



BENEMÉRITA UNIVERSIDAD AUTÓNOMA DE PUEBLA

Facultad de Lenguas

**The use of color-coding strategy to learn weather and clothing vocabulary in EFL  
class at nursery level**

A thesis submitted to the Faculty of Languages

For the degree of

**Licenciatura en Lenguas Modernas**

Presented by

**Gabriela Chávez Jacobo**

Thesis Director:

Mtra. Veronica Lezama de Jesus



Puebla, Pue.

Septiembre 2019

**“The use of color-coding strategy to learn weather and clothing vocabulary in EFL  
class at nursery level”**

This Thesis has been read by the members of the committee of

Gabriela Chávez Jacobo

And it is considered worthy of approval in partial fulfillment of  
the requirement for the degree of

**Licenciatura en Lenguas Modernas**

Thesis Director

Mtra. Verónica Lezama de Jesús

---

Committee Member

Mtra. Sandra Juárez Pacheco

---

Committee Member

Mtro. José Isabel Coix Guerra

---

Puebla, Mexico

September, 2019

## **DEDICATORY**

*To my beloved parents who have always been supportive, and whose motivation made me reach one more step in my life.*

*To my beloved husband Juan Carlos for all his love, patience and motivation.*

## ACKNOWLEDGEMENTS

*I would like to thank firstly to the language faculty for the opportunity of developing this thesis.*

*Also, I am grateful with my committee members, for all the support, help, patience and dedication they gave me to develop my research.*

*Moreover, I am grateful with my workmates who were supportive during the whole process it took me to develop this research.*

*I would like to express my gratitude to my beloved students who always encourage me to be a better teacher, and whose love and happiness make me enjoy my work.*

*Nevertheless, I am also grateful with the principals, because they have trust on me and they were very supportive in my research.*

*Lastly, I would like to thank my family: my parents, sisters and husband, for all the effort and love.*

## ABSTRACT

English language teachers are always aware of implementing useful learning strategies which can help students perform the lessons. Moreover, those strategies are designed taking into account different skills. In addition, learning vocabulary in the EFL class is of great importance to develop all the skills. For this, different strategies had been used in the classroom.

This research aimed to prove and test the effectiveness of the use of color coding strategy in EFL class in a nursery level. Children at this level tend to learn visually, therefore, one of the strategies which involves a visual experience is working through the use of flashcards, as well, using colors create an impact in students' learning.

Learning through the use of flashcards is effective for all levels. However, as it is mentioned before, nursery learners tend to be visual and stimulated with pictures and colors. Hence, this study involves a proposal which has resulted effective to acquire weather and clothing vocabulary in a pre-kindergarten level.

The proposal is to use the color-coding strategy in two different types of flashcards: *colored word* and *picture*. This material is pre and post-tested and evaluated through the use of rubrics. To sum up, observations about behavior are done through the use of a checklist.

Interesting results are gathered about this level working with this material, and at the end of this study, some proposals about this topic are suggested.

## TABLE OF CONTENTS

Dedicatory -----	III
Acknowledgements -----	IV
Abstract -----	V
CHAPTER I: Introduction	
1.0 Introduction -----	1
1.1 Rationale for the topic selection -----	2
1.2 Significance of the study -----	2
1.3 Context of the research -----	4
1.4 Aim of the study -----	5
1.5 Objectives -----	5
1.6 Research questions -----	6
1.7 Conclusion -----	6
CHAPTER II: Literature review	
2.0 Introduction -----	7
2.1 Learning strategies -----	7
2.2 Color-coding strategy -----	8
2.2.1 The role of Memory -----	9
2.3 English as Foreign Language -----	10
2.3.1 English Vocabulary Learning through the use of Flashcards -----	11
2.3.2 English Language Learning at Nursery Level -----	13

## CHAPTER III: Research Methodology

3.0 Introduction .....	17
3.1 Methodology .....	17
3.2 Context .....	18
3.3 Participants .....	20
3.4 Description of the overall research design .....	21
3.5 Instruments .....	23
3.6 Data analysis .....	25
3.7 Conclusion .....	32

