



BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA

Facultad de Lenguas

**Short and Long “A” and “I” phonemes recognition in reading and writing
through an Elkonin Boxes adaptation in second grade elementary school
children**

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DEDICATION

First of all, I would like to thank my parents, Dora Irma and Ricardo who, to the best of their ability, always endowed me with the love and resources to get ahead. I love you mom and Dad.

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ABSTRACT

In the context of the teaching of English in Mexico, the need to explore methodological didactics that strengthen learning is relevant. Proper pronunciation of English, for example, is important since it can provide students with greater confidence and comfort in the use of language. This study explores the application of an adaptation of the strategy known as Elkonin boxes. This strategy, applied in the second grade of a private primary school, seeks to promote phonemic awareness, which is a strong predictor of future reading success if developed in early stages. The research questions guiding this study are 1) How does the Elkonin boxes strategy facilitate elementary school children's recognition of "A" and "I" vowel sounds of English words in reading and writing?, 2) What are the differences and similarities before and after using the Elkonin boxes strategy in reading and writing?, and 3) What changes are observed in the participants during the process of application of the Elkonin boxes strategy in reading and writing? The instrument applied was a list of words, through two tests, one for dictation and the other for reading. This research evaluated the performance of the students before and after the application of the strategy and the results show significant progress in the development of the participants' phonemic awareness of short and long "A" and "I" vowels.

Key words: Elkonin boxes, phonemic awareness, phonological-based instruction in EFL, literacy, vowel phonemes recognition.

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CHAPTER 1: Introduction

In Mexico, during the last 29 years, five educational reforms have been carried out (López et al., 2020). However, it was in 2009 when the seventeenth ordinary plenary meeting of CONAEDU registered the proposal of the pilot stage of the National English Program in Basic Education (PNIEB) (SEP, 2009) which operations were approved for the 2010-2011 school year (García, 2014). Since then and gradually, the teaching of English as a foreign language has acquired greater importance in Mexican basic education. Later, in 2017, PNIEB became PRONI (Programa Nacional de Inglés) to teach English as a Foreign Language (EFL). According to SEP (2018), there is no evidence of existing problems related to PRONI's application into the basic education system. However, in the last PRONI evaluation, corresponding to the 2017-2018 school year, it is mentioned that the detailed information in terms of learning is very limited: "Almost three years after the implementation of the PRONI, the detailed information related to its results in terms of learning the English language in students is very limited" (SEP, 2018, p. 63).

However, the PRONI challenge now consists in structuring an adequate educational program for English that allows students to consolidate solid foundations in learning English as a Foreign Language (EFL). Regarding the PNIEB program, Ramirez (2016) maintains the following "although the program has expanded access to English in public primary schools, it has lacked continuity and has been characterized by its inconsistency and lack of solidity in the changes" (p. 2). Moreover, from a personal point of view, proper pronunciation in English can provide students with greater confidence and comfort in the use of language. This is one the

reasons why this strategy caught my attention from the very beginning. Taking into account all the above and in order to find viable alternatives to improve the teaching of EFL in Mexico, this research aims to explore and analyze the progress of phonemes recognition in children from a private primary school by using an adaptation of Elkonin Boxes. Elkonin boxes is a strategy to promote phonological awareness through segmenting words into phonemes. It requires the use of tokens to count and represent different types of sounds in words: vowels and consonants. The purpose is to have an understanding of what the true implications of this are in learning. Moreover, due to the nature of this research, a qualitative approach is carried out to verify the progress of this group of participants by taking into account their own needs.

The rationale for the topic selection will be presented, then, the significance of the study followed by the context of this research. Moreover, the purpose of the study, the objectives and the research questions will be presented. Finally, the conclusions will be described.

1.1 Rationale for the topic selection

In the Tools of the Mind project, Bodrova (2001) says that “good educational practices originating in one country can spark the creation of new practices that fit the cultural context of another country” (p. 4). This refers to the collaborative work American and Russian education researchers did, based on Vygotsky's sociocultural theory. Vygotsky's sociocultural theory sees human cognitive development as a result of a socially mediated process which involves the acquisition of culture,

beliefs, and values, this means, a link between sociocultural and mental processes in individuals.

In Mexico, strategies derived from the sociocultural approach, in the case of phonological awareness, or the ability to notice and manipulate sounds in spoken words, have been implemented in Spanish (Ramírez, 2015). Moreover, the presence of phonemic awareness in L1 early ages is an important predictor of success in learning to read (NRP, 2000; Torgesen, 2002) and it is an ability which also benefits the learning of a second language as most of the cognitive processes involved in learning to read in L1 are the same involved in learning to read in L2 (Filicková, 2014). For this reason, the interest of this study is to research the adaptation of Elkonin boxes strategy and its application in the EFL context inside a Mexican private elementary school. This will help to observe the impact of this strategy on the development of phonological awareness in EFL and determine its usefulness and effectiveness. This strategy will be implemented to register its progress so that it could provide some insights into teaching EFL to young learners.

1.2 Significance of the Study

According to Torgesen & Mathes (1999) phonological awareness is the ability to recognize and manipulate spoken language as it provides individuals with the ability to notice, to think about or to manipulate sounds. Regarding pronunciation problems faced by language students, Nixon (2013) points out that “Phonics, phonology and phonetics are the fundamental areas of speech sounds in any language. They could be mastered anytime and anywhere. The only difference is the method of learning

that makes it possible to achieve it” (p. 2). Therefore, an appropriate strategy to strengthen areas of speech sounds could lead students to increase their language skills because understanding the relationship between sounds and letters is fundamental when learning a foreign language. For this reason, education in phonics should take place even in early stages of learning a foreign language (Nixon, 2013).

After reviewing 15 experimental and quasi-experimental studies between 2000 and 2016, on the topic of the effectiveness of phonological-based instruction in the EFL context Huo & Wang (2007) found that most of the studies suffered from methodological flaws and, for this reason, were potentially biased. Therefore Huo & Wang (2007) claimed that “phonological-based instruction, namely phonological awareness instruction (PA) and phonics instruction, has shown to be effective on early literacy skills among young children in western countries [...] Effectiveness of the instruction in the EFL context is much less investigated” (p.1). This could offer a possible assumption that although phonological awareness instruction has yielded positive results, phonological awareness instruction in learning English as a foreign language has not been sufficiently researched to show its benefits.

Phonological-based instruction with the Elkonin Boxes strategy could help establish a starting point for teaching pronunciation in English as a foreign language (EFL) to children in Mexico. This would allow learners to consolidate solid foundations in the learning of a foreign language. The findings of this research may provide teachers with knowledge about teaching young learners with phonological-based instruction in the Mexican EFL context. In addition, the obtained results could be shared with other schools to apply this strategy for improving student’s reading and writing skills as well as their performance in pronunciation.

1.3 Context of the Research

The context in which this study takes place is the second grade of an elementary private school in San José Mayorazgo, Puebla. This school started operations in 2009, and its mission is to “offer a comprehensive education that guarantees the cognitive and emotional development of the student to promote the formation of an independent, creative and responsible personality in all areas of life” (Colegio Kepler, 2021). The institution’s infrastructure consists of one building, nine classrooms, bathrooms, a small warehouse, a teacher’s lounge, a library, a computer classroom, and a medium sized patio that both preschool and primary children share. English classes are often taught in each grade’s classroom. All classrooms have a big whiteboard, tables and chairs for students, as well as a small table and a chair for the teacher. The school also has a kindergarten, thus interaction between primary school children and kindergarteners is very common in extracurricular activities.

