2004))

What this might look like in an early childhood education setting			
	Physical and technical arrangements	**Role of children and adults**	**Scaffolding of children's learning**
A low level of quality (Isolation)	Only one computer is available for children to use, at the teacher's discretion. Only a few software programs are available, the software is uncorrected with the current classroom themes and topics. The child operating the computer has his or her back to the other children and is not involved in the activities.	Children seldom use the computer, nor do teachers encourage its use. Teachers often take a controlling and instructing role, partly to ensure that all children have equal opportunities to use the computer.	Teachers stop engaging themselves once children are self-sufficient and have learned basic ICT skills.
A good level of quality (integration)	The computer is relocated into a more central position among other classroom activities. Computers and other ICT equipment (such as digital cameras) are available for children to use. A range of software programs is available, including pedagogical programs, creativity/multimedia programs, and games.	Sitting together in front of a computer, children help each other, negotiate turn-taking, collaborate, and tutor each other. Children communicate, discuss strategies, solve problems, and have fun together while they use games and educational programs. Children develop different strategies while learning to handle the computer and/ or different programs. They ask friends, experiment, guess, move the mouse aimlessly, use help functions, and explore by themselves or with friends. Teachers encourage children to send email, use the internet for information, and write or illustrate, or lay down, soundtracks and narration for their own stories on the computer.	The computer is still not an integrated part of other activities in the preschool. Its uses can be described as learning by doing various activities on the computer, compared to learning through the computer.
A high level of quality (immersion)	Children use computers and ICT equipment throughout the day as a multifunctional tool that is integrated with other activities and themes. Children learn through the computer and from each other while using a variety of programs or creating their own.	Children explore new topics, are creative in their searcher for information, ask questions, and express their reflections and feeling Practitioners and children use computers to document children's activities, make labels and signs as needed, and send messages. Parents can access information while in the setting.	Teachers interact with and guide the children. They create possibilities in which ICT can be used to support children in developing new experiences and to expand their world.

Apart from this, there are principles that can be followed to appropriately insert ICTs in education and maintain a constructivist learning environment. In Sánchez (2001) these are listed as the following:

- Tools to support learning, with which activities can be carried out that encourage the development of superior cognitive skills and abilities in apprentices,
- Means of construction that facilitate the integration of the known and the new,
- Extenders and amplifiers of the mind in order to expand the potentialities of cognitive processing and memory, which facilitates the construction of meaningful learning,
- Means transparent or invisible to the user, such as the pencil when writing, so as to make learning visible and invisible the technology.
- Tools that participate in an orchestrated methodological set, which potentiates its use with active methodologies such as projects, collaborative work, concept maps and multiple intelligences, in the individual apprentices and facilitators to negotiate meanings and knowledge, with technology as a partner in the cognition of apprentice.

In addition, the term integration of ICTs has revolutionized to a new term called the appropriation of ICTs. This means that technology becomes invisible in the educational process. It is part of the curriculum and a learning facilitator. In Sanchez (2003), the author, defines the concept of appropriation of ICTs like "A flexible, autonomous, creative, transparent and pertinent use in pedagogical making as a tool to support learning, the result of immersion in culturally organized activities, which facilitates the appropriation and leads to cognitive representations that the learner constructs in their mental structure" (p.61). This last concept described is taken into consideration in the planning of the English classes of the present study.

Finally, the emphasis in the integration of ICT is put on students for its main positive effects in the students' development of cognitive and social skills. These effects are stated in Merrill (2010) as the following:

Cognitive skills

- Computers are motivating for young children, increasing their time in on-task behavior.
- Computers provide consistent and frequent reinforcement.
- Computers allow children to work independently at their own pace.
- Software programs often provide extensive scaffolding of learning. Scaffolding is very important in developing cognitive skills.
- The computer provides unique opportunities that may enhance learning.

Social skills

- computers may increase the amount of communication and positive interaction between children.
- Computers offer a unique environment that might encourage children who typically do not interact with others to do so.
- Children engage in diverse social interactions when using the computer.

2.3 Young Learners

Each generation over the years have acquired unique profiles according to the context influencing them at the moment. Prensky (2001) describes the most common terms used nowadays. The digital natives and digital immigrants, which according to Prensky (2005) digital natives are native speakers of technology, fluent in the digital language of computers, video games, and the Internet. While, digital immigrants are the ones who were not born in the digital world and adopted many aspects of the technology. These generations are described to be born up to 2005.

Now, learners in early childhood education were born after 2010. According to McCrindle (2011) they have decided to name the generation born in 2010 and onwards, the generation Alpha or also the Regeneration, Generation Hope, Generation New Age, the Saviours, Generation Y-not and the New Generation. The name was thought out for their overexposing of global warming and terrorism, they are expected to be more

conscience about the damage caused and help resolve the environmental issues. There is little information about the generation alpha, but it can be described by McCrindle (in Williams, 2015) to have the following characteristics:

- they are logged on and linked up – known as 'digital natives'.
- they are the most materially endowed
- technologically literate generation
- app-based play
- increased screen time
- shorter attention spans
- less social formation

In the national curriculum for preschool MINEDUC (2017), the characteristics of 3-year-old to 6-year-old learners are described as,

> *"El segundo ciclo considera el período desde aproximadamente los tres a los seis años. Se estima que en torno a los tres años los niños han alcanzado un desarrollo evolutivo que les permite participar más independiente y activamente de una mayor cantidad y variedad de experiencias educativas, integrándose a grupos más grandes y/o con niños mayores, que favorecen el logro de nuevos y más ambiciosos aprendizajes. Se produce un cambio significativo en sus necesidades de aprendizaje debido a una mayor autonomía en relación con los adultos, capacidad de integrarse con otros y expansión del lenguaje. En esta etapa, niñas y niños han logrado mayor dominio, control y coordinación sobre sus movimientos y una mayor conciencia acerca de las características y posibilidades de su cuerpo, lo que les permite sentirse más seguros y confiados. El inicio del pensamiento intuitivo les permite establecer relaciones lógico-matemáticas y* ***desarrollar significativamente el lenguaje y la capacidad de comunicación****; ya han logrado diferenciarse y avanzar significativamente en la construcción de su identidad, lo que los habilita a ampliar y diversificar sus relaciones interpersonales. Por otra parte, las niñas y niños han adquirido el control de esfínteres.*
>
> *Es importante considerar que alrededor de los cuatro años, tanto por la expansión de las capacidades psicomotoras, cognitivas, afectivas y sociales, como por la proximidad a la Educación Básica, los niños requieren de una mayor especificidad y complejidad en los contenidos de los aprendizajes. De esta manera, se debe iniciar una aproximación más directa a las experiencias que se derivan de los diferentes sectores de aprendizaje del curriculum escolar, manteniendo siempre un enfoque integrado de ellas, lo que es congruente con la forma como el niño percibe el mundo." (p. 30)*

The definition given by these authors, have been taken into consideration in the design of the activities of the interventions. The authors define the strong connection children have to technology, since they are surrounded by it. Therefore, an inclusive emergence of technological tools in daily formal teaching environment is necessary to implement.

Furthermore, the authors Piaget (1936) and Lievegoed (1999) define the children's developmental stages in distinct manners. The first author, states that Children have four stages of development, which are:

1. sensorimotor stage (from birth to age 2) – They learn about the world through their senses.
2. Pre-operational stage (from age 2 to age 7) – They can order objects logically.
3. Concrete operational stage (from age 7 to age 11) – They are aware that quantities can have different forms. They develop logical thought.
4. Formal operational stage (from age 11 to adulthood) – They develop the ability to think about abstract objects.

While the other, Lievegoed (1999) states that, there are three main evolutionary stages, which are essential in the development of the child:

1. Infant (0-7 years) - imitates, learns to talk, experiences senses.
2. Escolar (8-20 years) - the exterior affects happiness, socialize and make friends.
3. Profession (21 and on) - beginning of puberty, recognizes his own me and from this centre begins to socialize with the exterior.

These main stages defined by the authors are the guidelines used by the investigation to offer a limit on the expectations that is put on the children, when given different activities to complete.

2.4 Educational Digital Resources

The concept of educational digital resources first emerged with the open licence of Open educational resources. It was first talked about in UNESCO (2002) as Open courseware. According to Butcher (2015) Open Educational Resources are any type of educational materials that are in the public domain or introduced with an open license. The nature of these open materials means that anyone can legally and freely copy, use, adapt and re-share them. Consequently, Butcher (2015) "the OER have emerged as a concept with great potential to support the educational transformation" (p. 5).

It is important to appropriately integrate digital resources in education. Hussain et al. (2011, in Simin et al., 2007) it is stated that "ICT can help students to develop their skills, boost up their motivation and widen their knowledge and information" (p. 25). In preschool education, different possible roles for digital resources exists, as shown in Table 2.

Table 2 possible roles for ICT in early childhood education (adapated from Boldstad, 2004)

Roles for ICT	Some examples
Children using ICT in their play or learning (alone, with peers, or with adults),	Children using computers to play games, listen to stories, or draw pictures. Children using ICT equipment in games or role-play activities.
Children and practitioners using ICT together to scaffold children's learning	Using the internet to locate information or resources, sparked by children's interest in a particular topic or idea.
Children and practitioners using ICT together to document and reflect on children's learning, or to share children's learning wih parents, or other practitioners.	Taking digital photos, videos, or audio recordings of activities in the early childhood education setting and reviewing these together, or sharing them with parents. Practitioners and children using ICT to build portfolios of children's work, to use for evaluating progress in children's learning and development.
Practitioners using ICT for planning, administration, and information management.	Teachers developing individual learning plans for children, or using, computer-based templates to plan or document children's learning (e.g. using learning stories templates, or inserting relevant concepts from te Whanki into children;s learning records). Creating databases to keep track of important information about children and their families.
Teachers or teachers-in–training learning to use ICT, or learning through ICT.	Teachers -in-training learning to use ICT in their initial teacher education courses Distance-learning teachers-in-training using ICT to learn to become early childhood teachers. Teachers-in-training learning to use technology with children in their practicum placements. Teachers using ICT to document and reflect on their practice, or using ICT as part of a professional development programme.
Children and practitioners using ICT to communicate or exchange ideas or information with other practitioners, parents, or researchers.	Using videoconferencing, online discussion communities, or email, to communicate with other practitioners, parents, researchers, or to share news and information about what's happening in the early childhood education centre.

The Developmentally Appropriate Technology in Early Childhood project (DATEC) in Bolstad (2004) offers eight general principles for determining the appropriateness of ICT applications to be used in the early years:

1. ensure an educational purpose
2. encourage collaboration
3. integrate with other aspects of the curriculum: that is, if children are to understand ICT they need to see it used in a meaningful context, and for real purposes. This includes allowing for ICT to fature in children's play.
4. The child should be in control: that is, the ICT application should not control the child's interaction through programmed learning or any other behaviourist device.
5. Choose applications that are transparent and intuitive. The "drag and drop" facility on a computer screen is a good example.
6. Avoid applications that contain violence or stereotyping.
7. Be aware of health and safety issues. It should be between 10-20 minutes.
8. Encourage the educational involvement of parents

In Kalaš (2010) the steps to initiate the process of integration of ICT into the way children learn and play are mentioned. "We shape these recommendations as a series of eight steps: develop your potential; classify your position; set up your goals and objectives; build your environment; promote professional development of your staff; integrate, observe and reflect; build networks, plan further development" (p. 12). In other words, the environment is an important part in the integration of ICT. The digital resources selected need to provide an opportunity for learners to use them naturally, in an invisible manner.

Furthermore, in Halpern (2016), the average of hours of use of technological screens in different countries in a day are:

- United Kingdom an average of 6.1 hours
- USA an average of 7.5 hours
- Canada an average of 7.8 hours

In comparison to the hours recommended by the department of health of USA and Australia, together with the AAP (American academy of pediatrics) of only 2 hours of maximum consume of screens for underage children, the average in most countries are at a higher unhealthy amount. Plus, the CPS Canadian pediatric society indicates that children shouldn't have any technological devices, like TVs or PCs, in their rooms. They recommend that children less than 3 years of age should have 0 hours of use of technological screens, Children of 3-7 years should have 0.5 to 1 hour, 7-12 years should have 1 hour, 12-15 years should have 1.5 hours, and 16 years and older should have no more than 2 hours. These recommendations are considered in the planning of different classroom activities, within the present investigation. The activities with technology do not exceed the 0.5 to 1 hour recommended to provide a healthy use of the different technological tools.

Lastly, in an interview done to child neuropsychitrist, Amanda Cespedes, by grupo Educar, in 2016, the importance of ICT in the classroom of young learners was described, when she was asked, what the ideal age was for a child to start using ICT. She replied the following:

> *"Las tecnologías digitales (TIC) son un espléndido recurso cuando se emplean en el aula, con objetivos bien definidos. Desarrollan la creatividad, el pensamiento divergente y el convergente, la inteligencia ejecutiva, la originalidad, etc. Es distinto cuando las TIC pasan a ser el recurso de entretención en casa, un recurso que permite a los padres desentenderse por largo tiempo de los hijos porque saben que "están en buenas manos". Yo soy ardiente admiradora de las TIC en el aula, en la medida que se sepan utilizar y se puedan emplear en preescolar en la medida que no se transformen en "el" recurso metodológico único. Los párvulos necesitan experiencias directas."*

2.5 English Language Teaching

Nowadays, in English language teaching there are new methods that include the integration of ICT. There are methods like Mobile apps for language learning (MALL), Language massive open online courses (LMOOCs), and computerized language testing and assessment (Pareja et al., 2016). These new methods are more adequate for the new generation of students (Prensky, 2005).

In Chile, the curriculum for preschoolers designed by the Ministry of Education (2017) doesn't include teaching English as a foreign language (EFL) teaching. It only implies language development through the educational objectives of communication. Johnson (1989) states learners are best able to achieve second language acquisition during a maturational limited period, early in life. Thus, English language teaching is now included in most of preschools around the country. Plus, studies show the notion that children have an advantage over adults in acquiring a second language (Johnson, 1989). In other words, it facilitates the process of learning a second language to start at a young age.