## CHAPTER IV: Results

4.0 Introduction .....	33
4.1 Obtained results .....	33
4.1.1 General pre-test vs post-test results .....	33
4.1.2 Interesting obtained outcomes while using the proposed strategy, material and vocabulary. ....	35
4.2 Answer to research questions .....	37
4.2.1 Answer to RQ1: <i>How effective is the use of color-coding strategy to teach and learn weather and clothing vocabulary in English language for students of Pre k level?</i> .....	37
4.2.2 Answer to RQ2: <i>What are the observed behavioral changes in EFL Pre k level students, when applying color-coding strategy to teach weather and clothing vocabulary?</i> .....	39
4.3 Material Proposal through the use of color-coding Teaching strategy .....	40
4.4 Conclusion .....	44

## CHAPTER V: Conclusion

5.0 Introduction	46
5.1 Research contributions	46
5.2 Limitations of the study	49
5.3 Suggestions for further research	47
5.4 Conclusion and reflection	48
References	50
Appendix A	52
Appendix B	54
Appendix C	57
Appendix D	58
Appendix E	59
Appendix F	61



## LIST OF CHARTS

Table 3.1 <i>First test application Group A</i> -----	27
Table 3.2 <i>First test application Group B</i> -----	28
Table 3.4 <i>Post-test results Group A</i> -----	31
Table 3.5 <i>Post-test results group B</i> -----	32

## LIST OF FIGURES

Figure 4.3 <i>Flashcards</i> -----	45
Figure 4.4 <i>Black-word flashcards</i> -----	47

## LIST OF GRAPHS

Graph 3.3 <i>Comparison of pre-test results between Group A and B</i> -----	30
Graph 3.6 <i>Comparison of post-test results between group A and B</i> -----	33
Graph 4.1 <i>General Results pre-test vs post-test</i> -----	37
Graph 4.2 <i>Vocabulary learning improvement after using color-coding strategy</i> -----	41

# **CHAPTER I**

## **Introduction**

### **1.0 Introduction**

Nowadays, education starts in the early stages of life. To accomplish the goals, teachers must be aware of students' needs and learning styles. Consequently, the use of strategies and methodologies in the classroom impact the improvement of learning. As a matter of fact, this research seeks to prove the efficiency of using the color-code strategy to teach and learn new vocabulary in pre-kindergarten (pre-k) level of school. Then, this thesis will present the results of a qualitative research developed in a kindergarten, which particularly is focused on two groups of nursery level.

This chapter starts by providing a rationale for the topic, in this section the researcher states an overview of the selected topic. Then the significance of the study describes the importance of implementing new strategies when teaching and suggests how the use of color-coding strategy is useful in teaching and learning. Later, the thesis presents the context of the research in which a brief explanation of the institution and the participants is given. To continue the chapter, the aims of the research are presented, this section describes the purpose of doing this study. In addition, the objectives of the research are presented to fulfill the aims of the research. To sum up, some research questions are proposed in order to provide the focus of the research. At the end of the chapter, a conclusion is given.

## **1.1 Rationale for the topic selection**

According to Oxford (2003), the use of learning strategies is one main factor for students to learn a second language. Thus, when acquiring a second language, students and teachers should take into account the use of different strategies. Moreover, children's learning environment is another factor when learning a second language (Espinosa, 2010). As a consequence, it is important to establish a good environment in which children can be able to acquire better the language, in fact, the researcher of this study thinks that every classroom should be equipped according to students' needs. Establishing a nice environment would be as an important factor as the equipment is, however for this study, learning strategies represent a key factor to acquire a language.

This research is focused on the use of color-coding as a strategy to improve English as a foreign Language (EFL) learning. According to Dzulkipli and Mustafar (2012), the use of color may improve learning by relating ideas. This means that, when using colors as a classroom resource, students will be able to relate the main idea or new vocabulary to a color effectively. Then, the use of this color-coding strategy could be helpful for acquiring the second language and it can work as an important strategy to help English Language Teachers to improve their teaching practice and results. Specifically, the use of this color-coding strategy will improve the second language acquisition in children from 2 to 3 years old in this study.

## **1.2 Significance of the study**

This thesis aims to demonstrate how children acquire second language vocabulary by using color-coding. According to Espinosa (2010), "when a child learns two languages simultaneously, e.g. before three years of age, the developmental pathway is similar to how

monolingual children acquire language.” (p. 2). Thus, the researcher of this study believes that this research will be helpful to improve second language teaching with young children by implementing the color-coding strategy to learn different vocabulary.