1.4 Aim / Purpose of the Study

The purpose of this research is to analyze and describe the progress of second grade children from elementary school in the process of identifying short and long “A” and “I” vowel sounds in English as a foreign language (EFL). All this will be carried out by using the Elkonin boxes technique. The progress of the participants in this study will be measured through the application of two tests (pre and post) to evaluate the level of achievement of reading and writing skills by including words containing the sounds mentioned above. This research aims to analyze the progress of phonemes recognition in English as a Foreign Language (EFL) by using the

Elkonin boxes' adaptation in a group of 10 children. This study helped to determine if the strategy provides evidence of significant achievement in the participants.

1.5 Objectives

The objectives intended for this investigation are the following:

- a) To identify those vowel sounds in English that, due to their lack of phoneme-grapheme correspondence, can be difficult for Spanish speakers to identify in order to design the instrument.
- b) To apply the instrument before, and after the application of the Elkonin Boxes strategy to evaluate reading and writing skills.
- c) To analyze results to verify the progress of the participants.
- d) To compare results to determine the differences and similarities.

1.6 Research Questions

The research questions guiding this research are presented below:

- 1) How does the Elkonin boxes strategy facilitate elementary school children's recognition of "A" and "I" vowel sounds of English words in reading and writing?
- 2) What are the differences and similarities before and after using the Elkonin boxes strategy in reading and writing?
- 3) What changes are observed in the participants during the process of application of the Elkonin boxes strategy in reading and writing?

1.7 Summary

Taking into account the context of teaching English to children in Mexico, there is the need to provide English teachers and educators with a guide to use the Elkonin Boxes strategy to establish a starting point in teaching English to children. The purpose of this strategy is to develop phonological awareness, to determine if, based on results, it could be an alternative for introducing children in EFL to reading and writing in second grade of elementary school. This first chapter presented the reasons behind this research, the context, the purpose and the objectives. In addition, the research questions to be used for this research were presented.

The next chapter presents all the literature related to this research. Each concept and theory is explained in order to display the relevance of the development of phonemic awareness in EFL for the acquisition of reading and writing skills.

CHAPTER 2: Theoretical Framework

As mentioned in the previous chapter, the purpose of this research is to analyze and describe the process of identifying “A” and “I” short vowel sounds and diphthongs in English as a foreign language (EFL) in second grade children in elementary school. This will be carried out by using the Elkonin boxes technique. For this reason, this chapter will present, first, a description of the main characteristics of young children learning English. Afterwards, the importance of literacy and its implications in education. Then, the importance of phonological awareness in literacy and how it is acquired will also be discussed. Moreover, the theoretical approach will be described to support the strategy selected for this research. Finally, the chapter will describe the stages and materials required in the application and adaptation of the Elkonin boxes strategy.

2.1 Second Language Learning in Young Children

Some aspects related to the learning of a second language in children as well as the cognitive processes involved are described next. According to Mitchell & Miles (2013) “second languages are learned later than in early childhood [...] it takes place sometime later than the acquisition of the first language.” (p. 1). This means that the learning of a second language will only occur after the acquisition of the mother tongue. Similarly, Broughton (1980) says, “a second and even a third language can be acquired from the very earliest ages, without any seeming effort or retardation of

the mother tongue. What is more, this is shown to occur to all normal children, irrespective of levels of intelligence.” (p.168). In other words, the learning of a second language in children, far from being counterproductive for the learning of the mother tongue, can occur naturally. However, while it is true that younger children show less inhibition when faced with certain types of activities in English, such as role-playing or singing songs, the ideal is to introduce children to reading and writing in English once they know how to do it in their mother tongue. The learning of a second language is deeply linked and conditioned by the level of development in the acquisition of the first language. (Broughton, 1980).

The question is if the cognitive processes involved in learning a second language are the same as those involved in the acquisition of the mother tongue. Filicková (2014) explains that “learning to read accurately and fluently presents a complex process that requires a coordination of various sub-processes [...] the acquisition of word decoding skill represents the core reading ability fundamental to the development of reading competence.” (p.302). Then, decoding is the minimum unit in the reading process to be competent and reading implies a relationship between emitting phonemes and decoding graphemes plus the understanding of what is read.

As for Wren (2000), he describes that “decoding comprises the cipher knowledge, lexical knowledge, phonological awareness, phonics, and letter knowledge” (p. 32). Cipher knowledge allows children to understand what combination of letters are allowed in language, while lexical knowledge is to recognize and pronounce unfamiliar words by comparing them with familiar ones. Phonemic awareness

involves the manipulation of spoken words which may include rhyming words or breaking them into syllables. Finally, letter knowledge refers to the familiarity the child has with the alphabet. All these processes relate to decoding for understanding written language and when a child has reading difficulties, it is because there is a poor mastery in these processes.

The cognitive process that activates when receiving, processing and using information during reading at the decoding level is known as successive processing. Successive processing is in charge of decoding, transforming and retaining information so the adequate performance in a cognitive task will be conditioned by the correct functioning of these processes (Filicková, 2014). Successive processing is linked to the acquisition of reading in the mother tongue and reading in EFL. It is a strong predictor of performance in EFL reading. That is why reading in the second language depends, to a large extent, on the development of reading in the mother tongue. The importance of literacy and its impact on learning in the acquisition of the first language will be explained.

2.2 Literacy Acquisition

According to the Cambridge dictionary, literacy is defined as “the ability to read and write” (Cambridge University Press, n.d.). However, literacy takes place not only in the acquisition of the first language, but also in the learning of a subsequent language. Learning to read and write are essential activities for coding and decoding written language in the educational process. Barton (2007) used the term literacy to cover new broader views of reading and writing, and that is how it is being used in

several disciplines and in terms like emergent literacy (which is early reading and writing development), used in education. Moreover, Pahl and Rowsell (2005) mention that “literacy is not a neutral set of skills that we have in our heads and develop through language teaching and learning. Rather, literacy is always and everywhere situated and, what is more, literacy is inseparable from practices” (p. 56). In other words, literacy develops by instruction and it is often acquired in formal contexts, namely school as it has been regarded to printed text whether in reading or writing.

Literacy is one of the main goals of education and also the one by which it is carried out. After the first or two years of school, pupil literacy starts developing. Children are expected to work independently and they are required to read worksheets, written directions, and so on. Many schools encourage this pattern of pupil learning from the earliest stages, which means establishing literacy as soon as possible after school entry. According to Donaldson (1978) “the early mastery of reading is even more important than it is commonly taken to be because, from the standpoint of psychological theory, children’s thinking develops when something gives them pause and they have to consider more than one possibility” (p. 78). Reading goes beyond the interpretation of symbols and sounds since it also involves meaning, which is linked to reading comprehension. Once the learner understands what he reads, this will lead to the emergence of new knowledge. The earlier this happens, the better.

Hannon (2000) mentions that “literacy is fundamental to education because the ability to use written language to derive and convey meaning is fundamental to contemporary culture and thinking [...] Written language enables members of a

culture to communicate without meeting” (p. 45) All this, in order to express and explore experience; to store information, and ideas. It is through language that individuals pass knowledge to future generations and subsequent generations can do the same, perpetuate the culture inherited from their predecessors and witness the knowledge inherited by generations.

Literacy must be developed along with spoken language and its practices as children learn about literacy in their daily lives, both before and while attending school. Also, reading and writing must have real purposes in school for children to reflect on their literacy practices by documenting why, when, where, and how their parents or role models read and write (Barton, 2007). Educational literacy practices must go beyond school practices in order to give a sense of purpose to understand the importance of acquiring knowledge. In the literacy process, there are two key factors whose development will determine future success in reading. In the next section, the importance of these two sub-skills in reading instruction will be discussed.