Additionally, bilingualism is defined by Weinreich (1953) as "the practice of alternately using two languages" (p. 1). Likewise, Haugen (1953) claimed that it is "the point where a speaker can first produce complete meaningful utterances in the other language" (p. 7). The appropriate age to achieve bilingualism is explained by Lenneberg (1967) "…the incidence of 'language learning blocks' rapidly increases after puberty. Also, automatic acquisition from mere exposure to a given language seems to disappear after this age and foreign languages have to be tough and learned through a conscious and labored effort. Foreign accents cannot be overcome easily after puberty" (p. 176). For students to acquire a more fluent English it is better to teach it at a young stage and in a natural manner. Savignon (1971) used the term ''communicative competence'' to teach language learners that it is not so important to memorize grammatical structures or dialogues, but to be able to interact with other speakers and use the language with real meaning in natural context.

Now, there are existing studies that have proven both physical and psychological positive effects, when acquiring a second language at a young age. A study conducted by Mechelli et al. (2004) to perceive brain plasticity in bilinguals revealed that bilingual people have higher density of grey-matter in the inferior parietal region, which, according to previous research, is activated during verbal tasks. This area of the brain controls higher cortical functions, like spatial memory storage, orientation and perception of body limbs, which support language and mathematical skills (Beers et al., 2003). The same study showed that young bilinguals directly influence the level of the speaker. Thus, when a second language is learnt at a young age, higher verbal abilities are acquired in the first and second language.

Moreover, Ben-Zeev (1997, in Rosch 2007) establish that among the cognitive skills that are developed by acquiring a second language, the literary skills are the most developed. In another study, it was demonstrated that bilingual children can solve complex tasks with misleading clues more easily than monolingual students (Bialystok ,2009). Consequently, a code switching from one language to other helps strengthen superior mental abilities that allow higher scholar performance (Prior & MacWhinney, 2010).

Furthermore, the use of reading comprehension activities in EFL (English as a foreign language) teaching has proven to need both receptive and productive studies. In a study done by Qing et al. (2015) showed that reading comprehension done with both receptive and productive exercises lead to more vocabulary retention, than only using receptive exercises. Likewise, the selection of content and educational resources is an important asset in language teaching (Tomlinson, 2011). They need to be attracting and relevant to the learners.

Additionally, second language acquisition has proven to have a critical period (Johnson et al.,1989). This critical period for language acquisition is before the maturity stage of a child. Meaning that, it has been proven that children acquire a better pronunciation of a second language, if they are taught at a young age.

2.6 Communicative Language Teaching

The teaching method of Communicative Language Teaching (CLT) initiated at the end of the 1960s. It followed the method of situational language learning, where specific grammar structures were taught according to the context proposed. In the same way, the main ideas from situational language learning influenced the development of the concept communicative competence, which was first defined by Hymes (1972) as a concept that involves what and how to say something centered on the participants, intentions, situations and roles. This concept emphasized the use of the whole language to respond to communicative need. The beginning of this idea braced a structural paradigm in teaching syllabus and didactic materials. Richards (2006) mentions that the new communicative approach gives to the students the opportunity to achieve meaningful learning because the learners learn a language meanwhile they are communicating it instead of through a grammar-based approach. This happens because the language needs to be produced in different contexts to start to internalize the language through vocabulary, intonation, mimics, and other types of micro skills.

Likewise, in Richards (1986) CLT is defined as “an approach (and not a method) that aims to (a) make communicative competence the goal of language teaching and (b) develop procedures for the teaching of the four language skills that acknowledge the interdependence of language and communication” (p. 66). Expressly, it is an approach which focuses in the whole of a language. It transforms it into a need for learners, by giving activities that provide an opportunity for learners to fully communicate with others and use this second language.

To have a better understanding of this approach, Richards (1986, p. 71) expresses some of the characteristics of CLT, in the four following points:

1. Language is a system for the expression of meaning.
2. The primary function of language is for interaction and communication.
3. The structure of language reflects its functional and communicative uses.

4. The primary units of language are not merely its grammatical and structural features, but categories of functional and communicative meaning as exemplified in discourse.

Finally, the activities of CLT are based on producing and comprehending the language. It includes task-based activities, group activities, and paired activities, where the students are forced to apply the language to meet a specific need. “The range of exercise types and activities compatible with a communicative approach is unlimited, provided that such exercises enable learners to attain the communicative objectives of the curriculum, engage learners in communication, and require the use of such communicative processes as information sharing, negotiation of meaning, and interaction” (Richards, 1986, p. 76).

2.7 Contextual Background

The educational establishment, Antilen School, of the participants selected for the study is a subsidized-private school located in the sixth region, Rengo, Chile. It is composed of two floors with 30 classrooms in total. The kindergarten classroom contains a separate bathroom and backyard from the other students with different plastic slides and tubes for the children. It is small, decorated with different colorful educational materials. Each student has a hook assigned to keep their personal belongings.

The school was founded on October 31, 1996 by different associates and has grown from an enrollment of 300 students to 850 students. These students attend levels of pre-school, elementary and a humanist- scientific high school. Also, increased its space by adding a second floor. The educational levels are divided into a basic level, where teachers work with one technical unit director and a high school level, where teachers work with a different technical unit director. The mission and vision of the school is stated in the following from the school website:

Misión

El Colegio Antilen ofrece una educación integral, de calidad, con equidad, respetando la diversidad y capacidades de sus alumnos, en un clima de convivencia armónico fundado en el respeto mutuo. Atendemos alumnos y alumnas desde Primer Nivel de Transición hasta Cuarto Año de Enseñanza Media Científico-Humanista. Centramos nuestro quehacer educativo en un modelo pedagógico que junto a la adquisición de conocimientos conlleve al desarrollo de valores, actitudes y habilidades, formando personas que sustenten sus acciones sobre principios que les permitan contribuir en la construcción de una sociedad más justa, humana y solidaria, y capaces de insertarse exitosamente en un mundo globalizado.

Visión

El Colegio Antilen es una real alternativa educacional en la comuna de Rengo y sus alrededores, otorgando una formación de calidad e integral, que garantice a los niños y jóvenes aprendizajes significativos y sólidos principios humanistas cristianos, potenciando el espíritu crítico en cada uno de ellos para que sean poseedores de férreos valores que les permitan alcanzar éxito personal, proyectándose e integrándose positivamente en la sociedad.

In its institutional educational Project, the general methodology followed by all teachers of the establishment is defined as follows:

En el aspecto metodológico, se respeta la flexibilidad y la adecuación de las prácticas docentes en función del logro de aprendizajes significativos. Sin embargo, nuestro proyecto de formación integral requiere que la institución escolar sea una verdadera comunidad educativa, en donde se respete a cada niño o joven más allá de sus capacidades intelectuales. En este sentido, nuestras prácticas metodológicas ponen énfasis en la motivación, en el desarrollo de la reflexión y del espíritu crítico, en el aprender a pensar y a valorar, en el aprendizaje de estrategias cognitivas y en la integración de los saberes a través de todos los niveles educativos. Nos proponemos conseguir en nuestros alumnos la autonomía intelectual, base y soporte de una autonomía moral. Por ello la enseñanza se dirige a desarrollar tipos de aprendizajes significativos que susciten en el alumno un conocimiento profundo de las cosas que motive valores y compromisos. En resumen, pretendemos armonizar la formación intelectual con el cultivo de la dimensión socioafectiva y de la formación de la voluntad a través del ejercicio del esfuerzo y de la formación de hábitos.

Within the same educational project, the students and teacher profiles are defined. In each definition, there is an emphasis made on innovation and preparing students for

the future. This profile accords with the main objective and intention of improvement of the investigation presented.

Finally, it is important to highlight that the participants of the study live in a city, where it is primarily rural. It is common for them to interact with farm animals and harvest fields. It has also been brought up, through oral statements of the same participants, that many of them own or have taken care of horses, chickens, ducks, etc. It is for this reason, the contents chosen for this study is the farm animal unit. It is a relevant unit for them to learn, which according to the second transition national curriculum of Chile, it is important and more significant for students to learn about objects and animals from their daily life, to develop a better sense of their surroundings. The intuitive connection and learning young children have to their natural environment is better explained by the concept of biophilia, which is the natural relation and curiosity human have to their environment and living species (Torres, 2015).

2.8 Previous Studies

In this section, the two following investigations were selected to support the design of the didactic strategy constructed in the present investigation. Each of the studies have used a similar methodology framework and focused on the same line of investigation, as the investigation being conducted. They have concluded with interesting results, which will be considered and implemented as a basis for certain decision making in the planning process of the activities being proposed in the investigation.

The first study titled “Information and Communication Technologies (ICT) and Pupils with Attention Deficit Hyperactivity Disorder (ADHD) Symptoms: Do the Software and the Instruction Method Affect Their Behavior?” Done by Christina Solomonidou, Fotini Garagouni-Areou, and Maria Zafiropoulou from the University of Thessaly, Greece in 2004, focused on studying the effects of Information and Communication Technologies (ICT) use on pupils with Attention Deficit Hyperactivity Disorder (ADHD) symptoms. An

intervention was done in nine Greek primary school pupils with ADHD symptoms and four others with no such deficit. Each of them worked on a computer, either individually or collaboratively, once a week for a six-week period. As stated in the summary from this study “The pupils worked on a series of activities especially developed for the study, with educational software and ICT environments of different types and features. At the end of the study, it was found that specific characteristics of the educational software used by the pupils with ADHD symptoms stimulated their attention more than others did. Pupils with ADHD symptoms appeared to prefer reading short texts, watching short videos, and listening to short narration items when they work on the computer. Furthermore, significant differences were observed on those pupils’ behavior and performance in learning tasks between individual and collaborative work.” (p.109)

The second study is titled “Special Education and ICTs” and was done by Athanasios S. Drigas, and Rodi-Eleni Loannidou from Athens, Greece in 2013. They examined the most representative studies over the last decade which exploiting ICT, contribute to independent pupil learning and curriculum. After an extensive process of examination, they established that “The results of the current study are encouraging and there is a consensus that ICTs do play a significant role in both ensuring and enhancing learning and life skills programs of students with special educational needs.” (p. 45). For this reason, the study was considered, when focusing on a strategy that will work for all students with different educational needs.

CHAPTER III: METHODOLOGY OF THE STUDY

3.1 Type of Investigation

According to Gomez et al. (1996) a qualitative research "studies reality in its natural context, as it happens, trying to make sense of, or interpret the phenomena according to the meanings they have for the people involved. Qualitative research involves the use and collection of a wide variety of materials, like, interview, personal experience, life stories, observations, historical texts, images, sounds that describe routine and problematic situations and meanings in people's lives" (p. 32). Also, a quantitative research measures the data collected with a frequency and statistic method (Hernandez et al., 2014). The following research implements a mixed method of both quantitative and qualitative, for its main objective is to analyze a didactic strategy design in a specific context, through the observation of the interventions, comments of the participants and statistic data collected. The scope of this investigation will consider the following aspects, which have been selected a priori and can be modified later, depending on the occurrence of the observations:

- Cognitive engagement time of the children in activities with ICT tools.
- Comparison of vocabulary acquisition of the class intervened with the class using a traditional method.
- Behavioral currents of the children.

It is specifically a concurrent triangulation design (DITRIAC), where Sampieri (2014) “quantitative and qualitative data about the research problem is collected and analyzed at approximately the same time. During the interpretation and discussion, the two kinds of results are explained, and comparisons of the databases are generally made” (p.557).

Additionally, it is an exploratory investigation, since, it is a field of education with little information and its final purpose of the study is to analyze a strategy, for future investigations. As defined in Cazau (2006), the objective of an exploratory investigation

is “the purpose of an exploratory research is, as its name implies, to examine or explore a research topic or problem that has not been studied or has never been addressed before. Therefore, it serves to familiarize themselves with relatively unknown, little studied or novel phenomena, allowing to identify promising concepts or variables, and even to identify potential relationships between them” (p.26).

3.3 Design of the Investigation

The investigation is designed to be a participative action research (PAR) study, which will be applied to a quasi-experimental intervention, through a quantitative aspect. In Whyte (1991) point of view, PAR is described as a methodology of investigation that “involves practitioners in the research process from the initial design of the project, through data gathering and analysis, to final conclusions and actions arising out of the research” (p.7). Ergo, the investigator will participate throughout the study, for the investigator is also the English teacher of the students. This methodology is supported by many scientific researchers and has been validated in the social sciences. Greenhalgh & Taylor (1997) contended that researchers who employed qualitative research pursued deeper truths while aiming “to study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meanings that people bring to them” (p.740).

Additionally, as mentioned previously, the investigation has an existing quasi-experimental design to obtain a close and detailed observation of the behavioral and cognitive engagement of the students, who are being intervened with the proposed strategy, and compared to the students, who are taught with a traditional method. The traditional method was selected through the information given by the interview, which will be done on the teacher. For this quasi-experimental design, there are two existing variables:

- The independent variable: the didactic strategy implemented in the ESL kindergarten class.

- The dependent variable: The behavioral and cognitive engagement of the class actively participating with the designed didactic strategy.

At the same time, the investigation is designed to be a case study, through a qualitative aspect. The study focuses in a specific school with two actively participating classes, which will be intervened and analyzed. It is a type of sample that is used in both quantitative exploratory studies and in qualitative type of investigations, where the objective is to obtain information of quality and not quantity (Sampieri, 2014).

3.4 Selection of the Sample

The following study used a non-probabilistic random purposeful sampling, which adds credibility to the sample and reduces judgment within a purposeful category (Patton, 1988). The sample size is of two kindergarten class, which is composed of 63 preschool students in a subsidized-private school, in the city of Rengo, Chile (as shown in Annex 6). Each class are imparted in different schedules, one kindergarten class in the morning and the other in the afternoon. The class in the morning, with 31 students, was selected to be observed without intervention (the control group) and the class in the afternoon, with also 31 students, was selected to be observed with the intervention (the experimental group). The students are of evenly mixed sex, between the age of 5 to 6 years, with an existent background in English learning. According to the Common European Framework (CEFR), the students are at a starters level of English. In addition, in studies with a phenological perspective, in which the objective is to analyze values, experiences, and significance of social groups, it is frequent to use expert samples and specific case sample (Hernández et al., 2014). That is, the study is also recognized as a specific case sample, where the kindergarten students were selected for the absence of investigations in language teaching with ICT in this early stage. As mentioned previously, the participants were divided into two groups:

The experimental group – the afternoon class, where the designed strategy is being implemented.