As mentioned before, when acquiring a second language, students should have different learning strategies in order to learn better. In addition to that, this researcher believes that the use of color is a good strategy to increase learning by stimuli (Dzul kifli and Mustafar, 2012). In fact, teachers should always be aware of their students’ needs, they have to consider new teaching strategies depending on learning styles and improve their teaching to have a progress in students’ learning:

Teachers can make use of the information on language learning strategies and styles to create and design their lesson or course plan. Since teachers play a big role in their students’ language learning process, the tools, teaching methods and classroom environment adopted will ultimately affect their students’ progress. (Onnis, 2014).

Thus, teachers should take into account the use of different strategies in their classrooms to improve students’ learning. Ortega (2014) supports this idea by mentioning that individuals use learning strategies to improve the learning process. Then, it is important to understand that in every classroom, it should be taken into account the different strategies to help in students’ process of learning. Specifically, the main proposal of this study is the use of color-coding strategy which will be helpful, for teachers of young learners, to teach new vocabulary.

To sum up, this researcher believes that the significance of this study is that the use of color-coding is a strategy that helps memorizing and acquiring new vocabulary. Supportingly, Pruisner (1993) claims that color-coding improves retention against black and white. Therefore, implementing color-coding in vocabulary will be a useful tool for teaching and

learning the second language, and as a consequence, this study may help the teaching practice of some teachers.

### **1.3 Context of the research**

This research is a qualitative study focused on young learners from 2 to 3 years old. This research takes place in an active kindergarten which includes nursery level. To be specific, this institution has been working as a bilingual school since 2016. This study is carried out in this institution since its students are always learning through different strategies and activities that are selected according to students' needs. Two groups of pre-k are involved, group A and group B. Group A has 16 students in the range of ages from 2 to 3 years. Group A has 5 girls and 11 boys, 4 students are starting to develop their speaking skill and they demonstrate what they have learnt through listening to the teacher's directions and pointing to the appropriate items. On the other hand, group B has 5 girls and 10 boys, 3 of them are able to speak in the target language and to understand some phrases. However, some students have shown difficulties in paying attention and in the development of their listening skill.

The English class schedule in this institution plays an important role because the first group works from 9:00 to 10:00 am, and the second group from 11:00 to 12:30 am. Every week, their English language class schedule change in order to take advantage of the time. It has been observed that both groups work better and more effectively in the first hour, however it has been seen that the second hour provides more time to perform different activities to enhance students' knowledge and to achieve learning goals.

The rationale to select the groups mentioned above is that the students in those groups learn according to their needs. Mainly the researcher of this study states that these students are

visual and implementing color-coding strategy is helpful to them to memorize and acquire new vocabulary in English language. It is important to mention that a big number of the students have attended to this school since they were in pre-nursery and they have been in touch with English as a Foreign Language (EFL) through songs, games and activities. It has been observed that as much as children grow up, their learning process increases too. Consequently, every class they are able to listen, understand and perform some instructions as well as recognize and produce certain English words or phrases.

#### **1.4 Aim of the Study**

Using colors in the classroom is a great tool and creates a visual experience. According to Dzul kifli and Mustafar (2012), colors play an important role for memory and learning; as a consequence, the use of color may improve student's learning by having a cognitive experience. The aim of this thesis is to test the use of color word flashcards as a strategy to teach and learn new vocabulary with students from the ages of 2 and 3 years old. In addition to that, this thesis aims to analyze the use of this material in the classroom and the impact it causes on students' learning. Probably, due to Dzul kifli and Mustafar (2012) highlight that "color helps us in memorizing certain information by increasing our attentional level" (p.4), applying this material may help students to acquire new vocabulary by memorizing.

#### **1.5 Objectives**

To fulfill the aim of this research, the study has the following objectives

- To develop color-coding teaching material about weather and clothing vocabulary
- To apply color-coding as a strategy to teach weather and clothing vocabulary.
- To identify how many words can students acquire using the color-coding strategy.

- To compare the effectiveness of the proposed material using it in different ways, colored words and black words.
- To explore the effectiveness of color-coding strategy.

### **1.6 Research questions**

This thesis addresses the following research questions:

- How effective is the use of color-coding strategy to teach and learn weather and clothing vocabulary in English language for students of Pre k level?
- What are the observed behavioral changes in EFL Pre k level students, when applying color-coding strategy to teach weather and clothing vocabulary?