2.2.1 Phonological & Phonemic Awareness in Literacy

Phonemic awareness and phonological awareness are terms with some significant differences although one can be seen as part of the other. Phonemic awareness relates to the understanding of the smallest units of speech, namely phonemes. In the literacy process, it is a determining factor and an indicator that young children are ready to learn reading and writing. Now, phonological awareness relates to phonemic awareness in the way that phonemic awareness is a component of phonological awareness which involves the understanding that in order to produce sounds (phonemes), we use articulators such as tongue, lips, teeth, etc. While

phonological awareness is more related to larger units of speech sounds such as syllables, onsets and rimes. According to the Institute for Multisensory Education (2019):

Phonological awareness is the understanding that our spoken language is made up of words and that our words are made up of individual units of sounds called phonemes. Phonological awareness encompasses many skills such as word recognition, rhyming, syllables, and phonemic awareness. All of these are acquired by listening and manipulating words or sound” (Institute of Multi-sensory Education, 2019)

Because of the development of phonemic and phonological awareness, these may help increase learners’ literacy skills, phonological awareness should be promoted from early stages as a predictor of subsequent growth in reading. The development of phonological awareness could prevent serious problems in reading (Torgesen, 2002). Moreover, according to the Institute for Multisensory Education (2019), “there are strategies that help grow your students’ phonemic awareness such as finger tapping, blending strips, tokens and Elkonin boxes, and identifying the beginning and ending sounds in a word.” (IMSE, 2021)

Although phonemic awareness gained popularity in the 1990s, the discussion on children’s ability to recognize sounds in spoken words and its relationship with learning to read has been discussed over more than 50 years. According to the international reading association (1998) “in the 1940s some psychologists noted that children with reading disabilities were unable to differentiate the spoken word into its sounds and put together the sounds of a word (p. 3)”. Therefore, research on this topic intensified and with the emergence of the national reading panel in 1997 (NRP)

during the Clinton administration and the No Child Left Behind (NLB) initiative during George Bush's administration in 2002, phonetic awareness and phonics gained greater weight in reading programs (Starrett, 2006). Next, phonics, a well-known term in the field of literacy, is described as it refers to a specific method for approaching a sub-skill in decoding reading.

2.2.2 Phonics

In literacy, phonics can be seen in two ways, as a method or as a subskill. First, according to the Merriam-Webster dictionary (n.d.), phonics is defined as "a method of teaching beginners to read and pronounce words by learning the phonetic value of letters, letter groups, and especially syllables" (Merriam-Webster, n.d.).

In the field of beginning reading, there are two basic schools of thought in the U.S. today. One emphasizes "whole language" teaching, which relies on teaching a lot of reading; the other emphasizes phonics, teaching how letters and syllables correspond to sounds. Phonics instruction may be especially difficult in English, since English has the most difficult spelling of any Western language (Merriam-Webster, n.d.).

Historically, the teaching of phonics dates back to 1683 with the first book to teach reading, "The New England Primer" which was focused on teaching the alphabet and its sounds. Over the years many reading methods were proposed until the importance of phonemic awareness brought phonics back to the scene, for the first time, there was scientific evidence on how best to teach children to read (Starret, 2006).

As a sub-skill, phonics is defined as the knowledge of the relationship between phoneme and grapheme. That is, the relationship between the sounds that make up the words and the letters or symbols that represent them. Without this, word recognition and decoding skills are unable to develop (Pullen & Justice, 2003). Moreover, Blevins (2021) describes phonics as the relationship between sounds and written symbols and phonemic awareness is about the sounds in spoken words. He mentioned that students use their knowledge of sound-spelling relationships to decode written words. Then, phonics, as a teaching method, can help students to read and pronounce words as it focuses on the correspondence between sounds and letters that represent sounds but it does not imply a deep sense of abstraction as when supplemented by phonemic awareness. The next section will explain the psycho pedagogical approach that gives rise to the didactic proposal that helps promote phonemic awareness through a method similar to the one mentioned above which gives rise to this research.

2.3 The Sociocultural Theory

Sociocultural theory was conceived by Lev Semiónivich Vygotsky after the Russian revolution in 1917. In the first half of the nineteenth century, thinkers in various fields were interested in understanding the relationship between human behavior and its environment. The area of psychology was no exception. Vygotsky sought to establish a theory about human psychological processes; however, contemporary theories could not explain complex problem-solving and perception behaviors. Vygotsky's primary focus was the way in which the human mind has developed in the course of human history, its relationship with the environment and the role of using tools in the development of language. Vygotsky suggested that culture is part

of the nature of each individual and that higher psychological functions were the result of brain activity (Cole, 1979).

According to Lantolf (2000), “the most fundamental concept of sociocultural theory is that the human mind is mediated” (p.1). This means that humans need tools and signs to mediate their relationship with themselves and the rest of the world. One example is language as it is constructed and modified when passed from one generation to another. A second fundamental element of sociocultural theory is the activity theory.

Activity theory is a unified account of Vygotsky’s original proposals on the nature and development of human behavior. Specifically, it addresses the implications of his claim that human behavior results from the integration of socially and culturally constructed forms of mediation into human activity (Lantolf, 2000, p. 8)

Activity theory refers to how those forms of mediation in human activity are structured and how they integrate into human activity to contribute to the formation of a functional system. According to Luria (as cited in Talizina, 2009), “the activity approach in psychology is based on three fundamental principles. The first presupposes that the psyche is in an inseparable relationship with activity, that is, the psyche of the human being manifests itself and is formed in activity” (p.13). An example of this is the development of language as a result of human's cognitive activity that does not stop transforming throughout the time. The second principle is psychic development because the development of an individual does not occur simply by their biological determinations but also by their social interactions. Evolution of humankind has not been determined only by their biological conditions

but also by the experience acquired and inherited by its ancestors. The third principle was proposed by Alekséi Leontiev:

It refers to the unity of material and psychic activity. This, at the same time, is based on three more principles: Both types of activity have the same structure, external material actions are essential for the formation of new psychic actions and, finally, one type of activity is always included in the other (Luria, 2009, p. 22).

Cognitive activity and material activity have the same structure. Material activity is where psychic action is formed, for example, learning to count. An individual will know how to do it until he understands the concept of unity when it is represented with an object, not with a symbol. Finally, one type of activity will give way to the formation of a new one, that is material activity allows the appearance of new cognitive activity. Subsequently, they will give way to the more complex material activity. In the activity of reading, for example, practice is essential for the acquisition of this skill as both types of activity are intermixed.

Vygotsky's (1979) third element of his sociocultural theory is the Zone of Proximal Development (ZPD). He claimed that at least two levels of development should be considered, the first is the actual level of development, when a child's mind has achieved the developmental cycle. This level is determined through tests that help calculate mental age in children. The second is the zone of proximal development and according to Vygotsky (1979) "It is the distance between the actual developmental level as determined independent problem solving and the level of potential by development as determined through problem solving under adult guidance or in collaboration with more capable peers" (p. 85). ZPD is the distance

between what a person can do and what they can do with the help of someone else. Lantolf (2000) stated that “the ZPD is not a physical place situated in time and space; rather it is a metaphor for observing and understanding how mediational means are appropriated and internalized” (p.17). While the current level of development can be determined by testing to what extent a child is able to solve a problem and with what level of difficulty, the zone of proximal development is the resolution of a problem in collaboration with an adult or a partner to find a solution. This allows them to know what the child can do but also what he could do with the appropriate guidance.

The sociocultural approach relates to this study by the "invariant method", based on Elkonin boxes, for the introduction to reading and writing in Spanish as L1 (Solovieva & Quintanar, 2011). The analysis of the sounds that make up words, in addition to their symbolic representation, should be the prior action in all alphabetic languages. Invariant teaching proposes to analyze and systematize the conceptual content of the subject being taught. Additionally, it proposes to respect the process of acquisition of the actions from the external level to the internal level. Also, the pedagogical orientation that allows the execution of actions without errors from the first time is an essential characteristic of this invariant teaching (Solovieva, 2015, p. 35). Later, considering that it is necessary to adapt the didactic methods according to the language, a new adaptation for the English language takes into account elements of invariant teaching. The next section specifically describes the origin of the strategy whose adaptation is used in this research.