The controlled group – the morning class, where the children will use the traditional method of teaching (as shown in Annex 5).

The participants for the interview and questionnaires are also a non-probabilistic random purposeful sampling. The interview will be directed to the preschool educator, who has worked with the children from the study for two years and has a long trajectory as an educator in the establishment. Additionally, the questionnaires is composed of a sample size of 49 parents from both the controlled and experimental group, where only the completed sheets will be taken into account for the collection of data.

3.5 Instruments

In the following section, a short description of each of the instruments designed to collect data will be presented. The selection of the instruments underwent a process, by following the guidelines of Gomez et al. (1996) and Hernandez et al. (2014). The instruments constructed were the semi-structured interview for the teacher, pre and post diagnostic tests, questionnaire for the parents, field notes, videos of the lessons designed, and the lesson plans for each intervention.

Before initiating the study, each of the participants were informed of its characteristics and their participation, confirming their commitment by signing the informed consent (as shown in Annex 1). The authorization forms designed permitted a full comprehension of the investigation being imparted at the school. The parent guardian of each child consented permission with full knowledge of the video tapes and method used during the interventions. The principal of the school also gave consented permission for the investigation to take place and was fully aware of the process required to complete the intervention. Also, the teacher and assistants were given a full description of each intervention designed and gave consent to allow recordings and interviews of their work.

The questionnaire and pre and post evaluations were validated by experts from the same school, where the study was conducted. They are the following:

- kindergarten teacher

  Elisa Lopez with an educational degree and 20 years of teaching experience in the same establishment of the study. She has been the participants head teacher for 2 consecutive years. Also, Elisa has different specializing certificates in kindergarten education.

- pedagogical head of unit

  Daniela Latorre with an educational degree and master's in educational curriculum and administration. She has 7 years of teaching experience and has been the pedagogical head of unit for 2 years at the establishment of the study. Daniela has different diplomas specializing in instruments of evaluation.

3.5.1 Interview

A semi-structured Interview was constructed to collect information of the past experiences of the children's learning environment. It will be applied on the preschool teacher of the participants in the study, before designing the strategy and classes. The teacher will be the key informant, which will help to give general information about the children participating in the study. The interview consists of a maximum of 8 questions first focusing on the background of the children and later the educational methods and resources used to educate them (shown in Annex 2). Also, it focuses on the experience of the teacher with these groups of children, the teaching methods used on a regular basis throughout the year and a few questions based on specific characteristics of the groups. Some of the questions are, for example, "What is your teaching methodology used with the children? "and "Are there any children with a diagnosed learning difficulty? If yes, which ones?". These questions will help achieve a greater understanding of the characteristics of the group of children and the type of activities these children were used to doing. Its main objective is to identify the past teaching methodology and overall characteristics of the different groups of children participating in the study.

3.5.2 Pre and Post Diagnostic Evaluations

The pre and post diagnostic evaluations will be conducted a week before the interventions and a week after the interventions. Each of the children are to be tested individually and orally in the post and pre-test. They are to come up to a desk and with flashcards they must select the image, which matches the word the evaluator pronounces. The answers selected by each student are to be marked on a separate sheet by the evaluator. The children only identify the name of six different farm animals, which are to be worked on throughout the interventions to later evaluate again. The results of these diagnostic evaluations will be later presented and analyzed. The instrument selected for the diagnostic evaluation is an instrument used frequently by their main preschool teacher. It is an instrument the children are comfortable with and validated by experts.

3.2 Hypothesis

In Hernández, Fernández and Baptista (2003), hypothesis is defined as a concept which, “indicates what we are looking for or trying to prove and is defined as a tentative explanation of the phenomenon investigated, formulated as a proposition" (p. 140). In agreement with this, it is important to mention that the following study does not initiate with a hypothesis, for, as mentioned before, it is exploratory and focuses only in validating a design, serving only as a basis for future investigations in this field.

3.5.3 Questionnaire

A questionnaire was also designed for the parent guardians of each of the children participating in the study from the control and experimental group, to further understand the background of each participant and their encounters with technology in their daily

lives. It is an instrument validated by experts. The parents will be randomly selected to participate in the study as general informants. The main objective of this instrument is to recognize the different encounters of technological tools that the children of the second level transition course have at home, through the perceptions of their parents. These questionnaires have an extension of 6 multiple choice questions, directly focused on the amount of time the children are exposed to technology and the amount of freedom they have with different technological device (a detailed presentation of each questionnaire is shown in Annex 4).

3.5.4 Field Notes

Short notes will be taken, through the investigators perspective, of each intervention conducted in both groups. These notes will emphasize the opinions and reaction of the children during the different activities. The field notes offer a better opportunity to capture the significant opinions of the children and their thoughts about the use of technology of the classroom, which is harder to capture by camera.

3.5.5 Visual Data

Visual data will be taken to describe the way children interact in the English classes. It will be collected through videos that will be taken from different cameras placed in strategic points in the classroom to catch the interaction that occurs throughout the class. Throughout each intervention the video cameras will capture the general experience of the children. These videos will serve for later analyzation of the engagement the children have with the different activities presented to them. The parent guardian of each child has consented full authorization of using the images of these videos for the present investigation.

3.5.6 Lesson Plans

The lesson plans (presented in Annex 5) have been thoroughly thought out to improve the children's potential in the acquisition of a second language at a young age. Each lesson plan includes the transversal values, main objective, indicators, and use of ICT. The lesson plans are divided into the interventions with the proposed didactic strategy and interventions without the didactic strategy.

3.6 Techniques for Data Collection

A thick description was selected for the analysis of this study, together with data triangulation. A thick description will help to describe not only verbal statements, but also gestures that students have during the classes imparted, which are harder to capture in camera and can only be perceived by participation. Geertz (1973) defines it as an analysis not in search of laws, but an interpretive one in search of meaning. It looks to explicit social expressions and improve comprehension of the behavior within the culture.

Also, the different information collected from the instruments is used for data triangulation; that is, the results obtained from one source can be cross-examined by results obtained from another source of data collection (Hernández et al., 2014). Additionally, method triangulation, "frequently combining both quantitative and qualitative data methods, involves the use of multiple data collections such as observations, interviews, and documents. Analyzes multiple data sources to support patterns and identify inconsistencies" (Babione, 2015, p.147). It is specifically a triangulation of sources and a triangulation of methodology. In (Casanova, 2007) the triangulation of sources is defined as, "the possibility of gathering information to confirm a piece of information about the work done by the students, different teachers, the students evaluated, etc" (p.8). Also, by the same author, the triangulation of methodology is defined as, "the use of various methods, techniques or instruments to verify certain data" (p.8). In the present study, the

use of different instruments and methodologies supports the evidence and final conclusions in an undoubted manner.

3.7 Resources

The following are crucial resources needed to successfully fulfill the investigation:

Material Resources: video cameras, photocopies, apple brand tablets, projector, speakers, laptop, program, and ESL English book, class planifications.

Human Resources: The researcher, teacher assistant, and English teacher.

3.8 Procedure

- Meeting with principal, Technical unit, and parents of the school to inform about the investigation and obtain their formal consent.
- Planning of the classes and creation of the different instruments previously described.
- Interview of full time preschool teacher, to obtain any useful background knowledge of the class in general.
- Initiation of intervention of four classes, which are divided into 1 class per week.
- Analysis of the information gathered, throughout the investigation.
- A description of the results obtained at the end of the study.

3.9 Chronogram of the Activities

The time of activities for the development of the investigation are expressed in the following Table 3:

Table 3 Chronogram of the Activities in the Investigation

Activity of the week	Year 2017 and 2018																															
	Sept.				Oct.				Nov.				Dec.				Jan.				Feb.				Mar.				Apr.				May			
	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4	1	2	3	4
Construction of theoretical framework	x	x	x	x	x																															
Construction of methodology and instruments						x	x	x	x																											
Design of product									x	x																										
Intervention And collection of data until saturation[1]											x	x	x	x																						
Analysis of data															x	x	x	x	x	x																
Interpretations of results																					x	x	x	x	x	x	x									
Editing																												x	x	x	x	x	x	x	x	x

3.10 Didactic Strategy Description

The term didactic has been defined by various authors as a science, whose objective is to organize and orient the process of teaching and learning, with the finality to acquire intellectual habits and formation. Escudero (1980) and Fernández Huerta (1985) it is the process of normative decisions, which lead to learning with the guide of teaching methods. These authors emphasize the concept of didactic to be a process of decision making in a formal setting, which aid in the art of teaching to gain learning. In this process there are three main participating actors. The teacher, who plans and makes decisions, the student, who follows and learns, and the content, which is the subject that is being taught. Furthermore, the term strategy is defined as the decisions the teacher

[1] The time estimated in the intervention of the study may change, since it is until participants demonstrate a repetitive pattern in their behaviour.

makes in the didactic process. The strategy depends on the content and context of the participants. There could be one strategy to teach many different contents (Jennifer, 2011).

Therefore, the didactic strategy proposed merges key points from different existing teaching methodologies and approaches. These main concepts are the multisensory approach described by Ayres (1972) and communicative language teaching defined by Richards (1986). These concepts have been described in detail during the theoretical framework of the investigation. In consideration with the existing theories, the strategy designed alternates between activities with the use of ICT tools and handcrafted activities to activate different senses (kinaesthetic, visual, auditory), which look to promote communication in a second language. The children of second level of transition have a short attention span (as described in theoretical framework), therefore require an alternation of short engaging activities within the 45-minute sessions of English language teaching. The proposal offers the children the opportunity to use their senses to improve the form of second language acquisition with a multisensory approach. This aids in the adaptation of teaching to fulfill a range of children with different forms of learning. The children are presented with the content in many different forms, giving a vast array of activities to completely learn and practice the second language.

The main objective of this strategy is to improve second language acquisition in a second level transition classroom. As stated by Krashen (1995) “The first way is language acquisition, a process similar, if not identical, to the way children develop ability in their first language. Language acquisition is a subconscious process; language acquirers are not usually aware of the fact that they are acquiring language but are only aware of the fact that they are using the language for communication” (p. 10). For this reason, ICT resources (screenshot of resources shown in Annex 7) are implemented to increase the amount of language input the children are exposed to in each session. Using multimedia, online games, virtual books, and tablet applications, the children are presented with many benefits in language acquisition. According to Mohammad et al. (2012), some benefits are collaborative learning enhancement, a paradigm shift in teaching and learning, and

engagement. The children collaborate by sharing videos and completing game-oriented goals together. The teaching automatically transforms into a learner-center approach, where they become engage in the activities presented. Also, the platforms selected must be age appropriate and use language at learner level, as to avoid frustration in comprehension. The selection of the ICT resources underwent a rigorous revision of the complete guidelines established by Bolstad (2004). They also followed the 8 golden interface rules, as to provide the children with intuitive use of the applications in the tablet (Shneiderman, 1998). The images and font used need to be easy to understand and the icons added were comprehensible for easy access to the games within the application. At the same time, the online websites selected went along with Nielsen (2001), for the organization of the images and amount of texts used need to be limited as to not confuse and frustrate young learners.

Furthermore, the didactic strategy has been implemented in the planning of the interventions with the controlled group (Annex 5). They include the main objective of each session and the designed alternating activities to improve the form of teaching young learners a second language. As stated by Ellis (1994) “learning for all young children is best derived from direct experience, manipulation of concrete objects, and social interaction with adults and peers. As kindergarten teachers know, younger children learn more by talking while doing, than by listening to a long verbal explanation from the teacher. The same holds true for young English language learners. Thus, learning environments that are age appropriate for younger monolingual children tend to be optimal for young English language learners as well. Nevertheless, special accommodations are needed to help young English learners adjust to a school, understand instruction, learn English, and succeed socially and academically” (p.61). For this, a multisensory approach, in where a constructivist paradigm is presented, as an ideal method for young children to acquire a second language. This idea is also supported by Sanchez (2004), in the statement “the constructivist epistemology establishes that the only available tools to learn are the senses” (p. 76).

On the other hand, the didactic strategy seeks to present the children with educational resources and contents that attract the learner's interest and attention. In Tomlinson (2011) point of view, the materials for the teaching of languages should achieve impact, help learners feel at ease, and help learners develop confidence. It should also be perceived by learners as content that is useful and relevant to their lives. The transversal use of language gives the opportunity to teach a variety of contents, within the main objective of developing language comprehension. In the national curriculum of preschool's second transitional level there is an emphasis made in the importance of teaching natural sciences at a young age. The education department included learning objectives centered in comprehension of their natural environment and recognize and appreciate the flora and fauna (MINEDUC,2017). For this reason, the concept of biophilia is integrated into the didactic strategy. In (Wilson, 1984) the concept is defined as "the innate tendency to focus on life and life like processes" (p. 1). The same author suggests that "the urge to affiliate with other forms of life is to some degree innate, hence deserves to be called biophilia" (p.85). For this innate tendency humans have, it is the criteria used for the selection of the content.

CHAPTER IV: RESULTS AND ANALYSIS OF THE DATA

4.1 Field Notes

4.1.1 Notes

4.1.1.1 *First Intervention*

Date: October 30,2017

Controlled group (Morning class): planification without strategy proposed

I greeted the children and told them that a special guest would be coming to the classroom. As soon as the special guest entered, who is a student from the school in grade 6, the children instantly became quiet and intrigued by the girl that came into the classroom. They engaged in basic conversation in English, the children were able to ask her the two questions, that they have learned. After, an introduction to the class was given by asking them about the farm. The children were asked if they had farm animals in their house, four of them have farm animals in their backyards and 3 of them at their grandparents´ house. An informal oral pre-test was given by asking, if they knew the name in English of each farm animal. Most of them already knew the name of horse and mouse and only one boy knew the name of a chicken. After, I presented the vocabulary to the children, by pointing at the flashcards taped on the whiteboard and making them repeat the pronunciation. They also had to select the animals that live in the farm from the ones that don't. During the presentation of contents, the class in general were restless and distracted. Many of them were talking to their classmates in their tables or fidgeting with their fingers. Later, the first worksheet was given to the children, where they had to match the shadow of the animal to the picture. At first, they started off well, but soon became bored and began to play. The kids, who finished first, started to walk around the classroom and distract the others. When they were done the first activity, we repeated the names of the farm animals by pointing at the flashcards. Finally, they were given the last activity, where they had to cut four of their favorite farm animals to create finger puppets. In this

final activity, the children were more restless than before and many of them were walking around the classroom.