### **1.7 Conclusion**

In this chapter, it was presented a general overview of the study and it was also explained some of the benefits of using the color-coding strategy with Pre k students who are learning EFL. It is important to mention that the theories which support this study are mentioned in the following chapter.

## **CHAPTER II**

### **Literature Review**

#### **2.0 Introduction**

This chapter reviews the main concepts about this research. First, it presents how some authors define learning strategies and their relationship with the color-coding strategy in order to teach and learn vocabulary. Then, it states the importance of using color-coding material with children as a tool to memorize different words. Finally, this chapter reviews how memory works and the importance of English as a foreign language in nursery learners.

#### **2.1 Learning strategies**

How learners deal with new knowledge is a topic that many researchers have investigated. For instance, Oxford (1990) sees learning strategies as “steps taken by students to enhance their own learning, and as tools for active, self-directed involvement, which are essential to develop the communicative competence” (cited in Nematı 2009). Moreover, Tay (2014) points out that learning strategies are “the effort that students need to process, understand and adopt the information introduced in learning-teaching processes or in their individual preparation” (p.259). Both authors agree that when using learning strategies, students need to work actively to learn, in this case, English as a Foreign Language (EFL).

Continuing, Oxford (2017) highlights that learning strategies is a conscious process that learners use to reach certain goals, to accomplish and to improve learning tasks (cited in Burns and Richards, 2018). She suggests that learning strategies are meaningful to learn a second language and they are important for learners’ self-regulation in the different stages of the learning process. Another author who has contributed to this concept is Chamot. He



defines learning strategies as “procedures that facilitate a learning task, they are most often conscious and goal driven” (Chamot, 2005, p. 112). Thus, he adds that learners apply different learning strategies when they learn a second language, these strategies can be observable or behavioral and they facilitate the achievement of tasks in the class (Chamot A. 2014); which means that learners use different strategies according to the attitude or the task, but in the end, they are useful to improve or reach certain goals.

Based on the authors’ definitions that were mentioned above, it can be said that learning strategies are tools or steps that help students to get new knowledge and to master it. Due to the importance of them, it is necessary that both, teachers and students, identify the most appropriate one to success in the learning process.

## **2.2 Color-coding strategy**

As it is mentioned before, the use of strategies is useful to achieve different tasks and to improve the learning process. One strategy that has demonstrated great benefits in the language learning process is the color-coding strategy. Colors have a great impact in humans health and psyche (Gnoinska, 1998 cited in Anuthama, 2010); furthermore, using colors in the language classroom involves a visual experience. (Dzul kifli, M. and Mustafar, M, 2012). These researchers state that the color-coding strategy is an effective tool in education, because it allows students to pay more attention, to increase their memory span, to remember more information and to understand more effectively the lessons. In the same way, Kaya and Epps (2004) state that the use of color awakes an emotional sense and it is helpful to remember information; meanwhile, Farley and Grant (cited in Dzul kifli and Mustafar, 2012) add that the color-coding strategy is an excellent medium to create a positive classroom

environment. In other words, color-coding strategy has been applied to teach and learn a new language and it has been demonstrated that it has a great impact in the students' learning.

Coloured chalk or pencils can be used for learning spelling and pronunciation, for remembering the word's grammar, for teaching semantic categories and word differences, for learning morphology and for drawing learners' attention to words and for stimulating discussions. (Anuthama, 2010, p. 13)

Then, the use of color in different resources will be a useful tool to apply in the classroom to learn new vocabulary, also, it can help students to memorize better what they are learning in the classroom. Anuthama (2010) establishes that students' attention and concentration is better when they have colored words. To support this Dzulkifli and Mustafar (2012) highlight that "color helps us in memorizing certain information by increasing our attentional level" (p.4). Thus, he points out that children are mainly visual learners and acquire knowledge visually. As a result, this color-coding strategy will be helpful for them to concentrate and it will be easier to remember the new vocabulary; in fact, much of the implementation of this strategy is based on memory work.