2.3.1 Elkonin Boxes

In 1958, the Soviet psychologist Daniil Borisovich Elkonin published his book "The development of speech in preschool children". His research focused on the development of speech in preschool children. The central problems that stand out in this research are the development of functions and forms of speech, the assimilation of the grammatical structure and the sound composition of the native language by a preschooler. This research focused on Russian preschool children when learning Russian.

Assimilation of the sound side of the Russian language includes two interrelated processes: the process of developing the perception of the sounds of the language or, as it is called, the development of phonemic hearing in a child, and the process of pronouncing the sounds of the Russian language (Elkonin, 1958, p. 85).

Elkonin explores the development of the sound side of speech in preschool children by segmenting words into sounds with the purpose of identifying those sounds that represent a challenge for children. To proceed in his study, Elkonin relied on a comparative psychological study of the analysis of the sound of words in preschool children. Khokhlova (as cited in Elkonin, 1958) taught children to analyze the sound composition of words. The teaching method consisted of pronouncing a word and the child had to dismember it into sounds by strong pronunciation. If the child did not succeed immediately, the experimenter helped him by asking questions and made the dismemberment of the word together with the child. There were no positive results in the progress of children. Therefore, It was considered to materialize

speech and represent the word with graphic symbols to promote the fluency of sounds when pronouncing a word. However, the difficulty was that preschool children did not know the letters, therefore it was necessary to use another element to represent the sounds.

In the second stage of the experiment, colored tiles were used to replace the letters. The child had to carry out a sound analysis by designating each selected sound with a token; at the end, the child had as many tiles in the row as there were sounds in the word (as cited in Elkonin, 1958, p.107). Later, the use of a graphic diagram was suggested in which each cell represented a sound and during the analysis a colored tile was placed in each cell. Also, there was a picture in front of the child, under which a diagram of the sound to be analyzed was graphically represented. The child received a card with the object, and at the bottom there was the diagram of the sound. The child had to name the drawn object, make a sound analysis of the word, and insert a tile in each cell in the diagram. Once the children had mastered the action, they were asked to perform a sound analysis of the words without a graphic scheme, using auxiliary means (tiles) and, finally, perform a sound analysis without any aid, speaking out loud. The results improved considerably as 82% of the children achieved the formation with little or no errors. The suggestions made by Elkonin to Khokhlova gave rise to the method known as Elkonin Boxes. This became a widely known instructional method for teaching young learners and has been adapted for teaching different languages and for teaching children with reading difficulties. In the next section, the adaptation made to this strategy will be further explained.

2.3.2 Elkonin Boxes Adaptation

The adaptation of Elkonin Boxes strategy considers the main principles of sociocultural theory: zone of proximal development, mediation and activity theory and is divided into four main stages and each stage into nine steps (Solovieva, 2015). First, in the materialized stage, sounds are represented with colored circular tiles. Each color represents a specific type of sound: white tiles represent all sounds in a word, green tiles represent consonant sounds, red is for vowel sounds, small red circles represent long vowel sounds, and small red and pink circles represent diphthongs. Graphic diagrams are used to represent the number of sounds in a word. At this stage, additional materials are used such as black lines to divide syllables; cardboard keys to indicate whether a syllable is open or closed; and graphic accents to indicate the stressed syllable in a word. Flashcards are used to represent the objects whose words are analyzed. The second stage, the perceptive stage, students draw on their notebook the picture of the object and the graphic diagram with all its features: colored tiles, lines, keys, and graphic accents. The third stage, the oral stage, the teacher pronounces a word and students should identify the number of sounds, consonants or vowels and determine if there is a diphthong, a long vowel sound, and in which syllable the stress is located. The last stage consists of replacing the colored tiles with letters. This last stage is carried out gradually and it begins by replacing the consonant sounds with the letters that represent them, preferably with those whose correspondence between phoneme and grapheme is unique. Later, the rest of the phonemes with different characteristics and more than one correspondence are replaced. It ends with the replacement of vowel sounds by

graphemes. All of this is done on all three levels, materialized, perceptual, and verbal.

This strategy is also supported by the use of orientation cards that allow students to have the necessary information at hand to make the appropriate replacements of phonemes by graphemes. Once all the letters have been introduced, the English alphabet can be taught in its usual way. The control exercises are very important to verify the progress of the students and the learning of the rules studied. Finally, students proceed to the reading of stories in English. Children are asked to read aloud while the teacher supports and verifies the reading. With regard to writing, they proceed to the writing of words and short sentences. If the teacher considers it necessary, they can resort to materialized or perceptual analysis of difficult or new words.

Thus, this chapter presented a brief summary of the theory that supports this research. In the following chapter the methodology used in this study, as well as all the information related to the design of this research will be described.

CHAPTER 3: Research Methodology

3.0 Introduction

This chapter provides information related to the methodology used in this research, which is based on a qualitative method. The first section of this chapter describes the methodology used for the purpose of this research. The second section provides the

information related to the context and it is followed by the participants' information, the instrument design and the description of the overall research design. Finally, the data analysis process and the conclusions will be described.

3.1 Methodology

This study aims to analyze how phonemic awareness helps primary school children identify sounds when reading and writing vocabulary in English as a Foreign Language (EFL). This research is qualitative as it intends to understand a given research problem or topic from the perspectives of the community it involves (Mack, 2005). In this case study, the objective is to find out the feasibility of a strategy for developing phonemic awareness in children. Furthermore, the implementation of this strategy and its results are of particular interest to EFL teachers working with Spanish speaking children.

Additionally, Walliman (2011) stated “qualitative research depends on careful definition of the meaning of words, the development of concepts and variables, and the plotting of interrelationships between these [...] subjective concepts are real and detectable, even if they are difficult to record and measure” (p.73). This means that no type of information obtained in any given investigation can be considered irrelevant or of little value, nor the means to obtain it. However, information requires careful and rigorous treatment in order to be valid and reliable.

This research intends to describe how a group of students can identify “A” and “I” sounds in English by using a specific strategy. Descriptive studies help to describe in a systematic and accurate way the facts and characteristics of a given area of interest (Dulock, 1993). Furthermore Atmowardoyo (2018) affirms that “descriptive

research is defined as a research method used to describe the existing phenomena as accurately as possible [...] What is necessary for a researcher to do is collect the data through the use of research instruments such as test, questionnaire, interview, or observation” (p.198). In this research, a dictation test and a reading aloud test will be applied to obtain the data for the analysis.

Case studies can be, as well, classified as a descriptive research to describe the present condition of a particular case (Atmowardoyo, 2018). Mesec (as cited in Starman, 2013) “considers a case study as a comprehensive description of an individual case and its analysis [...] a description of the process of research itself.” (p. 31). This type of research not only aims to verify the progress of the participants but also the processes to achieve objectives with a complete description of what is intended to be done to obtain results. Woodside and Wilson (as cited in Gagnon, 2010) claimed that “the case method is appropriate for describing, explaining, predicting, or controlling processes associated with a variety at the individual, group and organizational levels” (p. 2). As the process for intending to achieve phonological awareness will be described in detail as well as the characteristics of the participants and their development, this research will be considered as such, a case study.

3.2 Context

This research was carried out with children in the second grade of elementary school at a small private school located in San José Mayorazgo, Puebla. The pedagogical method of the school is based on the socio-cultural approach. The school is made up of preschool and elementary levels and it has a group per each grade. Although the

school is small, it has enough space for the development of students. In addition, there is a supply storage, a teacher's lounge, a small library, the main office, a computer room, restrooms for teachers and children, a ball pool, a small basketball court and nine classrooms.

Each classroom has a whiteboard, blue tables and chairs for the children, a large white bookcase for the children to place their school supplies, as well as a desk and chair for the teacher. Each classroom is decorated with pictures, posters and visual support according to the teacher's taste. From second grade to sixth grade of elementary school, English classes are held three times a week, one hour each. First graders only twice, and preschoolers have classes twice a week of 45 minutes each. Due to the lockdown caused by the COVID-19 pandemic, virtual learning caused sessions for elementary school to decrease from three to two of 50 minutes each.