Experimental Group (Afternoon Class): planification with strategy proposed

The class started with the initial greetings songs, which is how we have started our classes since the beginning of the year. The students know it by heart and sing it every time. After, I asked them how they were and they all respond with different feelings. A special guest is brought into the class and the students stay quiet and are intrigued by the visit. They answer familiar questions and ask our special guest the same questions back. Later, they are shown the 3D images and are asked about farm animals. In the class 5 different children have chickens or some other type of farm animal at home. Plus, they are asked about their previous knowledge of the vocabulary presented and the only word most of them knew was chicken. Th rest of the animals they were unfamiliar with. The students repeated the pronunciation of each and were captivated by the images shown. When I initiated the first activity of an online web resource animal farm game, the children were a bit rowdy. I told them that I will only pick them to come and play, if they are listening and sitting correctly. The students immediately sat right and quiet. While one kid was moving the farm animals on the computer, the rest of the class told him what to pick and where to put it. Everyone in the classroom was participating together. After they sang the animals on the farm song, where all the students were yelling the animal sounds and dancing. Next, the students were given cheese and eggs to taste and guess from which animal the different food products come from. They were later given time to play with an app, where they played different games with the farm animals. They received one tablet, per 4 kids. Here, it was easy to observe that the kids took turns and collaborated to complete each game. Some of them decided to play one game and pass it to the next, while others decided to touch the tablet ones each until they finished the game. They played quietly until I told them to stop. After the activity, we sang the animals on the farm song again and finished with our last activity of creating finger puppets. When the students were told that they could choose four of their favorite farm animals, they were excited to

complete the activity and happy about having a choice. They started commenting at their table the animals they chose.

4.1.1.2 Second Intervention

Date: November 06, 2017

Controlled Group (Morning class): planification without strategy proposed

In the second intervention I focused on reading. I started with the special guest where the children listen and ask their questions. After, we reviewed vocabulary, while using the flashcards. The children repeated the name of the animals without any problems. Later, we gave each of the students their finger puppets created the previous class, so they can follow along with the story. Consequently, I showed them the book and started reading. At first, the children weren't paying much attention, but as soon as they noticed that the book made a noise the children paid attention to the story. They seemed fascinated by the flaps that opened in the book and the noise of each animal that it made. After reading the book, the children played with their finger puppets naming the animals and trying to make the sound each one makes. In this activity, some of the children played well, while others got bored fast. Finally, the children were given a worksheet, where they must cut the animals and paste them by size. In this activity the children were rowdy and the child that finished first, distracted the rest of the children.

Experimental Group (Afternoon class): planification with strategy proposed

The second intervention started with the greeting song, where the children followed the actions of the video and sang along. Later, our special guest came to the classroom, so the children were able to practice their greeting questions with an older student from the same school. They were very amused by this activity and everyone wanted to participate. Next, the assistant teacher and I handed them their finger puppets and asked them to predict what the story was going to be about from the initial imaged displayed on the projector. The children agreed that we were going to read about a farm. As the digital

book started the students listened and were captivated by the flowing pages and moving images from the digital book. It also gave them an opportunity to listen to a different accent of English from my own, as a recording of native English accent was reading the book to them. The children were, after, to listen to the story again and follow with their finger puppets, as the different characters from the story appeared. Finally, each table with four children were given a tablet to record a scene from the book. Many of them use their farm house to recreate that the animals (the finger puppets) were coming out and playing around with other animal friends. They were able to recognize their names and the sound each of them made. Here, I also noticed that most of the children were able to manage the camera by themselves. They knew how to go to the camera record a video and view to decide whether they liked it or not. One of them even noticed that the tablet had a good camera and commented on it, as well as, another child was wondering where the video will be published. He asked me, if the video would be published in YouTube or in some other website. I finished the class by letting them play with the farm animal app, that I selected for them.

4.1.1.3 Third Intervention

Date: November 13, 2017

Controlled Group (Morning Class): planification without strategy proposed

Children greet the teacher and sing the “hello, how are you?” song. They also practice their greeting questions with our special guest. We proceed to singing the animals on the farm song to help review vocabulary. The children enjoy singing and dancing with the song. They show a comprehension of the words and start to remember it and sing along. The children participate in a TPR activity to act out the different actions of each farm animals. A picture of each of the animals are placed in different corners of the classroom. The children must hear the word I say to identify which animal it is and run to the corresponding corner. They enjoy playing the game and running around the classroom. After a while, I observed that the children would follow around certain

classmates. The first one to identify the animal would run to the corner and the rest would follow. I noticed that at first, they followed and after the started to remember the corners and the words of the animals, so many started thinking on their own. After a while, I told the children to line up, so I could order the tables and sit them back down again. They are each given a coloring activity with different farm animals on them. They were to choose which farm animal they wanted to color and had to tell me what color they were going to use to color the animal. Some of them wanted to color the animals, their typical colors, (for example, the pig is pink, the horse is brown, etc.) while others wanted to be created and colored the pig red and the horse blue. Some of the children finished before. The ones that finished first were rowdy and started to get bored. As soon as everyone was done, I told them I had a surprise for them. I took a real live chick for them to show and take care of. The children touched the chick gently and were very excited to see one. I asked for its name in English and they were all able to remember that the name was “chicken”. They took turns touching the chick and later went to wash their hands. Finally, the children select their favorite farm animal and with play dough they create it.

Experimental Group (Afternoon Class): planification with strategy proposed

The children greet the teacher and sing the “hello, how are you?” song. They meet our special guest to practice the greeting questions. I noticed that being the third time we do this; the children seem more comfortable in asking questions and communicating in a second language with an older student from the same school. After, they sing the “animals on the farm” song. They repeat the actions and sing along to the lyrics. The children reacted the same way as the class in the morning to the songs. They start learning it little by little and become more comfortable with dancing to it. Later, we played the same game, where they run to the corners according to the name of the animal that is given to them. They loved playing and again had the same reaction as in the morning. I noticed that in general games and songs always captivate their attention. Next, the children view a short cartoon, identifying the color of each animal that appears. They were after given the same coloring activity as in the morning and the same thing happen. The children that finished first started to get bored and rowdy. Later, the children were shown a real live chick and

were told how to take care of it. They were very excited. Some of them jumping around their seats. I told them they had to take turns, or they could hurt the chick. Each of them patiently waited at their table. I let them wash their hands after touching the chick and gave each one a piece of play dough to let them create their favorite farm animal. Finally, they could play with the farm animal app.

4.1.1.4 Fourth Intervention

Date: November 14, 2017

Controlled Group (Morning Class): planification without strategy proposed

Children greet the teacher and sing the “hello, how are you?” song. The children put on their badges created the previous class. They were divided into groups, according to the farm animal they chose. Each group went to their station. The Children immediately started playing with the things placed in their station. I had to give fast instructions and explain to them what they were to do with this. The children were very excited to receive a visit from pre- kindergarten children. They understood the instructions well and waited patiently for the children to come.

The different stations were:

1. Puzzles
2. Match pads
3. Count pads
4. Act it out cards and farm play area.
5. Color activity to be placed on the wall.
6. Word search activity

The visitors played in each station and with help of the assistant teacher, we walked around making sure everyone understood what to do. They were very amused, and the children found it fun to have to give the other children instructions and explain what to do.

Experimental Group (Afternoon Class): planification with strategy proposed.

During the afternoon, the same activities were done, and another set of pre-kindergartens came to visit the classroom. This time one of the activities at the table was to play with the farm animal app. At this station the children were more amused. I noticed that the more active and impatient children waited for their turn to play. It helped with repeating the farm animal words in English and remember what the word translated to in Spanish.

4.1.2 Analysis

During the interventions, it was expected for the children to demonstrate engagement throughout the activities completed in each class. At the same time, it was expected for them to interact with the support of the ICT resources and make a connection with the content being taught in class. As previously established by Tomlinson (2011), the impact that the content and resources have on the students is crucial for language learning. After reading the field notes written by the investigator, two different interesting aspects of the children's behavior come to light. These actions of the students were not able to be captured by video, since the children spoke quietly and faced the opposite way.

a) Connection between contents learnt and used.

During the first interventions, in both groups, the children were excited to be able to put into real life context the short questions learnt in the second language. The children maintained an excited expression on their faces and they asked many times, when the special visitor was coming, showing enthusiasm.

b) The knowledge and questions of tablets.

At first it appeared the children, in the experimental group, represented eagerness in the use of tablet. On the contrary, after walking around the tables and listening to their comments. It was the brand of the tablet they were excited for. The children could

already distinguish from a more economic tablet from a better quality one. Also, as mentioned in the notes, during the activity of their recordings, a group of children asked, if the recordings were to be published somewhere, like YouTube. It showed the knowledge the students have about social networks and how publishing their work has become an extrinsic motivation at a young age. The use of technological tools provided the enthusiasm and engagement the children needed to improve their language learning experience.

4.2 Interview of the Teacher

4.2.1 Transcript

In the following section, a Spanish-translated transcript of the interview done on the nursery school teacher is presented and analyzed to better comprehend the characteristics of the classes participating in the investigation.

Objective: identify the past teaching methodology and overall characteristics of the different groups of children participating in the study.

Name of teacher interviewed: Elisa Lopez
Date of interview: October 25, 2017

1.	**How long have you been a preschool teacher?** "I've been a preschool teacher for 10 years."
2.	**How long have you worked with these groups of children?** "I started working with this group last year in pre-k, this will be my second year with them."
3.	**What type of classroom management structure do you implement?** "I try to implement songs for classroom management, we have our 'be quiet' song and 'sit down' song, which works great with the children. We also have our daily routine. It helps so the children know what is expected of them. "
4.	**What is your teaching methodology used with the children?** "My teaching methodology is very traditional. I use behaviorism with my children. They have reading and writing activities with breaks in between. We have a behavior chart to help with discipline."

5. How would you describe these groups of children? "the children in both groups in general are well disciplined. The children in the morning seem to learn faster than the children in the afternoon. I've noticed that activities where they participate, use concrete objects or watch videos makes them pay more attention."
6. How have you used technology in the classroom? "I do not use technology in my classroom. I have only projected a few videos, throughout the year."
7. Which activity, that you have done this year, would you say was the most successful with the children? "I did a science experiment with them, where they learned about the change of colors in the leaves. They loved that activity, each of them got to see and apply the different colors to their leaves."
8. Are there any clinically diagnosed children with some type of educational deficit? "Yes, I have 2 children, which are diagnosed with attention deficit hyperactivity disorder (ADHD). Student E.D. and M.E. In the morning class I have 1, which is diagnosed with the same deficit, E.M."

4.2.2 Analysis

The interview conducted supported the background knowledge needed to understand the background context of the children. The teacher mentioned important points, which were taken into consideration before and during the intervention.

- The children in the intervention were used to a behaviourist method, which is the method selected for the controlled group. The children are used to completing photocopied activities, where they color, draw, and cut.
- There are three different children diagnosed with attention deficit hyperactivity disorder (ADHD)
- The teacher had also already noticed their reaction when implementing didactic activities, in which they interact and participate.

4.3 Questionnaire

The questionnaire was conducted on 23 different parents of a total of 49 participants. It was conducted during the process of the interventions, as to better comprehend the general profile of the different classes. Each parent was randomly chosen to be part of the questionnaire from the two-different kindergarten class. In the following Table 4 the total results of the questionnaire are shown. The questions are displayed to the left with each of its alternative displayed at its right. The options vary in every question and could be marked more than one at a time (for example, some children have all three different technological devices).

Table 4 Results from questionnaire conducted on parents of 23 participants of a total of 49.

Questions	Alternatives			
1. Marque con una X todos los dispositivos que su hijo/hija tiene disponible en su casa. 1. Mark with an X the technological devices that your child has available at home.	**Tablet**	**Celular**	**Computer**	
	14	**21**	**18**	
2. Marque con una X la cantidad de horas al día que su hijo/hija utiliza un dispositivo tecnológico. 2. Mark with an X the number of hours your child uses a technological device.	**Less than an hour**	**An hour**	**More than an hour**	
	7	**6**	**12**	
3. Poseo una conexión de internet en la casa. 3. I have internet connection at home.	**Yes**	**No**		
	20	**3**		
4. Marque con una X que uso se les da a los dispositivos en su casa. 4. Mark with an X the uses that are given to the technological devices at home.	**Entertainment**	**Homework support**	**Other**	
	23	**19**	**8**	
5. Controlo los hábitos de navegación de internet de mi hijo/a.	**Yes**	**No**	**No, I don't consider it necessary**	**No, I don't consider that I should do**

				it.
5. I control the internet navigation habits of my children.	**23**			
6. Incentivo a mi hijo/a tener un hábito saludable del uso de las tecnologías. 6. I promote a healthy habit of technological use in my child.	**Yes**		**No**	
	23			

4.3.1 Analysis

The results of the questionnaire showed that most of the children spend more than the hour recommended for them to use a technological device, even though all the parents marked that they promote a healthy habit of technological use. The overexposure of digital platforms can lead to physical, psycho-cognitive, social, and mortality problems (Halpern, 2016). As majority of the children from this study are overexposed to digital platforms, they may have problems with learning, attentional deficit, emotional intelligence, development of their social skills, obesity and diabetes, among others. In other words, parents are not aware of the healthy habits of technological use and the consequences they may have on their children.

Also, the parents declared a navigation control of the content their children are exposed to in the internet. Even though, the children, later, in the interventions, demonstrated good handling of platforms like YouTube and commented on many popular YouTube videos inappropriate for their change. Again, parents showed little knowledge of technological use.

Finally, internet connection has become a common accommodation, over time. In Chile, every 100 habitants have 97,5 access to internet connection, majority being mobile internet connection (Gobierno de Chile, 2017). In this case, it has not differed from these statistics, but only helped confirm them with an 83% of the children, in the questionnaire, having internet connection. The use of internet at home has provided an ever-expanding variation of opportunities for its use. Further on, the question about the use that is given

to technological tools established that there is an existent division of priority and purpose. It has been divided between entertainment and support in educational needs.