### **2.2.1 The Role of Memory**

The role of memory in the learning process is of great importance. Memory is divided in three parts: "the sensory buffer, the working memory and the long-term memory" (Mujis and Reynolds, 2011 p. 31). The sensory buffer registers lot of information but it cannot retain it for long time. Some information on the sensory buffer will move to the working memory. Working memory is where thinking is done but it does not have the capacity to keep information. Thus, working memory has the information that people use in any time. Finally, the long-term memory "has a nodal structure, and consists of neural network representations, whose nodes represent chunks in memory and whose links represent connections between

those chunks” (Best, 2000, in Mujis and Reynolds, 2011, p. 31). In easy words, every piece of information is related to each other within the memory process. Particularly when learning, it is important to have connections and understanding due to the fact that every chunk of memory has a relationship.

Additionally, all parts of memory are important. However, working memory plays a relevant role in learning because it limits and discriminates the amount of information that is needed to process new information that has not been stored in the long-term memory yet (Mujis and Reynolds, 2011). To be more specific, working memory only retains useful information for the long-term memory. As it was stated, the way memory works is not to do repeatedly actions after learning something, but to practice with different skills and testing ourselves. Also, it is important to have a base or knowledge in order to have connections for the long-term memory (Brown et al., 2014). This means that learners need to use acquired knowledge and practice it in different ways, thus they can remember the information and have a better learning process.

### **2.3 English as Foreign Language**

English is one of the most spoken languages around the world. It is the official language that allow people from countries which their first language is not English to communicate. According to Broughton, Brumfit, Flavell, Hill and Pincas (2002), English as a foreign or second language (EFL or ESL) is used in different sectors such as educational, business, financial among others. In fact, commonly people in Europe acquire English as a second language, due to the fact that they need to communicate to others worldwide; consequently, there exists some variations according to the area (Broughton, et al., 2002).

In other parts of the world, English language is taught as a foreign language (EFL) because of the increasing development of media and purposes. However, the role of EFL is not important for national or social life completely (Broughton et al., 2002). Thus, learning English as a foreign language is important but not necessary to communicate to some non-English-speaking countries. For instance, in Mexico, English language is taught as EFL. Even when English is not necessary to communicate, it is necessary to learn; as a result, English language has been implemented in all educational levels of this Mexican country (SEP, 2017), and teachers must implement new teaching materials and strategies when teaching the language.

### **2.3.1 English Vocabulary Learning through the use of Flashcards.**

According to Gardner, “people have different abilities to accomplish goals” (1983, 1993 cited in Mujis and Reynolds, 2017, p.17). This means that every person is able to perform a certain task in different ways since some subjects are easier for people to learn depending on the ability everyone has. For example, with color-coding strategy implementation, children of this study will employ their visual intelligence mostly.

Visual or spatial intelligence is described as “the ability to perceive the visual. Visual/spatial learners tend to think in pictures and need to create vivid mental images to retain information. They enjoy looking at pictures, charts, movies and so on” (Gardner, 1983,1993, in Mujis and Reynolds, 2017, p.17). Additionally, some studies have demonstrated that “*visual learners* learn best by looking at pictures, graphs, slides, demonstrations, films, etc. Colorful, bright graphics can help these learners retain information” (Benzwie, 1987 & Dunn and Dunn, 1978, cited in Mujis and Reynolds, 2017 p. 28). Thus, the use of visual material is of great importance for learning and retaining certain information.

In fact, learning a foreign language is always challenging because learners need to master different skills and subskills. Vocabulary is one of those skills that is necessary to communicate effectively. Schmitt (2000) emphasizes that lexical knowledge is central to develop the communicative competence and to the acquisition of a second language. This idea is supported by Azabdaftari, Behrooz, Mozaheb and Amin (2012) who mention that the more vocabulary an ESL/EFL learner acquires, the better communication he/she will have. Due to the role of vocabulary in the English language learning process, Nemati (2009) suggests that teachers should select different strategies or materials such as flashcards or dictionaries that help learners to understand the meaning of the words.

New vocabulary should be learnt in an active and purposeful context. According to Rivers (2018) when learning vocabulary “students should be involved in an activity which requires them to retrieve from their long-term memory store vocabulary which is appropriate in the circumstances” (p. 469). For instance, children can be involved in activities which imply practicing new vocabulary such as warm-ups or during discussions. Based on the opinion of the researcher of this study, it can be said that every teacher should identify the best tools to make their students learn new words in an easy way.