3.3 Participants

The participants in this study are nine children, three girls and seven boys, from the second grade of elementary school. Their ages range from 7 to 8 years old. Due to the quarantine caused by COVID-19, participants will be attending classes in the hybrid modality. Four children will be attending face to face classes while the other five will be attending simultaneous online classes at the same time as their classmates. Sessions in this modality will last 45 minutes. Children who are attending online classes are always accompanied by an adult to guide them during their classes. There are two new students in this grade but all of them have acquired literacy skills in their mother tongue, Spanish. None of them have received bilingual training other than the English classes they take at school.

3.4 Instrument Design

According to the experience obtained in the application of this strategy in previous years, it has been observed that vowel phonemes are those that, due to their lack of unique correspondence between phoneme and grapheme, cause greater difficulty in learning EFL. For this reason, in order to design the instrument for this study, these sounds were considered, as thought, they could provide evidence of progress in the acquisition of phonemic awareness because they have more than one phoneme in English. Therefore, at the beginning, for the dictation test, a list of 20 monosyllabic words containing the short and long vowel sounds was considered. However, due to the time constraint, only 10 words were chosen out of those 20 on the original list. This last version of the list contained long and short vowel sounds that are often confused, "A" and "I" (See table 4.1). In the case of the reading test, 15 monosyllabic words with similar characteristics to those of the dictation test were considered, however only 6 of these words could be used for the purpose of this research (See table 4.3).

3.5 Description of the overall research design

The data was collected through a test to identify the vowel sounds. The first part consists of a dictation test. The teacher dictates 10 words in English and repeats 3 times each word for the participants to write words on a sheet of paper to observe how they identify the sounds in writing. These words have been selected according to their phonemic characteristics, they all contain a diphthong, a short or a long vowel sound, which is the main focus of this research. The second part of this test consists of having participants read out loud 6 words with the same phonemic

characteristics mentioned before. The teacher shows the word card and the participants read the word aloud according to how they think it is read. This will be recorded for comparison. The same procedure was followed after the completion of the strategy to identify and compare the data obtained.

3.6 Data Analysis

Since the objective is to explore the development of phonological awareness and verify the impact after the adaptation of the Elkonin boxes strategy, the analysis procedure of phonological awareness was carried out as follows: first, the results of the first and second application were in separate tables to show the responses of the participants in both tests (Dictation and Reading). Once this was done, the information from both tests was analyzed, in terms of a) identification of the number of phonemes in a word, or phoneme awareness, b) alphabetic principle, for each unit of sound there is a symbol that represents it (a letter), c) letter knowledge, the letter name and what the letter sounds like, and d) cipher knowledge, the understanding of valid combination of letters. This information was also synthesized in tables showing the presence of these decoding sub skills in EFL. Afterwards, the same procedure was carried out with the post test and, finally, the results of the pre and post test were compared to respond to the research questions.

3.7 Summary

This chapter provided information related to the methodology used in this research, and the qualitative method to be used. The purpose of the research and the

information related to the context, the participants' information, the instrument design and the description of the overall research design were described. Finally, the analysis process was also described.

In the next chapter, the results obtained in the first and second application of the test will be compared and described in detail. The results will be described according to the four decoding sub-skills in EFL: Letter knowledge, Lexical Knowledge, Cipher Knowledge, and Alphabetic principle.

Chapter IV: Results

4.0 Introduction

The following chapter presents the information obtained in the data collection process. First, the information collected during the first application of the test will be summarized in a table and discussed. This will be followed by the presentation and discussion of the results obtained during the second application of the instrument. Finally, a comparison between the two applications will be presented, as well as a discussion of all the data.

4.1 Obtained Results

Since the cognitive processes related to reading include cipher knowledge, lexical knowledge, phonological awareness, alphabetic principle and letter knowledge. As claimed by Jimenez (2002) “reading is a complex cognitive process of coding and decoding symbols in order to construct or derive meaning” (p. 3). Therefore, these processes and how they relate to the reading decoding sub-skill will help determine the feasibility of implementing the adaptation of the Elkonin boxes strategy for the development of phonetic awareness in EFL second graders in Mexico with long and short phonemes of vowels A and I.

The goal of phonological awareness is to help children to identify isolated sounds that make up words. As phonological awareness is a cognitive process related to reading, the presence of phonemic awareness is essential for subsequent reading and decoding texts. This is through the identification of initial sounds, phoneme segmentation, phoneme deletion, phoneme substitution and phoneme blending. During the application of the Elkonin Boxes strategy, the activities carried out

promoted sound identification and its relationship with the alphabetic principle, which is the understanding of the correspondence between letter and sound. This will be considered as the means of evaluation to determine the feasibility of implementing the Elkonin boxes strategy for the development of phonemic awareness of long and short phonemes of A and I vowels in second grade EFL students in Mexico.

4.1.1 Dictation Results

The following table shows a summary of the results obtained in the first application of the dictation test. The words used in this test are listed on the left side and they are followed by the answers of the 10 participants. These words include short and long A and I vowel sounds. Juan, Pedro and María are those who have not previously worked with the adaptation of Elkonin Boxes for the purpose of literacy acquisition in L1.

In the analysis carried out below, words will be classified in categories concerning the vowel sounds: short A vowel, long A vowel, short I vowel and long I vowel. The results will be described according to the participants who had previously worked with Elkonin boxes (group 1) and of those who have not had any previous training (group 2).

	Juan	Pedro	María	Diego	Lola	Matía s	Ana	Aldo	Saúl	Sara
rat	rats	ruat	rat	eats	roatd	ruac	urats	rat	rat	rat
rate	reit	rueit	reyt	reiv	reitd	reits	----	reit	graet	rei
can	can	can	gan	can	can	cans	cats	can	can	cen
cane	cein	ceint	quein	cen	cen	quen	----	ceint	cain	cei
bit	bits	dit	bit	nit	mnti	bist	diti	bit	bit	bit

bite	baits	bait	bail	mait	bat	barit	daiti	bait	bite	bait
kit	kits	kics	kit	cis	cit	kist	citi	cit	kid	cit
kite	kaits	gait	kait	cats	cat	gal	cati	cait	kite	cait
ship	ship	tiup	cheep	tuq	chit	siat	cati	ship	chip	cip

Table 4.1 First Dictation Test Results

Two words in the dictation test include the short vowel sound a such as rat / ræt / and can / kæn /. In the word “rat”, four participants, Ana, Aldo, Saúl, and Sara from group 1 (previous training with Elkonin boxes) fully identified the short vowel sound and represented it with the appropriate grapheme. The other three participants, Diego, Lola, and Matías did not identify the phoneme correctly, therefore, they did not represent it with the right grapheme, they even added an extra grapheme. Two participants from group 2, Juan and María (no previous training with Elkonin boxes) correctly identified the vowel sound and represented it with the appropriate grapheme; the other participant, Pedro, added an extra grapheme to the word. In the word “can”, participants Diego, Lola, Matías, Ana, Aldo, Saúl identified the short vowel sound and represented it with the appropriate grapheme, the last participant, Juan0, did not identify the vowel sound therefore it was not represented with the right grapheme.

Two words in the dictation test included long vowel sound a, such as rate / reit / and cane / keɪn /. In the word “rate”, five participants from group 1, Diego, Lola, Matías, Aldo, and Sara, fully identified the vowel phonemes and represented it with the equivalent graphemes in Spanish. Saúl did not identify the phoneme and did not represent it with the appropriate grapheme. Ana did not identify the full word so it was left blank. Two participants from group 2, Juan and María, identified the

phonemes and represented them with their equivalent graphemes in Spanish. Pedro identified the phonemes but added an extra grapheme before the right phoneme.