In the end, the results from this study demonstrated the parents have little knowledge as to how to handle technology and its effects, children in this case study have an overexposure of technology at home, and the children use only half their time to benefit from internet access. It has provided a more in-depth profile of the participants.

4.4 Recordings of Interventions

During the four interventions, implemented throughout the time range of a month on the control group and the experimental group of kindergarten children, different interesting categories emerged. These categories will be explained and examined in the following sections.

4.4.1 Digital Story Telling and Apps

During the second intervention, a storytelling activity was conducted on the children. In the control group, the teacher told a short story about farm animals and used a regular hardcover book. The teacher made sure to read it with great enthusiasm and effects. In the experimental group, the teacher told a digital short story by using an online website, where the stories were read to you and the images of the story had movements. In the recording from the interventions, it was easy to observe the different levels of engagement. The control group, seemed at first interested in listening to the story, but slowly started drifting off and paying less attention. While, in the experimental group the children started by not paying attention at all and slowly started observing the images and listening to the story. At the end, when the children from each group were asked oral comprehension questions about the story.

As mentioned previously by McCrindle (2011), in the theoretical framework, Children of the generation alpha have much shorter attention spans and are used to technological devices, as natural as the use of a pencil. During the analysis of the visual data collected, the children have shown to respond better with a digital story book than a hard cover printed story book, even though they contained the same animal farm theme.

The activities designed with the use of the farm animal application (as shown in Annex 7), used on the tablet hand held devices, provided an opportunity for the children to develop listening comprehension. Throughout the process of planning, the selection of the farm animal application and the amount of time they were given to use the application were in accordance with the standard guidelines of the author, Bolstad (2004). During the visual data examination, the children showed a natural control of the application and independently discoved how to use it. As they started to match the pronunciation of the words with the images of the farm animals, they practiced the vocabulary. It is a process, which was clearly captured in the visual data. At the beginning of the game, the chidlren had a difficult time in completing the levels, for they did not understand the words. After awhile, the children started to complete the levels, since they remembered the name of each farm animal shown. In comparison to the activitity designed in the control group, which was also a listening comprehension activity, but needed to be completed in a worksheet, the children seemed to be engaged with the game in the tablet and had the opportunity to be exposed to the natural pronunciation of the words.

The activities with the tablets pursued to reach collaboration. In the control group, each table of four children were only given one tablet. The visual data showed the children negotiating turns and planning how they were to complete the game. Some tables decided to each take turns completing a level and passing it on to the next classmates, while in other tables the children compromised to touch the tablet screen ones and then pass it on to finish the levels together. Also, in the activity where they had to record a scene from the story with their finger puppets, each of the tables designated one child to record the videos.

4.4.2 Biophilia

In the third intervention, the children participated in a biophilia activity, where 2 small chicks were brought to class, so they could feel them and experience a sense of connection to the content being taught. As the instructions were being given on how to take care of the chick, the children were leaping off their seat with excitement. The teacher made sure they knew that chick in Spanish meant “pollito” and the children practiced the name many times. As the chick was being passed around each table, the children would carefully touch it and put it on their hand. In this activity many children declared that they had chicks at home and were used to touching them, but nevertheless they seemed very eager to participate and share this experience with their classmates. They demonstrated true understanding of the word and followed the instructions perfectly. The children were previously warned that, if they weren’t careful, they could hurt the chicks. The activity was implemented on both the control group and experimental group and in both cases the children reacted the same way. The use of biophilia in the present study corresponded to the importance the national curriculum gives to the children’s learning and connection of their natural environment. It supports their development in the sciences, where they develop their investigating abilities and acquire a further understanding of their surrounding environment (MINEDUC, 2017).

In this investigation the children demonstrated to remember the word being taught because of the experience they lived in class of holding a chick. In the visual data, it can be clearly observed when the children start repeating the word and are excited to interact with it.

4.4.3 Language Input

An important category considered during the study is the amount of language input the strategy designed provided. It is important for children at a young age to be exposed to as much of the language as possible (Krashen, 1995). For this reason, the amount of

language input provided in each intervention measurement of the language input provided is demonstrated through the following graphs.

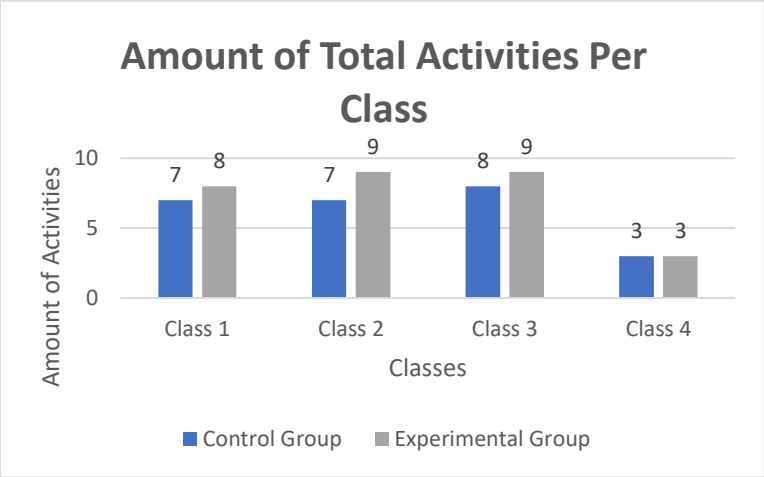

Figure 3 Amount of Activities Per Class

In Figure 3 above, the total amount of activities per class are shown. The graph shows the experimental group with more activities per class, except the last class for it is a similar activity for both groups. The difference in activities is due to the design of the strategy being integrated with ICT. The use of technological resources allows for quicker preparation and use of less time to switch from one activity to the next. While, photocopied activities require more preparation time and children require more completion time.

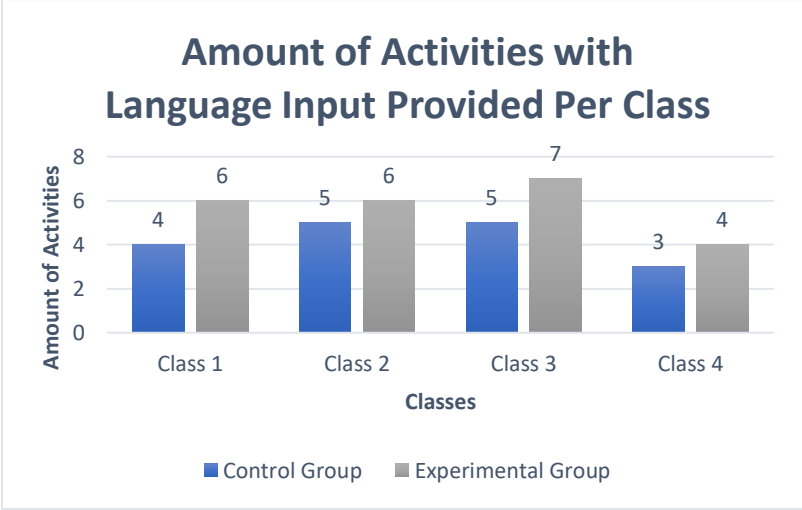

Figure 4 Amount of Activities with Language Input Provided Per Class

In Figure 4, throughout each class, the experimental group has more activities with language input, than in the control group. The use of ICT tools permits more language input during a class. It could be activities like, listening and singing a song, playing an online game, using applications in the tablet, completing activities together with a touch screen computer, listening to a story, watching a video, among others.

Finally, Figures 3 and 4 can be compared to demonstrate the difference between the total amount of activities completed per class to the language input. In the control group, the first class had 7 activities and only 4 had language input, the second class had 7 activities and only 5 had language input, the third class had 8 activities and only 5 had language input, and the fourth class all 3 activities had language input. In the experimental group, the first class had 8 activities and 6 had language input, the second class had 9 activities and 6 had language input, the third class had 9 activities and 7 had language input, and the fourth class had 3 activities and it shows that 4 of them had language input because the last activity was sub-divided into small activities where one of them required the use of a tablet to play a game.

In this comparison, the gap between language input and total number of activities is less in the experimental group than in the control group. This result is because the didactic strategy proposed in this study focuses in designing activities, which will permit more language input. At this age, it is critical for children to listen to the language than to produce it (Johnson,1989).

4.4.4 ADHD

The didactic strategy proposes an inclusive design, which in the following section will be analyzed. In Table 5, the 3 children have been identified, through the previous interview done on the teacher, as children clinically diagnosed by external professionals with attention deficit hyperactivity disorder (ADHD). All three children initiated the investigation with knowledge of only 1 farm animal from the six that were shown. These 6 words were worked with and practiced during the rest of the interventions. E.M. is a child from the control group and the other 2 children are from the experimental group. It

has been clearly demonstrated that children in the experimental group benefited greatly from the activities of the didactic strategy being proposed. Also, in the visual data, the children from the experimental group were seen engaged throughout the activities of the intervention. Since the activities had children moving and participating constantly, these children captured the vocabulary and learnt it faster. While, the child in the control group didn't complete many of the activities with photocopies and had no interest in listening to the teacher repeat the words of the flashcards. The only time there was participation from E.M. is when the children played the game to run to the different corners to find the correct flashcard.

Table 5 Results of Children Diagnosed with ADHD in Test of Farm Animal Vocabulary

Student	Pre-test	Post-test
E.M.	1 out of 6	1 out of 6
E.D.	1 out of 6	6 out of 6
M.E.	1 out of 6	6 out of 6

4.5 Pre and Post Diagnostic Tests

In figures 5 and 6 the results of the vocabulary learnt before the interventions and after the interventions are shown. Each one of the evaluations contained a maximum of 6 points, one point for each word. In the control group, the children obtained an average of 2.1 words in the pre-test and in the post-test, they achieved an average of 3.4. While, in the experimental group the children had an average of 1.2 word in the pre-test and in the post-test the children achieved an average of 3.2. The initial evaluation resulted in a lower average, as many of them were nervous to be asked unfamiliar words and felt confused on what the words meant. The final evaluation, the children felt more comfortable with the evaluation, since they were words already seen in class. The evaluations included flashcards, that they used to point out the farm animals, as to not make them nervous by giving them a structural format evaluation, as seen in Annex 3.

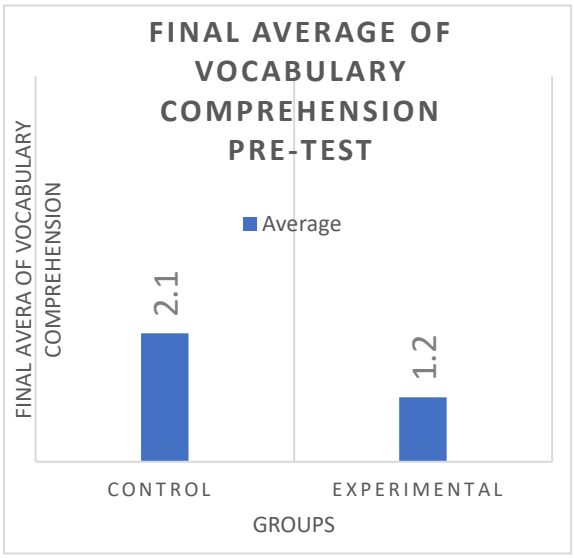

Figure 5 Final average of vocabulary comprehension in pre-test conducted on the participants

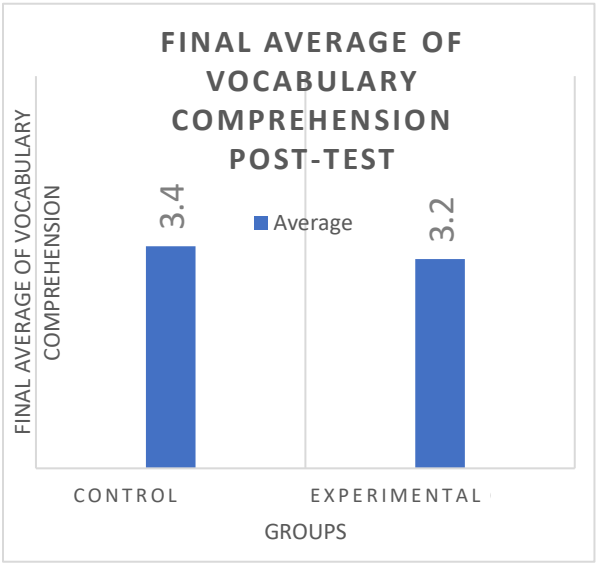

Figure 6 Final average of vocabulary comprehension in post-test conducted on the participants

4.5.1 Analysis

At first, the results from the evaluations were alarming, since the control group was able to achieve a higher final average. Then, the comparison from their initial start and the statements from the interview conducted on the teacher facilitated the explanation of these results. The difference in the averages of the control group is of 1.3, while in the experimental group it's of 2. This means that, the experimental group learnt more words than the control group. The teacher interviewed also mentioned that the control group, often had more background knowledge than the experimental group. These two important points led to an understanding that the experimental group benefited more from the interventions than the control group.

CHAPTER V: CONCLUSIONS

5.1 General Conclusions

The field of English teaching has been long thought out to be a strong field of investigation, for its fast-changing context and worldwide popularity. It is a field, which has undergone many paradigm drifts, from grammar translation method, where grammar was the focus of attention to Communicative Language Teaching, where communication became of most importance (Richards,1986). The importance given to learning English as second language can be easily seen in most, if not all Chilean schools. In specific, preschool education has undergone a change in Chile, where English has been added to the contents needed to be taught. As previously stated, a recent problem has arisen from this, English teachers are not taught to work with preschool children (Améstica, 2013).

Now, Universities nation-wide have implemented a new curriculum, which emphasizes teaching young children a second language, but the national educational curriculum has yet to be modified by the Ministry of Education. Therefore, the main objective of this study was to analyze if the use of a didactic strategy design, which integrates ICT and a multisensory approach, improves the learning experience of boys and girls in an English as a foreign language kindergarten class of children.

After exploring the main concepts shown in the theoretical framework, a didactic strategy has been designed in relation to the main objective, which includes specific characteristics that allow an improvement in English language teaching young learners. The strategy proposed by the investigation motivates interaction in the second language and inclusiveness in the classroom. It can explicitly be described as a strategy which:

- Works with short rotating interactive activities.
- Includes ICT as a fundamental resource.
- Provides opportunities for communication in the second language.
- Integrates children’s new profile.
- Embraces different learning needs.
- Comprises meaningful experiences.