Due to the necessity of implying new activities that help to learn specific vocabulary, the use of flashcards as material is proposed for this research. A flashcard is mainly described as a cardboard which includes the picture and the written word. In Oxford living dictionaries (2011), flashcard is described as “a card containing a small amount of information, held up for pupils to see, as an aid to learning” (p.665). Then, it is a useful resource to retain new vocabulary, due to the fact that it has few information which is easy to remember. To support this, Lee (2017) says “the purpose to use flashcards is to increase your memory by repetition”

(para. 2), therefore, the more a flashcard is used, the easier it is for students to acquire new vocabulary.

To summarize, previous research has shown that the use of flashcards is helpful in language learning and memorization (McCullough, 1995 in Azabdaftari, Behrooz, Mozaheb, Amin, 2012). However, this research also showed that the use of flashcards is not always good for comprehension. Then, the use of this material will be helpful only to remember and increase vocabulary. Other authors agree that flashcards are better to use with children (Nicholson, 1998, in Azabdaftari, Behrooz, Mozaheb, Amin, 2012), and fun classes can be performed with this material. Thus, this material is a helpful tool to teach children a foreign language.

### **2.3.2 English Language Learning at Nursery Level**

Nowadays children are starting to get education from the early stages of their lives. Then, it is important to give a brief description of how learning occurs according to the developmental stage. According to Piaget (2001), there are four developmental stages: *the sensory-motor stage, (0-2 years), the pre-operational stage (2-7 years), the concrete operational stage (7-12 years) and the formal operational stage (12 +)*. However, this section is focused on the pre-operational stage due to the fact that the participants on this thesis are from the range of ages 2-3 years old.

Piaget (2001) describes the pre-operational stage as the first steps children take from action to thinking symbolically. In other words, in this stage children are able to perform different actions by thinking. Despite of being able to think symbolically, Piaget states that children at this stage can only think in one direction, in other words, it is difficult for them to perform different actions. Also, children in the pre-operational stage are very egocentric “they tend to

see the world and the experiences of others from their own standpoint”. (Piaget, 2001, in Mujis and Reynolds 2017, p.23, 24) Then, children on the pre-operational stage are not able to comprehend others’ perceptions.

Another fact about children is the way they acquire language. Vygotsky (1978) studied the language development and he believed that it develops separately from thought. Nevertheless, as children grow up, they start understanding meaning better. Hence, language development improves as children overlap thought. This author also states that interaction has much to do on children's understanding because they are strongly influenced by others. Then, when learning a foreign language, children are closer with it and they are eager to understand, consequently, they reach better understanding as they keep in touch with the new language.

Age plays an important role when learning a second language because “the earlier one starts to learn a second language, the more likely it is for the learner to achieve native-like proficiency” (Granena and Long, 2012, in Burns and Richards, 2018). Due to this fact, the acquisition of a foreign language would be easier for children since they have the ability to learn the language more effectively. In addition, Rivers, (2018) states that children are:

much more flexible, curious, less inhibited and less threatened in their sense of identity. They are more open to new experiences and new learning than their parents, or even their older brothers and sisters, and all of these factors are conducive to good language learning (p. 452).

Conversely to Rivers’ statement, Hatch (1978) state that children do not acquire a foreign language as easy as we might think (cited in Rivers, 2018, p. 446). In other words, it is a belief that children acquire the language easily because they have not developed their first language yet. On the contrary, Hatch says that “recent work in first-language acquisition...

shows that the process is a very long, very demanding, and frequently frustrating one for the child” (Hatch, 1978, in Rivers, 2018 p.446).

Regarding EFL learning in nursery students, Rivers (2018), believes that there is no an established age for acquiring a foreign language, but she agrees that the beliefs that state that children learn faster than adolescents or adults have been criticized so far. In other words, there are many other factors which can affect the way or the speed that people learn a foreign language, but not only the age. In fact, some research about the optimal age for learning a foreign language has demonstrated that the more time students spend learning a foreign language, the more effective it would be to acquire it. (Snow and Hoefnagel-Hohle, 1978 in Rivers, 2018 p. 447). Sportingly, the results that these researchers obtained from their research rejects the belief that the first ages are the optimal to acquire any foreign language. Despite the fact that some research has shown that children do not acquire a new language faster or easier, Rivers (2018) states that children are:

much more flexible, curious, less inhibited and less threatened in their sense of identity. They are more open to new experiences and new learning than their parents, or even their older brothers and sisters, and all of these factors are conducive to good language learning (p. 452).