Short i vowel words included bit / bɪt /, kit / kɪt /, and ship / ʃɪp /. In the words “bit” and “kit”, all participants from group 1 identified the vowel phoneme and represented it with the closest grapheme in Spanish. As for participants from group 2, they did the same. In the word “ship”, four participants from group 1, Lola, Aldo, Saúl, and Sara identified the phoneme and represented it with the closest grapheme in Spanish. Diego, Matías, and Ana did not identify the phoneme and did not represent it with any close grapheme in Spanish. Juan from group 2 was the only one who identified the phoneme and sought to represent it with the closest grapheme in Spanish. Pedro and María failed to identify the phoneme and to represent it with an appropriate grapheme.

Long vowel i words included bite/ baɪt / and kite / kaɪt /. Saúl from group 1, identified the phonemes correctly and represented it with the appropriate graphemes in English. Diego, Aldo, and Sara identified the phonemes but represented them with their equivalent grapheme in Spanish. Lola, Matías, and Ana did not identify the phonemes nor represented them with the appropriate graphemes. As for group 2, the three participants identified the phonemes and represented them with the appropriate equivalent graphemes in Spanish. Finally, in the word “kite”, Saúl from group 1 identified the phonemes correctly and represented them with the appropriate graphemes in English. Aldo, and Sara identified the phonemes but represented them with their equivalent grapheme in Spanish. Diego, Lola, Matías, and Ana did not identify the phonemes nor represented them with the appropriate graphemes. As for

group 2, the three participants identified the phonemes and represented them with the appropriate equivalent graphemes in Spanish.

The following table shows the results of the second application (post-test) of the dictation test. The words with the responses of the 10 participants are listed. The list of words is the same as in the initial test.

	Juan	Pedro	María	Diego	Lola	Matías	Ana	Aldo	Saúl	Sara
rat	rat	rat	rat	rat	rat	rat	rat	rat	rat	rat
rate	rate	rate	rate	rate	rate	rate	rate	rate	rate	rate
can	can	can	can	can	can	can	can	can	can	can
cane	can	cane	cane	cane	cane	cane	kein	cane	cane	cane
bit	bit	bit	bit	bit	bit	bit	bit	bit	bit	bit
bite	bite	bite	bite	bite	bite	bite	bait	bite	bite	bait
kit	kit	kit	kit	kit	kit	kit	kit	kit	kit	kit
kite	kite	kite	kait	kite	kait	kite	kait	kite	kite	kite
ship	ship	ship	ship	ship	ship	ship	chip	ship	ship	ship

Table 4.2 Second Dictation Test Results

After applying the adaptation of Elkonin boxes strategy, the following results can be noted in the responses of the participants. As it can be observed in table 4.2, in the words with short “a” vowel rat / ræt / and can / kæn /, all participants from the two groups, group 1 (previous training with Elkonin boxes) and group 2 (no previous training with Elkonin boxes) fully identified the short “a” vowel sound and represented it with the appropriate grapheme in both cases. In the case of the long “a” vowel words rate / reɪt / and cane / keɪn /, it can be noted again that the participants in group 1 and 2 were able to identify the phonemes and represented them with the

corresponding graphemes in English. In both words, all the participants wrote each word correctly.

In the case of short i vowel words bit / bɪt /, kit / kɪt /, and ship / ʃɪp /, all participants from both groups identified and represented the short vowel sound with the appropriate grapheme. Finally, in the case of long "i" vowel word bite/ baɪt /, it can be seen that four participants from group 1, Diego, Lola, Matías, Aldo, Saúl, identified the phonemes and represented them with the right graphemes in English. Ana and Sara, identified the phonemes but represented them with the equivalent graphemes in Spanish. The three participants from group 2 fully identified the phonemes and represented them with the appropriate graphemes in English. As for the long "i" vowel word kite / kaɪt /, five participants from group 1, Diego, Matías, Aldo, Saúl, Sara, identified the phonemes and represented them with the appropriate graphemes. Lola and Ana identified the phonemes but represented them with the equivalent graphemes in Spanish. Two participants from group 2, Juan and Pedro, fully identified the phonemes and represented them with the appropriate graphemes in English. María identified the phonemes but represented them with their equivalent in Spanish.

4.1. 2 Reading Test Results

Tables 4.3 and 4.4 summarize the information in the second part of the instrument, a reading test. In this test, participants were asked to read aloud six words that have the same sounds as the words in the dictation test, that is, short and long "A" and "I" vowels. The voices of the participants were recorded using the phonetic alphabet (IPA) to provide greater precision to the answers from participants.

	Juan	Pedro	María	Diego	Lola	Matías	Ana	Aldo	Saúl	Sara
man	[man]	[man]	[man]	[man]	[man]	[man]	[man]	[man]	[mæn]	[man]
pin	[pin]	[pin]	[pin]	[pir]	[plin]	[pin]	[pln]	[pin]	[pɪn]	[pin]
tape	[tape]	[tape]	[tape]	[ka]	[tape]	[tape]	[tape]	[tape]	[teɪp]	[tape]
time	[time]	[time]	[time]	[time]	[time]	[time]	[tlme]	[time]	[taɪm]	[time]
mane	[mane]	[mane]	[mane]	[mate]	[mante]	[mane]	[mane]	[mane]	[meɪn]	[mane]
pine	[pine]	[pin]	[mine]	[pi]	[peln]	[pin]	[pin]	[pine]	[paɪn]	[pine]

Table 4.3 First Word-Reading Test Results

In the case of words with a short vowel sound “a”, only the word man /mæn/ was included. As it can be seen in table 4.3, all participants in group 1, except Saúl, identified the grapheme, but the pronunciation was rather similar to that emitted in Spanish with this grapheme /man/. Saúl provided a more accurate pronunciation using the correct English phoneme /mæn/. Participants from group 2 also used the pronunciation of the most similar grapheme in Spanish /man/. Regarding words with a long vowel “A”, tape /teɪp/ and mane /meɪn/, in the word “tape”, five participants from group 1 identified the graphemes in Spanish but pronounced them in Spanish, without the awareness of the use of silent “e”. Saúl, again, provided a more accurate pronunciation of this word using the correct English phonemes /teɪp/. Diego did not identify the graphemes nor pronounced the word appropriately. In regard to group 2, the three participants identified the graphemes in Spanish but pronounced them in Spanish. As for the word “mane”, six participants from group 1, Diego, Lola, Matías, Ana, Aldo, Sara, identified each grapheme but read them as in Spanish. Participant 9 provided a more accurate pronunciation of this word using the correct English

phoneme /meɪn/. In group 2, the three participants identified each grapheme but read them as in Spanish /mane/.

Respecting short i vowel words, only the word / pɪn / was included. In this case, four participants from group 1, Diego, Lola, Matías, Aldo, Sara, identified the grapheme but they pronounced it as in Spanish /pin/. Saúl identified the grapheme and pronounced it as in English /pɪn/. Ana did not sound out the grapheme representing the vowel. Regarding long “i” vowel words time /taɪm/ and pine /paɪn/ , in the case of the word “time”, five participants from group 1, Diego, Lola, Matías, Aldo, Sara, read the word as in Spanish /time/. Saúl read the word as in English /taɪm/. Ana replaced the vowel for another consonant /tlme/. The three participants from group 2 read the word as in Spanish /time/. As for the word “pine” two participants from group 1, Aldo and Sara, read the word as in Spanish /pine/. Saúl read the word as in English /paɪn/. Diego, Matías, and Ana identified the “i” grapheme but pronounced it as in Spanish; they also omitted the silent “e”. Lola sounded out the “i” vowel like a Spanish “e” and did not sound silent “e”. Finally, in the case of the participants from group 2, Juan and María read the word by sounding out each of the graphemes as they do in most Spanish words. Pedro sounded out the first three graphemes and omitted the silent “e”.