- Accentuates language input.
- Develops social and play skills.

Subsequently, it was implemented at Antilen school of Rengo, on children from a kindergarten class for 4 sessions. The results from this study resulted in favor of the new didactic strategy, for it improved the learning experience of the children. This was specifically demonstrated in the results from the pre and post test. The comparing results of 1.3 from the control group, to 2.0 from the experimental group, presented a difference in content learnt. At the same time, the children with ADHD obtained a perfect score at the end of the interventions, which has offered inclusiveness in the teaching strategy. It provided the children with the variety of activities needed to keep them actively participating and engaged. In the graphs of language input, the children in the experimental group reached a higher amount of activities done per session with more language input, in comparison to the children from the control group. The design of the activities facilitated the learning process of the second language, by giving the children a chance to listen to the vocabulary more often and interact with it. The special focus put on the use of biophilia resulted in a rich and enjoyable experience for all the children in the classroom, as demonstrated by the recordings of the intervention.

On the other hand, the integration of ICT tools benefited the children in different aspects. The results from this study confirmed the definition proposed by McCrindle (2011), for the use of digital resources only improved children's engagement during the lessons. In the visual data, the children were actively participating during the digital story telling and application selected to practice the vocabulary. Concurrently, the questionnaire answered by randomly selected parents of the children participating in this study, provided a complete profile of the participants. The overexposure of technology at home claimed by the parents of majority of the children, only permitted to understand the behaviour of the children in class. At the same time, it responded to the instinct the children had with the use of technological tools in the classroom.

Overall, the design of the didactic strategy proved to be a solid and well-grounded approach for English teaching young learners. It answered the research question from the investigation, "does the use of a didactic strategy that integrates ICT with a

multisensory approach improve the learning experience of boys and girls in an English as a foreign language kindergarten class of children?", in a positive manner. It fulfilled many educational needs considered necessary to achieve meaningful learning and comprehension of a second language. The children were engaged in all classroom activities and participated actively. The technological tools kept them fully motivated and actively listening. In the end, it demonstrated an improvement in the learning experience of EFL kindergarten children and in concordance with Tomlinson (2011) description of the benefits of choosing appropriate educational content and resources.

5.2 Limitations and Delimitations

In relation to the limitations of the study, the investigation was designed with a PAR methodology, which permits the investigation to actively participate during the process of the interventions. In this sense, the methodology provided "no single, objective reality, there are multiple realities based on subjective experience and circumstance" (Wuest, 1995, p. 30). Nevertheless, a subjective experience has a possible negative effect, which directly influences the analysis and interventions conducted. As to avoid the manipulation of results, during the interventions, an equal mood of enthusiasm was used in both the control and experimental group for each of the activities. Also, the present investigation used field notes, a qualitative data collection method. According to Greenhalgh and Taylor (1997) "to study things in their natural setting, attempting to make sense of, or interpret, phenomena in terms of the meanings that people bring to them." (p. 740). Ergo, an important issue to this is the subjective manner of field note taking, where the investigator could direct the data into a more favourable perspective. Regardless, while seeking to maintain a natural setting and make sense of the different behaviors children had throughout the interventions, a careful non-bias point of view was sought out during the interpretations of the field notes taken. As to avoid subjective interpretations to manipulate the data.

As well, the investigation had to establish time limits of the interventions, due to the amount activities and evaluations the children had to complete, as requirement of the establishment and national curriculum. Nevertheless, the four interventions conducted were enough to achieve saturation in the study, which according to Hernandez et al. (2014) it is achieved when a sample is taken, and the results begin to repeat or it depends on the available resources, opportunity, and time.

Finally, the investigation has an exploratory level, for its main objective was to examine the problem of investigation, which hasn't been well investigated (Hernández et al., 2014). In this case, the revision of the literature available in the field of EFL teaching young learners has little information, in Chile. For this reason, it has been viable to design a didactic strategy and help identify concepts, which could stablish an initiating step for future investigations.

Contrarily, in relation to the delimitations of the study, a different level of investigation was not selected, for as mentioned before, the field of investigation put into question does not have a strong fundamental literature of studies in Chile. On the other hand, in Young (2006) the author describes the selected methodology of study, mixed method, as a method, which "focuses on voice and everyday experiences" (p. 501). Since the main objective of the study was to analyze a new didactic strategy, it was important to capture a general picture from different perspectives of the engagement and attitude towards the English classes designed. The use of only a quantitative method would not permit a full description of the students' behaviour and the qualitative method does not include the pre and post diagnostic data collection technique, which is fundamental to measure the amount of vocabulary learnt throughout the interventions.

To conclude, in Chile, there are different existing levels in education, Preschool (first and second level of transition), elementary education (first stage from first to fifth grade and second stage from sixth to eighth grade), and high school education (from ninth grade to twelve grade). Elementary and high school education are levels with public resources and extended work in their field. The ministry has recently provided updated workbooks and curriculums for elementary and high school. However, schools have taken

the initiative to start teaching English at a preschool level and it is in this area, where the resources and curriculum are non-existing.

5.3 Future Works

The results from this investigation serves as a stepping stone for future projects, that could elaborate on the experimental design formulated. The characteristics of the experimental design responds positively to the learning needs of children today, thus it is an interesting line of investigation to expand on and give enriching results. In the future, a study could measure the types of collaboration and retention of vocabulary given by this design in a longer period. The sample selected could be from a different context and social class. For example, a public school from a vulnerable neighbourhood in the city. The age groups could also differ, as to evaluate the efficiency of the designed didactic strategy with older or younger children. Instead of a sample from second level of transition, it could be students from first grade or second grade. Likewise, the time of the interventions is another interesting investigation to continue. The interventions from the control and experimental group could be modified to occur at the same time, as to compare the effect morning and afternoon classes could have on the children.

An extension of this work can be done on another line of investigation. The results from the questionnaire, where it demonstrated that parents answered without knowing the positive and negative effects of technology and healthy technological habits that their child should come to partake. In Halpern (2016) the results of the investigation showed that, when a child uses their digital device to navigate the web, chat, or share photos within the perimeters of the amount of time recommended, an improvement in their average marks could be observed. In concordance, a future investigation could emphasize parents' education about healthy technology use.

Furthermore, the methodology of investigation used in this study can be adapted as to determine, if the results maintain consistency. The methodology can be of a descriptive level, instead of an exploratory. It may be a more reliable study, if the study

did not include the investigator as a direct participant. The investigator could play a role of only observant, as to avoid bias results.

In conclusion, some interrogations left from this investigation are:

- Can the didactic strategy, proposed in this investigation, work with children from other contexts?
- Which technological tools can help the most to produce meaningful learning?
- What impact could the didactic strategy have, if used during a year of school?

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ANNEX

Annex 1 Authorization Forms – Adapted for Each Participant

Información para el Consentimiento Informado del(la) Representante del Estudiante

Este documento contiene información que le servirá para tomar una decisión informada respecto a la participación de su hijo(a)/pupilo(a) en el estudio "Integración de las TIC a un enfoque multisensorial: aplicado en el proceso de aprendizaje de los estudiantes de segunda transición en una clase de inglés como lengua extranjera".

Estimado(a) Madre/Padre/Apoderado(a):

Su hijo ha sido invitado(a) a participar en un estudio sobre el diseño y validación de una metodología innovadora en la enseñanza de inglés como lengua extranjera, presentado al comité de tesis del programa de magister en educación con mención en informática educativa y a cargo de la Prof. Katherina Gonzalez Gonzalez, tesista del programa Magister en educación con mención en informática educativa de la Universidad de Chile. El objetivo de este estudio es diseñar y validar una metodología que integre las TIC en la enseñanza con un enfoque multisensorial en una clase de inglés como lengua extranjera de estudiantes preescolar.

El foco del estudio son los(as) niños(as) de Segundo Nivel de Transición, razón por la cual es necesario obtener información respecto a las clases que implementan las Educadoras de Párvulos y sus percepciones sobre los estudiantes, al igual que realizar una intervención de cuatro sesiones, y por eso se invita a su hijo(a)/pupilo(a) a ser parte de esta investigación.

La participación de su hijo(a)/pupilo(a) es absolutamente voluntaria y usted tiene derecho a negarse a que participe o retirarlo del estudio en cualquier momento, sin dar explicaciones de causa o razón y sin que esto tenga consecuencias negativas en sus estudios.

Específicamente, se solicita su autorización para: i) que su hijo(a)/pupilo(a) sea observado(a) y grabado(a) en video en algunas clases (cuatro sesiones) en el ámbito de inglés; ii) que su hijo(a)/pupilo(a) participe en una experiencia de aprendizaje en la sala de clases, consistente en el aprendizaje de inglés, iii) recoger información respecto a las observaciones y preguntas que su hijo(a)/pupilo(a) realice durante estas actividades. Si se produjera un cambio en alguno de estos aspectos, usted será avisado(a) oportunamente, y dado que la participación de su hijo(a)/pupilo(a) es voluntaria usted podrá decidir si éste continúa o no participando en la investigación.

Como el estudio requiere el registro de la participación de los(as) niños(as) en clases, se solicita a usted la autorización para la observación y grabación en video de su hijo(a)/pupilo(a).

La participación en este estudio no conlleva ningún riesgo físico, psicológico o emocional para su hijo(a)/pupilo(a). Entendemos que el hecho de ser observado(a) y videograbado(a) puede causarle alguna incomodidad a usted y a su hijo(a)/pupilo(a), sin embargo, los resultados que se obtengan de esta investigación permitirán validar una metodología con integración de TIC. En este sentido, el

establecimiento podrá beneficiarse directamente de los resultados, los cuales les ayudarán a potenciar el desarrollo de las habilidades lingüísticas en un idioma extranjero de sus estudiantes.

No existen gastos ni compensaciones asociadas a la participación en este estudio. En la eventualidad que durante el estudio surgiera algún costo, éste será cubierto por la Investigadora Responsable.

La Investigadora Responsable del proyecto se compromete a asegurar la confidencialidad de la información recolectada, la cual no será individualizada y se mantendrá el anonimato a través del uso de un seudónimo.

La información será almacenada en un lugar seguro durante los 4 meses que dure el estudio, y sólo el equipo de investigación tendrá acceso a ella para fines de esta investigación. La persona encargada de velar por esto será el Investigador responsable del proyecto.

Al final del estudio se realizará una charla, a la cual se invitarán a todos(as) los(as) Educadores(as) de Párvulos(as) y Directores(as) de los Establecimientos Educacionales participantes, para contarles los resultados que se obtengan de esta investigación. Además, se hará entrega de un informe con los principales resultados obtenidos en la investigación para que pueda ser consultado.

Tiene derecho a hacer todas las preguntas que le parezcan pertinentes respecto a las características de la investigación y de la participación de su hijo(a)/pupilo(a). Se firmarán una copia del Consentimiento Informado, la cual será fotocopiada para entregarle una de estas copias.

En caso de tener preguntas, dudas y/o consultas respecto a la investigación, puede contactarse con la Prof. Katherina Gonzalez Gonzalez, Investigadora Responsable del proyecto (teléfono: 996593303, correo electrónico: katherinagonzalez93@gmail.com.

Sin otro particular, y esperando una buena recepción a esta invitación, se despide atentamente de usted

Katherina Gonzalez Gonzalez
Investigadora Responsable

Por favor, entregar el consentimiento firmado el martes, 10 de octubre.

Consentimiento Informado del(la) Representante del Estudiante

Yo, _____, acepto voluntariamente que mi hijo(a)/pupilo(a) _____, participe en el proyecto de tesis "Integrating ICT to a Multisensory Approach: Applied in the Learning Process of Kindergarten Students of an English as a Foreign Language Class", a cargo de la Prof. Katherina Gonzalez Gonzalez, tesista del programa de magister en educación con mención en informática educativa de la Universidad de Chile. Estoy consciente de que, independiente de esta autorización, sé que tengo derecho a terminar la participación de mi hijo(a)/pupilo(a) en cualquier momento, sin tener que dar explicaciones y sin que esto tenga consecuencias negativas en sus estudios.

He sido informado(a) respecto a los objetivos, procedimientos y resultados esperados de esta investigación. He leído la información del documento de consentimiento, y he tenido tiempo para hacer preguntas y se me ha contestado claramente. No tengo ninguna duda sobre la participación de mi hijo(a)/pupilo(a) y estoy de acuerdo en que sea observado(a) y videograbado(a) (entre cuatro sesiones) en el ámbito de inglés, que participe en experiencias de aprendizaje dentro de la sala de clases, y que se recoja información respecto a las observaciones y preguntas que realice durante estas actividades. Estoy consciente que esta información será confidencial y anónima, y sólo será utilizada para fines de esta investigación. Además, se me ha asegurado que el equipo de investigación se compromete a resguardar la integridad física, psicológica y emocional de mi hijo(a)/pupilo(a) durante las actividades en las que participe.

Se me ha informado que se me entregará una copia de este documento, y que, en caso de tener preguntas, dudas y/o consultas respecto a la investigación, puedo contactarme con la Prof. Katherina Gonzalez Gonzalez, investigadora responsable del proyecto (teléfono: 996593303, correo electrónico: katherinagonzalez93@gmail.com).

Nombre del Representante	Nombre de la Investigadora Responsable
_____	Katherina Gonzalez Gonzalez
_____	_____
Firma del Representante	Firma de la Investigadora Responsable
	_____
	Fecha

Annex 2 Teacher Interview

Teacher Interview

This document contains information that will be used to collect information of the children in the study "**Integrating ICT to a Multisensory Approach: Applied in the Learning Process of Kindergarten Students of an English as a Foreign Language Class**". There will be complete confidentiality of the information given in this interview.

Objective: identify the past teaching methodology and overall characteristics of the different groups of children participating in the study.

Name of teacher interviewed: _____
Date of interview: _____

1. How long have you been a preschool teacher?
2. How long have you worked with these groups of children?
3. What type of classroom management structure do you implement?
4. What is your teaching methodology used with the children?
5. How would you describe these groups of children?
6. How have you used technology in the classroom?
7. Are there any children with a diagnosed learning difficulty? If yes, which ones?
8. Which activity, that you have done this year, would you say was the most successful with the children?

Annex 3 - Pre and Post Diagnostic Tests

Name:		Class:		Mark:
Date:		Points:		

1. MATCH.(6 pts.)

Pig

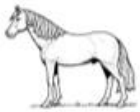
Cow

Horse

Goat

Chicken

Duck



Oral Pre-test Results

Class: Kinder afternoon (experimental group)

Student Name	Number of words known out of six in total
Antonela Ignacia Alegría Sepúlveda	1
Josefa Ignacia Avilés Cáceres	1
Vicente Eduardo Cabrera Leiva	2
Agustina Antonia Cáceres Góngora	1
Renato Alonso Cáceres Valenzuela	1
Maite Isidora Canales Urzúa	2
Constanza Elizabeth Carreño Cornejo	1
José Tomas Correa Salvatierra	2
Violeta Anastasia Donoso Escobar	1
Emilia Antonella Duarte Araos	1
Vicente Alfonso Espinoza Gallardo	1
Antonia Valentina Espinoza Leiva	1
Matías Ignacio Espinoza Sedano	1
Bárbara Pazcale González Ortiz	1
Danae Naomi González Pozas	1
Alonso Alfredo Horta Faundez	1
Isidora Ignacia Labra Rojas	1
Jorge Ignacio Leyton Moreno	2
Antonia Del Carmen Lobos Martínez	1
Agustina Belén Orellana Vásquez	1
Matías Clemente Pérez Vera	1
Valentina Constanza Pizarro Gaviño	1
Matilda Antonia Riquelme Puelles	1
Maite Trinidad Varas Jiménez	1
Luciano Fernando Vilaza Cornejo	2
Vicente Ignacio Zapata Castro	1
Martina Isidora Vera Riveros	1
Alonso Emmanuel Aedo García	2
Constanza Antonella Castro Rivera	1
Valentina Paz Marchant Navarrete	1
Total Average	1.2

Class: Kinder Morning (controlled group)

Student Name	Number of words known out of six in total
Isidora Suillan Arenas Pinochet	2
José Pablo Barra Gutiérrez	2
Amaia Margarita Cabezas Gálvez	1
José Luis Cornejo Díaz	2
Agustín Alfonso Cornejo Martínez	2
Emilia Belén Gajardo Canales	2
Luis Martin Galaz	2
Isidora Catalina De Lourdes Gallardo Yañez	3
Lucas Cristóbal González Camilo	1
Francisco Javier González Castro	3
Trinidad Daniela González Velarde	2
Nicolás Alberto Lizama Matus	2
Alice Jazmín Lizana Morales	3
Magdalena De Jesús Lucero Maldonado	2
Diego Alonso Mella Reyes	1
Felipe Alonso Moraga Carvajal	1
Elizabeth Cristina Morales Araya	3
Julieta Catalina Muñoz Cornejo	2
Emilia De Los Ángeles Ortega Bustamante	2
Darío Humberto Prieto Olivera	1
Bastian Ignacio Johan Ramírez Cerda	3
Vicente Antonio Rodríguez Quinteros	2
Thomas Alonso Rodríguez Sandoval	3
Ignacia Paz Toledo Morales	1
Paskal Emilia Ulloa Rodríguez	2
Facundo León Valenzuela Bustamante	2
Daniel Alejandro Valenzuela Zúñiga	2
Pablo Ignacio Zamorano Díaz	2
Maitte Isabella Florencia Carmona Muñoz	2
Melany Alejandra Román Pulgar	2
Total Average	2.1

Annex 4 Questionnaire

FACULTAD DE CIENCIAS SOCIALES
UNIVERSIDAD DE CHILE

UNIVERSIDAD DE CHILE
Facultad de Ciencias Sociales
Magíster en Educación
Mención en Infomática Educativa

Encuesta Apoderados

Este documento contiene información que se utilizará para recopilar información de los niños en el estudio "Integración de las TIC a un enfoque multisensorial: aplicado en el proceso de aprendizaje de estudiantes de Kínder de una clase de inglés como lengua extranjera". Habrá una total confidencialidad de la información proporcionada en esta encuesta.

Objetivo: Dar a conocer la exposición de herramientas tecnológicos que tienen los niños del curso de segundo nivel de transición en el colegio Antilen, Rengo, a través de percepciones de sus apoderados.

Nombre de estudiante: _____
Fecha: _____

Marque con una X todos los dispositivos que su hijo/hija tiene disponible en su casa.	☐ Tablet ☐ celular ☐ computador
Marque con una X la cantidad de horas al día que su hijo/hija utiliza un dispositivo tecnológico.	☐ Menos de una hora ☐ Una hora ☐ más de una hora
Posee una conexión de internet en la casa.	☐ SI ☐ NO
Marque con una X que uso se les da a los dispositivos en su casa.	☐ Entretenimiento ☐ Apoyo a las tareas escolares ☐ Otro
Controlo los hábitos de navegación por internet de mis hijos.	☐ Si ☐ No ☐ No, no lo considero necesario ☐ No, no considero que debería hacerlo
Incentivo a mi hijo/a tener un hábito saludable del uso de las tecnologías.	☐ SI ☐ NO

Annex 5 Lesson Plans

Control Group Lesson Plans

<table>
<tr><td colspan="2">DATE: October 30,2017</td><td>GRADE: kinder</td><td>SUBJECT: English</td></tr>
<tr><td colspan="4">CONTENT
Farm animals (Horse, cow, pig, duck, chicken, bird)</td></tr>
<tr><td colspan="4">TRANSVERSAL VALUES
• Formation in respect towards others and solidarity.
• Develop coordination of their fine motor skills, exercising and developing the necessary coordination, according to their interests of exploration, construction, graphic expression of their representations and recreation.</td></tr>
<tr><td>OBJECTIVE</td><td>INDICADORS</td><td>ACTIVITIES</td><td>RESOURCES</td></tr>
<tr><td rowspan="4">Comprehend and reproduce oral texts, like short songs to introduce farm animals.

Comprehend and express words and basic phrases in a foreign language.</td><td>Participate in songs and formulate introduction questions and response.</td><td>Students greet the teacher and sing the “hello, how are you?” song.

Students greet and meet “our special guest”</td><td>None</td></tr>
<tr><td>Respond to instructions appropriately.</td><td>The teacher shows flashcards of a farm and asks students to select the different animals that live there.</td><td>Flashcards</td></tr>
<tr><td>Discriminate between different farm animals.</td><td>The teacher presents different images to the students of the target vocabulary.

The students sing the “animals on the farm” song.

Students complete farm animal worksheet to practice the names of each animal.</td><td>Farm animal flashcards

Worksheet</td></tr>
<tr><td>Identify different farm animals, according to their food products.</td><td>The students smell and taste different food products to identify its animal origin.</td><td>Food products</td></tr>
<tr><td></td><td>Recognize the name of different farm animals in a</td><td>Using images of the different farm animals, the students create finger puppets with the help of the teacher.</td><td>Worksheet</td></tr>
</table>

	foreign language.		

DATE: November 06, 2017	**GRADE:** kinder	**SUBJECT:** English

CONTENT

Farm animals and animal sounds
Yes or No

TRANSVERSAL VALUES

- Expand their practices of social coexistence in new situations, to strengthen and deepen collaboration and relationship with others.
- Contribute to others, contributing to people or groups of them with their company, their knowledge, their affections, their expressions.
- Enjoy works of children's literature by listening carefully to stories and poems to expand their linguistic skills, their imagination and knowledge of the world
- Form interests in written language through contact with texts of different types such as stories, signs, news, commercials, labels, among others.

OBJECTIVE	**INDICADORS**	**ACTIVITIES**	**RESOURCES**
Understand and reproduce texts read by an adult or in audiovisual format, brief and simple, such as songs and stories. demonstrate understanding of new vocabulary through mimes, visual recognition, gestures, etc.	Participate in songs and formulate introduction questions and response.	Students greet the teacher and sing the “hello, how are you?” song. Students greet and meet “our special guest”	None
	demonstrate interests of a short fictional story.	Students play with finger puppets and farm house created the previous class. Students comment and predict what the story will be about.	Story book
	Recognize different characters from a short fictional story.	The students listen to the story and identify the names of the characters (farm animals) from the text as they appear. Students recreate the story with their fingers puppets. Students complete in laminated cards comprehension activities. Like, place the animals in order as they	Laminated cards

		appear and match the action to the animal.	
	Express themselves creatively through different artistic manifestations: painting, modeling, graphic, theater, dance, music, poetry, stories and projected images.	Students play the "farm animal sounds" TPR game. Students in group act out the action of each animal from the story.	None

DATE: November 13, 2017	**GRADE:** kinder	**SUBJECT:** English
CONTENT Colors (red, blue, yellow, brown) and Farm animals (chicken cow rooster duck horse rabbit sheep mouse dog cat fish chick)		
TRANSVERSAL VALUES • Organize group projects of investigation of the natural environment, expressing the activities carried out and the results obtained through different representations. • Recognize changes in technology as responses to the needs of individuals and groups. • Share with other children, playing, researching, imagining, building and venturing with them. • Awareness and consciousness of the care of animals.		

OBJECTIVE	**INDICADORS**	**ACTIVITIES**	**RESOURCES**
Describe different farm animals, through interaction in the English foreign language. Communicate with different purposes, in different contexts and with different interlocutors	Participate in songs and formulate introduction questions and response.	Students greet the teacher and sing the "hello, how are you?" song. Students greet and meet "our special guest" The students sing the "animals on the farm" song.	None
	Identify the action of each farm animal.	Students participate in a TPR activity to act out the different actions of each farm animal. (corners)	Flashcards
	Distinguish the name of different colors and farm animals.	Students complete coloring activity, identifying the name of the color to the animal. Students are shown a real farm animal. (chick) and are told to take care of it for the day.	Coloring worksheet. Realia (chick)

using arguments in their conversations, respecting shifts and listening intently.			
	Describe action and color of farm animals in oral presentations.	Students select a farm animal and with play dough create it with the corresponding color. Students in their groups present the farm animals created by describing the action and color.	Playdough and farm animals.

DATE: November 14, 2017	**GRADE:** kinder	**SUBJECT:** English

CONTENT

Colors (red, blue, yellow, brown), Farm animals (chicken cow rooster duck horse rabbit sheep mouse dog cat fish chick) and action verbs.

TRANSVERSAL VALUES

- Organize themselves in groups for a common purpose, playing different roles in games and collective activities and cooperative building rules for the operation of the group
- Gain confidence in situations, people or new experiences, expanding their fields of knowledge, relationships and actions.
- Make presentations or presentations on different topics of interest, with adult support, incorporating new words that are relevant to the content addressed, explain their meaning and give examples
- Express their preferences, differentiating situations, themes, activities, games and projects that produce special pleasure and interest according to their affective and cognitive needs.

OBJECTIVE	**INDICADORS**	**ACTIVITIES**	**RESOURCES**
Describe an animal, using some concepts such as: size, shape, color, quantity, behavior, life cycles and others.	Participate in songs and TPR activities.	Students greet the teacher and sing the “hello, how are you?” song. Students come with their badges, from the farm animal chosen the previous class. The teacher points out the name of each of the animals and emphasis that they must present themselves as that animal to each visitor.	Face paint

Give explanations on how to play a game or simple craftsmanship, so that it can be performed by another person. Participate in conversation circles: comment, question and respond to films, pictures or photographs of your choice.		Students are divided into their groups by farm animals and are each given their roles at their different stations. During the "English day" presentations students will rotate stations and throughout the whole hour, the videos of the students will be shown in a loop, in the classroom. The different stations are: 1. Puzzles 2. Match pads 3. Count pads 4. Act it out cards and farm play area. 5. Color activity to be placed on the wall. 6. Word search activity	Puzzles Sensory bin Laminated pads Farm animal Cards Realia (chick)

Experimental Group Lesson Plans

<table>
<tr><td colspan="2">DATE: October 30,2017</td><td>GRADE: kinder</td><td>SUBJECT: English</td></tr>
<tr><td colspan="4">CONTENT
Farm animals (Horse, cow, pig, duck, chicken, bird) and animal food products (eggs, milk, wool, cheese)</td></tr>
<tr><td colspan="4">TRANSVERSAL VALUES
• Formation in respect towards others and solidarity.
• Develop coordination of their fine motor skills, exercising and developing the necessary coordination, according to their interests of exploration, construction, graphic expression of their representations and recreation.</td></tr>
<tr><td>OBJECTIVE</td><td>INDICADORS</td><td>ACTIVITIES</td><td>ICT</td></tr>
<tr><td rowspan="5">Comprehend and reproduce oral texts, like short songs to introduce farm animals.

Comprehend and express words and basic phrases in a foreign language.</td><td>Participate in songs and formulate introduction questions and response.</td><td>Students greet the teacher and sing the “hello, how are you?” song.

Students greet and meet “our special guest”</td><td>Projector, computer, speakers</td></tr>
<tr><td>Respond to instructions appropriately.</td><td>The teacher shows a 3D image of a farm and asks students to select with the digital pad, the different animals that live there.</td><td>Projector, computer, web resources</td></tr>
<tr><td>Discriminate between different farm animals.</td><td>The teacher presents different digital images to the students of the target vocabulary.

The students sing the “animals on the farm” song.

Students play with farm animal app to practice the names of each animal.</td><td>Projector, computer.

Tablet
Farm animal App.</td></tr>
<tr><td>Identify different farm animals, according to their food products.</td><td>The students smell and taste different food products to identify its animal origin.</td><td>None</td></tr>
<tr><td>Recognize the name of different farm animals in a foreign language.</td><td>Using images of the different farm animals, the students create finger puppets with the help of the teacher.</td><td>None</td></tr>
</table>

DATE: November 06, 2017	**GRADE:** kinder	**SUBJECT:** English

CONTENT

Farm animals and animal sounds.

Yes or No

TRANSVERSAL VALUES

- Expand their practices of social coexistence in new situations, to strengthen and deepen collaboration and relationship with others.
- Contribute to others, contributing to people or groups of them with their company, their knowledge, their affections, their expressions.
- Enjoy works of children's literature by listening carefully to stories and poems to expand their linguistic skills, their imagination and knowledge of the world
- Form interests in written language through contact with texts of different types such as stories, signs, news, commercials, labels, among others.