In table 4.4 it is observed the results in the post-test after applying the Elkonin boxes strategy. The results will be expressed in phonetic symbols of the International Phonetic Alphabet (IPA) for a better understanding of the results.

	Juan	Pedro	María	Diego	Lola	Matías	Ana	Aldo	Saúl	Sara
man	[man]	[man]	[man]	[man]	[man]	[man]	[man]	[man]	[mæɪn]	[man]
pin	[pɪn]	[pɪn]	[pin]	[pin]	[pɪn]	[pɪn]	[pɪn]	[pin]	[pɪn]	[pin]

tape	[teɪp]	[teɪp]	[teɪp]	[teɪp]	[teɪp]	[teɪp]	[teɪp]	[teɪp]	[teɪp]	[teɪp]
time	[taɪm]	[taɪm]	[taɪm]	[taɪm]	[taɪm]	[taɪm]	[taɪm]	[taɪm]	[taɪm]	[taɪm]
mane	[meɪn]	[meɪn]	[meɪn]	[meɪn]	[meɪn]	[meɪn]	[meɪn]	[meɪn]	[meɪn]	[meɪn]
pine	[paɪn]	[paɪn]	[paɪn]	[paɪn]	[paɪn]	[paɪn]	[paɪn]	[paɪn]	[paɪn]	[paɪn]

Table 4.4 Second Word-Reading Test Results

In the word man /mæn/, all participants in groups 1 and 2, except Saúl, identified the grapheme, but its pronunciation stayed rather similar to that emitted in Spanish with this grapheme /man/. Saúl kept the appropriate pronunciation for the main vowel grapheme of this word by reading it as /mæn/. In the long “a” vowel word tape /teɪp/ and mane /meɪn/, in both cases, participants in group 1 and group 2 correctly identified the graphemes and read appropriately the long vowel sound “a” in the both words. Regarding short “i” vowel word pin /pɪn/, four participants from group 1, Lola, Matías, Ana, and Saúl, identified the grapheme and read it correctly /pɪn/. The other three participants from the same group, Diego, Aldo, and Sara, identified the main short vowel grapheme but sounded it out as in Spanish /pin/. As for group 2, Juan and Pedro, identified the grapheme and read it correctly /pɪn/. María identified the main short vowel grapheme but sounded it out as in Spanish /pin/. Finally, in the case of the long “i” vowel words time /taɪm/ and pine /paɪn/, it can be observed that, in both words, both groups correctly identified the long vowel “i” and read them correctly as /taɪm/ and /paɪn/.

4.2 Research Questions' Answers

1) How does the Elkonin boxes strategy facilitate elementary school children's recognition of "A" and "I" vowel sounds of English words in reading and writing?

The Elkonin boxes strategy helped children to understand the patterns of pronunciation of some words in English. Participants were able to discriminate the use of these patterns and put them into practice both in writing and orally. It helped them in their level of phonemic awareness, not only in the phonemes for this research but also in others such as consonant sounds. For example, participants of group 1 (table 4.1), when they did not identify the phonemes correctly, chose to omit them or replace them with others. In some other cases, they would add extra graphemes in the words or generate invalid combinations such as "mnti" or "lluq".

It also helped participants understand the alphabetic principle in English and increased their letter knowledge, in which, unlike Spanish, there is no unique correspondence between phoneme and grapheme in most letters, especially vowels. Participants stopped representing the vowel sounds "a" and "i" with their equivalents in Spanish and understood the implications of silent "e" in words. For instance, in the word "cane" they stopped making a generalization in the phoneme of the grapheme "C", to which, at first, they attributed to a unique correspondence of sound. In other words, at first, participants did not take into account that, in both Spanish and English, the grapheme "C" varies its sound depending on the vowel or consonant that accompanies it. Something similar happened with the word "kit" in which most of the participants represented the first sound with the grapheme "C", later on, this generalization disappeared. Another observable aspect, in the written level, is that

participants tried to identify and represent the dictated words with the appropriate graphemes, blank spaces and perseverance or repetition in writing were no longer observed. This could mean that increasing their knowledge of letters and their understanding of the alphabetic principle manifested itself in greater confidence and less anxiety in writing the words with the correct graphemes.

2) What are the differences and similarities before and after using the Elkonin boxes strategy in reading and writing?

Participants were divided into two groups: participants who had learned to read and write in L1 through Elkonin Boxes in Spanish (Group 1) and those who did not do so with it (Group 2). Participants who had already worked with this strategy in L1 showed a lower level of phonemic awareness, alphabetic principle and letter knowledge than those who used any other strategy for the same purpose. Participants in group 1 had higher incidences in the omission or placement of an extra grapheme in the dictation or in the omission of phonemes in the reading test. However, after the application of the strategy, results show that both groups reached the same level of development of phonemic awareness, alphabetic principle and letter knowledge. Although not all participants developed these three sub abilities in the same way in L2, the strategy favored their development in L1, seen in the responses of the participants in the written level as words containing the same number of phonemes and graphemes, just as it is done in Spanish. In the oral level, it is evident in the use of an approximate phoneme to the one required and not another without any relationship.

Another difference is the identification of the graphemes in the reading test and their correct oral expression. For example, in the identification of long vowel sounds, at

the beginning, participants tended to read the words as they saw them written, without taking into account the change in the sound of the main vowel before the presence of silent "e". However, in the case of short vowels, in few cases, there was a modification in the pronunciation of the main vowel. This could be explained due to the fact that these vowels may sound similar to those vowels in Spanish and the way participants are used to sounding them out, so this could be the only similarity kept after the application.

3) What changes are observed in the participants during the process of application of the Elkonin boxes strategy in reading and writing?

In terms of knowledge, the use of this strategy helped to increase participants' phonemic awareness in their mother tongue. In such a way that the omission of phonemes in the counting and identification became less frequent over time. This can be observed in students with a greater number of incidences in the distortion, omission or placement of extra graphemes in the dictation or distortion, omission or placement of extra phonemes in the reading. After the strategy, the number of students with these problems decreased and the identification of phonemes and graphemes was achieved, but their representation was used in Spanish and not in English.

In terms of attitudes, participants began to feel more confident in counting and identifying phonemes in words. Over time, they took less time to carry out these two activities. Also, they showed greater enthusiasm than at the beginning with words that were challenging for them and themselves proposed activities to include them in counting and identifying phonemes. Activities and games such as championships or "the art gallery" game promoted their interest and learning since participants used

their tiles as coins to buy pictures whose price had to be paid with the right number of tiles representing the number of sounds. When it came time to establish the relationships between phonemes and graphemes, most could do so independently and correctly. They were able to identify their own mistakes and those of their classmates when pronouncing some words such as “three” and “tree” or playing with the sounds in Spanish when pronouncing them as it would be done in English. As an example of this, once one of the participants mentioned that if we had to read the Spanish word “*Hoja*” by pronouncing the consonant sounds as in English it would sound /hoyə/ which, for them, sounded like the Spanish word “*joya*” (jewel).

4.3 Discussion

The first goal in phonemic awareness instruction is to help participants notice individual sounds, then the Elkonin boxes strategy has been functional for the participants in this research. However, there are two issues open to discussion. The first one is the fact that participants of group 1 who had previously worked with Elkonin boxes to read and write in Spanish as L1 presented a lower performance than the participants of group 2. This could be explained by the conditions of education derived from the COVID-19 pandemic. In group 1, participants were the first to work remotely with this strategy in L1 which could have resulted in poor performance in reading and writing in their mother tongue and, therefore, in English as a foreign language (EFL).

The second issue, a relevant finding, has to do with the improvement in performance of almost all the participants in this study. However, while there was evident progress in phonemic awareness in English, there was also noticeable low awareness in some participants during this investigation. As an example, participant Ana had a very poor level of phonemic awareness, constantly resorted to omission, placement of extra graphemes and even presented perseverances (constant repetition of a word or an idea). After the application of the strategy it is observed that this participant did not reach the same level as the rest of his classmates because he still represented the sounds with the equivalent graphemes in Spanish; however, the omission of words, the placement of extra graphemes and even perseverations were avoided. Moreover, in reading, this same participant replaced the sound of the grapheme "i" by the sound of the grapheme "l", which results in an inappropriate combination of phonemes in both Spanish and English. However, afterwards he succeeds in identifying these graphemes and sounds out the phonemes correctly.

In the case of high-performing participants such as Saúl, he demonstrated a high development of phonemic awareness and knowledge of the English language. Although his results in the first test are not perfect, in the post test he fully achieved the objective of this type of phonological based instruction. In general terms, the objectives of the application of this strategy were accomplished by the participants at their own pace. However, when comparing results, it is important to highlight that the application of the Elkonin boxes strategy had a positive impact on both Spanish and English, in such a way that both groups of participants showed significant changes in their phonemic awareness.

4.4 Summary

In this chapter, the results obtained were presented. The results were ordered and discussed according to the vowel sound (short or long). The research questions were discussed with some additional elements of this research. In the next chapter, the research contributions as well as the limitations of this study will be discussed. Moreover, there will be some suggestions for further research as well as a brief reflection.

Chapter V: Conclusions

This chapter discusses the research contributions and limitations of this study as well as provides some suggestions for further research. At the end, issues faced during the elaboration of this thesis will be mentioned.

5.1 Research contributions

This research arises from observing the teaching of English in Elementary education according to the Secretaría de Educación Pública (SEP) objectives and the benefits of increasing phonological awareness in early stages. Therefore, this research could be useful for teachers of English as a Foreign Language (EFL) in Mexico to help establish a starting point for reading and writing in English.

A possible contribution could be the perspective that phonological instruction in English must be based on the knowledge that students have about their own language as “phonological awareness is a strong predictor of reading growth not only in English, but also in Swedish, Spanish, French, Italian, Portuguese, and Russian” (Torgesen, 2002, p. 5). A solid foundation in phonological awareness will guarantee the consolidation of knowledge in its later stages. However, if reading and writing foundations in L1 are not strong, reinforcing them through phonological instruction (Elkonin boxes) may be a possibility.

In addition, this strategy allows the adaptation of content according to the age and knowledge of the students as it can be enriched with the appropriate activities to reinforce and consolidate knowledge. Although phonemic instruction in English with Elkonin Boxes is suggested for the second grade of primary school, older students could also benefit from this to reinforce reading and writing in English. Moreover, teachers can approach it from the stage (materialized, perceptual or verbal) they consider appropriate for their students.

5.2 Limitations of the study

The most significant constraints were the teaching time and the conditions due to the COVID-19 pandemic. In terms of teaching time and the hybrid model, lessons were time-reduced as well as the number of sessions per week due to the pandemic. Also, the time to conclude this research had to be reduced for the application as it would normally take approximately 8 months. For this reason, the research only focused

on the long and short vowels "a" and "i". By increasing the number of phonemes and graphemes or choosing more complex ones would have opened the possibility to verify a constant progress to identify, in time, those emerging difficulties during the application of the strategy.

Another limitation was the application of just two tests instead of three as it was proposed because that would have helped to measure the progress of participants with greater precision. Also, the instruction concentrated on the phonemic level and it was not possible to verify if the progress of the participants also occurs in the semantic level, that is, if the words that are used for the phonemic analysis are part of the current knowledge of the participants. Moreover, it was not possible to verify whether the reading shows improvements if it is done globally, that is, instead of reading a list of words, the reading of a passage or a short text could have been implemented.

Yet another limitation refers to the sample population chosen, which was very small and did not allow for a quantitative study to be carried out. A larger population could have been advisable to have a greater number of traits susceptible to comparison and to know if the improvement in phonemic awareness in poor-performance students could have shown similar progress as the participants in this study. Finally, regarding the hybrid model conditions, some participants carried out the activities at home and in a bigger sample population, it could have been possible to verify whether remote learning has greater implications in the application of the strategy and the results obtained.

5.3 Suggestions for further research

For further research, a similar investigation could be considered with a longer application time of the Elkonin boxes adaptation for a greater number of acquired phonemes and graphemes to be evaluated and verify the progress of the participants before the application of this strategy.

Also, beyond the phonemic level, the semantic level could be considered to monitor the level of internalization of the words that were used for phonetic analysis. Since learning a second language involves memorizing new words, it would be interesting to verify in subsequent research whether, using the adaptation of the Elkonin boxes strategy not only favors the development of phonemic awareness in the participants but also the increase of English vocabulary. Moreover, increasing the time for application could also help to evaluate reading in a wider way as it could be investigated to observe any benefits of using the Elkonin boxes and if this strategy favors reading in general terms, so that the procedure may include not only a list of words but also short texts to verify any significant difference when reading one type of text or another.

Finally, a larger study could be carried out in a public school to provide a wider view in the sense that larger populations would allow to have a significant number of traits susceptible to comparison such as control groups with different backgrounds or ages that could provide some insight into the effectiveness of this strategy by being able to verify if progress occurs at the same pace, slower or faster, and most importantly, to be able to give this research a quantitative approach.

5.4 Reflection

Regarding my teaching experience, this project began ten years ago approximately when I started working at the institution I work nowadays. Their methodological proposal includes the Elkonin boxes strategy for the acquisition of reading and writing in Spanish and English. For this reason, I based my thesis project on the application of this strategy. However, if I had concluded at that time, I would probably not have done it enough justice since mastering the strategy requires time to reflect positive results in students.

The adaptation of the strategy in the hybrid model due to the COVID-19 pandemic was difficult because in distance learning, students, at home, have greater distractions and the necessary guidance is limited. The application of this strategy is usually difficult in that sense and at the beginning, it was not interesting or attractive for students, for this reason various activities were used to make it more attractive for them. Finally, in addition to the above and in the search for better job opportunities, this does not imply I am dissatisfied with my current job, this project made me rethink about my role as a student as I realized how many things I ignore.

5.5 Conclusion

The purpose of this research was to analyze and describe the progress of second grade primary school children in the process of identifying the sounds of the short and long vowels "A" and "I" in English as a foreign language (EFL) by using an adaptation of the Elkonin boxes strategy. Phonological awareness is a strong predictor of reading success, then, phonological-based instruction should be considered in the curricular program, preferably in the early stages when

mother-tongue literacy has been established. The adaptation of Elkonin boxes was possible to verify the feasibility of this strategy to promote phonemic awareness. Although there are other strategies to promote phonological awareness in children, the adaptation of Elkonin boxes helps in the introduction to reading and writing in English for Spanish speakers.

This research helped to verify the level of development of phonological awareness regarding three important factors (sub abilities) in the literacy process: phonemic awareness, alphabetic principle and letter knowledge. This strategy favored the development of phonemic awareness in the participants in a reasonable way, even in the participants with poor performance. Participants with a high level of phonemic awareness in L1 managed to significantly increase their performance in reading and writing in English. Those with the lowest level achieved a fair improvement in the correct identification of the number of phonemes in the written plane and the correct identification and emission of short vowels in reading. Although this research presents a small sample of the benefits of a little-explored strategy in the field of teaching English as a foreign language in Mexico, it shows the importance of applying fully structured strategies to train students' skills gradually and systematically.

Appendix

Appendix A Instrument

Instrument

Student's name:

Part 1: Dictation

Directions: Listen carefully and write down the following words.

- 1.- rat
- 2.- rate
- 3.- can
- 4.- cane
- 5.- bit
- 6.- bite
- 7.- kit
- 8.- kite
- 9.- ship

Part 2: Reading

Direction: Read aloud the following words.

man	pin
tape	time
mane	pine

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