OBJECTIVE	**INDICADORS**	**ACTIVITIES**	**ICT**
Understand and reproduce texts read by an adult or in audiovisual format, brief and simple, such as songs and stories. demonstrate understanding of new vocabulary through mimes, visual recognition, gestures, etc.	Participate in songs and formulate introduction questions and response.	Students greet the teacher and sing the “hello, how are you?” song. Students greet and meet “our special guest”	Projector and Computer
	demonstrate interests of a short fictional story.	Students play with finger puppets and farm house created the previous class. The students are given different objects representing the farm animals in a sensory bin. They play the hide and seek game with each object. Students comment and predict what the story will be about.	Computer and projector Digital story website speakers
	Recognize different characters from a short fictional story.	The students listen to the story and identify the names of the characters (farm animals) from the text as they appear. Students recreate the story with their fingers puppets. Students complete in laminated cards comprehension activities. Like, place the animals in order as they appear and match the action to the	Computer and projector Digital story website Speakers.

		animal.	
	Express themselves creatively through different artistic manifestations: painting, modeling, graphic, theater, dance, music, poetry, stories and projected images.	Students play the "sounds of animals" TPR game. Students in group act out the action of each animal from the story. The videos from the students will be presented in the final presentation.	Mobile Tablets Video camera

DATE: November 13, 2017	**GRADE:** kinder	**SUBJECT:** English	
CONTENT Colors (red, blue, yellow, brown) and Farm animals (chicken cow rooster duck horse rabbit sheep mouse dog cat fish chick)			
TRANSVERSAL VALUES • Organize group projects of investigation of the natural environment, expressing the activities carried out and the results obtained through different representations. • Recognize changes in technology as responses to the needs of individuals and groups. • Share with other children, playing, researching, imagining, building and venturing with them. • Awareness and consciousness of the care of animals.			
OBJECTIVE	**INDICADORS**	**ACTIVITIES**	**ICT**
Describe different farm animals, through interaction in the English foreign language. Communicate with different purposes, in different contexts and with different interlocutors using	Participate in songs and formulate introduction questions and response.	Students greet the teacher and sing the "hello, how are you?" song. Students greet and meet "our special guest" The students sing the "animals on the farm" song.	Projector, computer, speakers Youtube
	Identify the action of each farm animal.	Students participate in a TPR activity to act out the different actions of each farm animal. (corners)	Flashcards
	Describe the color of each farm animal presented.	The students view a short cartoon, identifying the color of each animal that appears.	Projector, computer, speakers. Youtube
	Distinguish the name of different colors and farm animals.	Students complete coloring activity, identifying the name of the color to the animal.	Tablet Coloring farm animals app.

arguments in their conversations, respecting shifts and listening intently.		Students are shown a real farm animal. (chick) and are told how to take care of it.	
	Describe action and color of farm animals in oral presentations.	Students select a farm animal and with play dough create it with the corresponding color. Students in their groups present the farm animals created by describing the action and color.	Play dough

DATE: November 14, 2017	**GRADE:** kinder	**SUBJECT:** English

CONTENT

Colors (red, blue, yellow, brown), Farm animals (chicken cow rooster duck horse rabbit sheep mouse dog cat fish chick) and action verbs.

TRANSVERSAL VALUES

- Organize themselves in groups for a common purpose, playing different roles in games and collective activities and cooperative building rules for the operation of the group
- Gain confidence in situations, people or new experiences, expanding their fields of knowledge, relationships and actions.
- Make presentations or presentations on different topics of interest, with adult support, incorporating new words that are relevant to the content addressed, explain their meaning and give examples
- Express their preferences, differentiating situations, themes, activities, games and projects that produce special pleasure and interest according to their affective and cognitive needs.

OBJECTIVE	INDICADORS	ACTIVITIES	ICT
Describe an animal, using some concepts such as: size, shape, color, quantity, behavior, life cycles and others.	Participate in songs and TPR activities.	Students greet the teacher and sing the “hello, how are you?” song. Students come with their face painted, from the farm animal chosen the previous class. The teacher points out the name of each of the animals and emphasis that they must present themselves as that animal to each visitor.	Projector, computer, speakers

Give explanations on how to play a game or simple craftsmanship, so that it can be performed by another person. Participate in conversation circles: comment, question and respond to films, pictures or photographs of your choice.		Students are divided into their groups by farm animal badges. During the "English day" presentations students will rotate stations and throughout the whole hour, the videos of the students will be shown in a loop, in the classroom. The different stations are: 7. Puzzles 8. Tablet (farm animal app) 9. Act it out cards and farm play area. 10. Color activity to be placed on the wall. 11. Farm animal word search 12. Counting farm animals	Projector, computer.

Annex 6 Attendance List of Participating Students

	ASISTENCE OF INTERVENTIONS 2017	
	Colegio Antillan de Ranco	Educación parvularia

- CURSO: Kinder Mañana
- EDUCADORA DE PÁRVULOS: Elisa Victoria López González
- ASISTENTE DE PÁRVULOS: Sonia Rossana Sedano Lizana

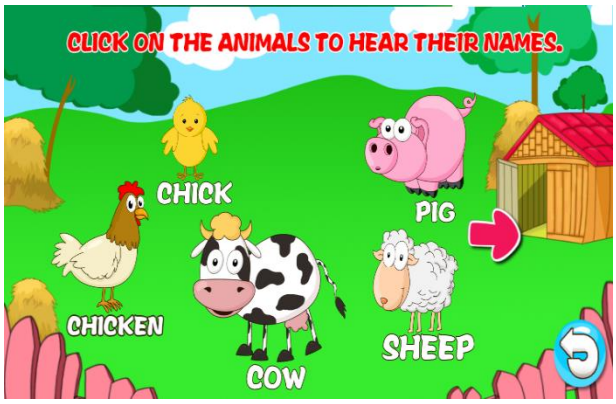
	ALUMNOS (Kinder Mañana)	Oct.30	Nov.06	Nov.13	Nov.14
1	Isidora Suillan Arenas Pinochet				
2	José Pablo Barra Gutiérrez				X
3	Amaia Margarita Cabezas Gálvez				
4	José Luis Cornejo Díaz				X
5	Agustin Alfonso Cornejo Martínez	X	X		
6	Emilia Belén Gajardo Canales		X	X	
7	Luis Martín Galaz Galaz				
8	Isidora Catalina De Lourdes Gallardo Yañez	X	X	X	X
9	Lucas Cristóbal González Camilo	X			
10	Francisco Javier González Castro				
11	Trinidad Daniela González Velarde				
12	Nicolás Alberto Lizama Matus				
13	Alice Jazmin Lizana Morales				
14	Magdalena De Jesús Lucero Maldonado				
15	Diego Alonso Mella Reyes				
16	Felipe Alonso Moraga Carvajal				
17	Elizabeth Cristina Morales Araya				
18	Julieta Catalina Muñoz Cornejo			X	
19	Emilia De Los Ángeles Ortega Bustamante				
20	Dario Humberto Prieto Olivera				
21	Bastian Ignacio Johan Ramírez Cerda	X	X	X	
22	Vicente Antonio Rodríguez Quinteros				
23	Thomas Alonso Rodríguez Sandoval				
24	Ignacia Paz Toledo Morales				
25	Paskal Emilia Ulloa Rodriguez				
26	Facundo León Valenzuela Bustamante				
27	Daniel Alejandro Valenzuela Zúñiga	X			
28	Pablo Ignacio Zamorano Díaz				
29	Maitte Isabella Florencia Carmona Muñoz				
30	Melany Alejandra Román Pulgar		X		
31	Agustina Florencia Gómez Muñoz				

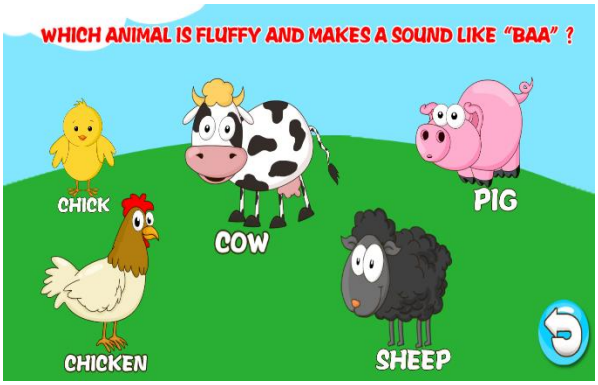
	ASISTENCE OF INTERVENTION 2017
	Colegio Antilen de Rancagua | Educación parvularia

- CURSO: Kinder Tarde
- EDUCADORA DE PÁRVULOS: Elisa Victoria López González
- ASISTENTE DE PÁRVULOS: Marcela Silvana Celis Hernández

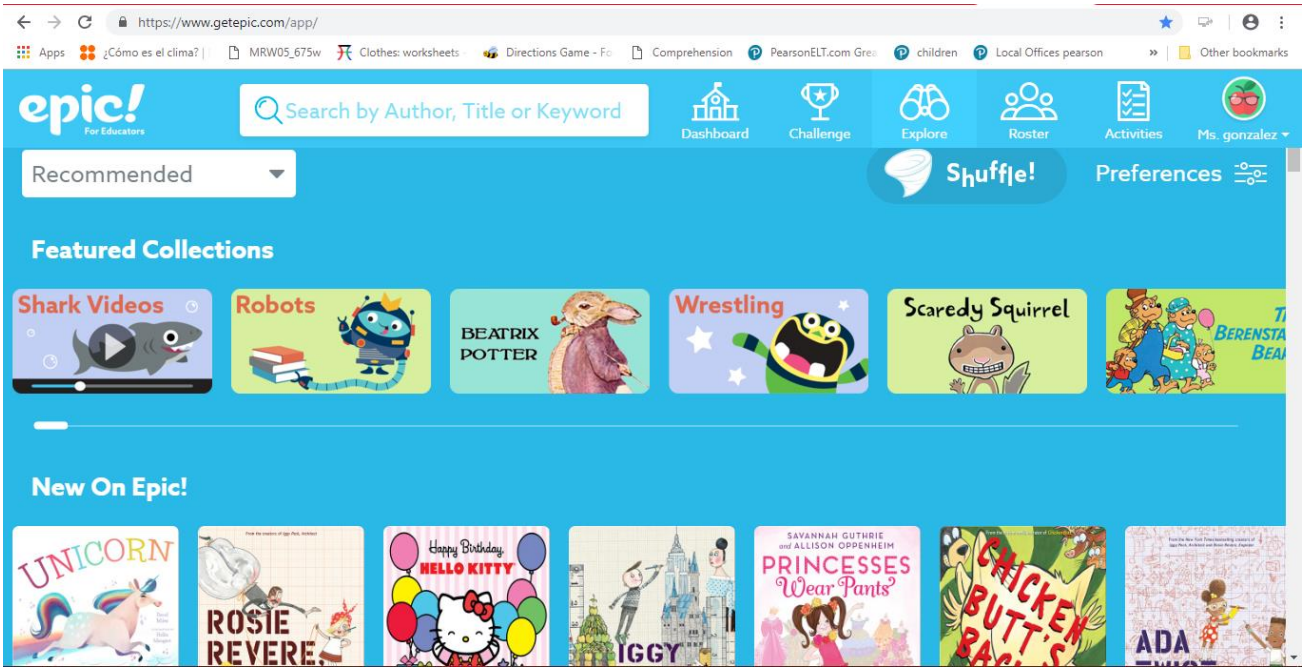
	ALUMNOS (Kinder Tarde)	Oct.30	Nov.06	Nov.13	Nov.14
1	Antonella Ignacia Alegría Sepúlveda				
2	Josefa Ignacia Avilés Cáceres			X	
3	Vicente Eduardo Cabrera Leiva				
4	Agustina Antonia Cáceres Góngora				
5	Renato Alonso Cáceres Valenzuela	X	X		
6	Maite Isidora Canales Urzúa	X			
7	Constanza Elizabeth Carreño Cornejo				
8	José Tomas Correa Salvatierra				
9	Violeta Anastasia Donoso Escobar				
10	Emilia Antonella Duarte Araos				
11	Vicente Alfonso Espinoza Gallardo				
12	Antonia Valentina Espinoza Leiva				
13	Matías Ignacio Espinoza Sedano				
14	Bárbara Pascale González Ortiz				
15	Danae Naomi González Pozas				
16	Alonso Alfredo Horta Faundez				
17	Isidora Ignacia Labra Rojas				
18	Jorge Ignacio Leyton Moreno				
19	Antonia Del Carmen Lobos Martínez				
20	Agustina Belén Orellana Vásquez	X		X	X
21	Matías Clemente Pérez Vera				
22	Valentina Constanza Pizarro Gaviño				
23	Matilda Antonia Riquelme Puelles	X			
24	Maite Trinidad Varas Jiménez				
25	Luciano Fernando Vilaza Cornejo				
26					
27	Vicente Ignacio Zapata Castro				X
28	Martina Isidora Vera Riveros				
29	Alonso Emmanuel Aedo García				
30	Constanza Antonella Castro Rivera				
31	Valentina Paz Marchant Navarrete			X	
32	Maximiliano Esteban Arturo Reyes Álvarez		X		

Annex 7 Visuals of Technological Resources






Not secure | www.sheppardsoftware.com/preschool/animals/farm/animalfarmgame.htm
Preschool + Kindergarten Menu
usa | world | animals | vocabulary | health | science | math | preschool
THESE ANIMALS ARE CALLED SHEEP. SHEEP LIVE ON A FARM. CLICK ON THE ARROW TO PLAY THE GAME AND FIND ALL THE SHEEP!
Animal Farm Movie
Create an Animal Farm
Create an Animal Forest
Learn about Green
Color Game
design, game, graphics and sound by Jasmine Chapgar
Click for full screen


https://www.getepic.com/app/
epic! For Educators
Search by Author, Title or Keyword
Dashboard
Challenge
Explore
Roster
Activities
Ms. gonzalez
Recommended
Shuffle!
Preferences
Featured Collections
Shark Videos
Robots
BEATRIX POTTER
Wrestling
Scaredy Squirrel
New On Epic!
UNICORN
ROSIE REVERE,
Happy Birthday HELLO KITTY
IGGY
PRINCESSES Wear Pants
ADA