Thus, children show positive attitudes about learning something new. As a result, even though research has proved that children do not acquire a foreign language easier or naturally, they follow a process that makes them understand that language little by little, through repetition or by listening. Nowadays, parents want their children to acquire a second language in the early years of their lives to increase the language skills and to make them able to achieve goals for their future. (Chu, 2014) Thus, learning a second language in the first years of life is of great importance and children will achieve speaking goals; for instance, in this study nursery students are learning EFL.





## **CHAPTER III**

### **Research Methodology**

#### **3.0 Introduction**

This study is focused on the implementation of the color-coding strategy to teach EFL to nursery students. In order to prove the effectiveness of this strategy, this chapter describes the experimental methodology which was used in this research. Also, a description of the context, the participants and the instrument will be done in the following paragraphs. In addition, the research design of this study is also presented as well as the analysis of the collected data.

#### **3.1 Methodology**

As it was mentioned in the first chapter, the aim of this thesis is to test the use of color-word flashcards to teach new vocabulary in pre-k level. In order to do so, this study is developed through the use of a qualitative approach, and the instrument applied by the researcher aims to prove the efficiency of how pre k level students acquire new vocabulary by using the strategy of color-coding.

According to Kothari (2004), “qualitative approach to research is concerned with subjective assessment of attitudes, opinions and behavior” (p.5). Thus, this study will demonstrate the attitudes that the participants have towards the proposed material. In addition, Creswell (2009) emphasizes that a qualitative research collects data of the behavior of the participants during their activities. In this case, the researcher will observe participants’ behavior during the use of the material.

Additionally, this thesis is based on a qualitative approach because it aims to analyze how effective is this color-coding strategy proposal working in two groups of pre-k level. Specifically, this qualitative research is performed through the use of an exploratory methodology because “it is useful when the researcher does not know the important variables to examine.” (Creswell, 2009, p. 16). Consequently, this research approach and methodology are suitable for this study.

According to Kothari (2004), experimental approach is related to the environment and the variables can be manipulated to identify the results or effects given. In other words, this methodology leads the researcher to play with the variables and gather data about the effects. Hence, this researcher wants to prove the effectiveness of the proposed material used through the use of a color-coding strategy during a period of time in two groups of pre-k level. Additionally, this experimental methodology demonstrates the impact or consequences caused in different groups by changing the variable or treatment (Creswell, 2009). Then, this study will show the differences between both groups of participants due to the fact that the time spend with proposed material and color-coding strategy will not be the same.

### **3.2 Context**

This research takes place in a private school in Puebla, Mexico. Its commercial name is Bumblebee and this institution has been working since 2007. This year, this institution started with a nursery level and it has been growing through the years, nowadays the school works with kindergarten level and it has opened an elementary school as well.

The students enrolled in this institution have good economic status, so they have access to English language in different ways; for example, they travel to different places where English

is the official language. Usually, students' parents speak English constantly, so they are used to follow certain orders. In addition, they have access to different gadgets and technology that allow them to watch movies or listen to music in English language.

In the first years of this institution, there were few students enrolled in this school, consequently, there was just one English language teacher. Through the time, the school expanded significantly, and it adopted a bilingual system as a way to enhance English language. Since 2016, this institution has been working as a bilingual school. It means that Spanish language and English language are used as a means of instruction in different school subjects. Usually, students move from classroom to another classroom in order to take their lessons in Spanish or English. Moreover, this institution has different English language events per month which allow students to keep in touch with the target language.

Currently, this school has four English teachers and they focus on students' needs to develop their lessons. In addition, every teacher has the responsibility to work in an active way in which students learn through games or dynamic activities. Moreover, teachers are not allowed to use visual technology aids because the system is active, and teachers have to design teaching materials that students can manipulate.

Regarding the teaching process in this institution, teachers work from general to specific topics. Daily routine starts in a magic circle in which students talk about what they did the day before; and then, students sing along with teachers. After that, usually, this teacher introduces the topic through the use of the magic bag or telling students a situation or problem related to the topic. Then, the class must start in the playground where students are able to play using touchable material. Every activity has to be controlled by the teacher and it has to have a specific purpose.

### **3.3 Participants**

This study is focused on two nursery level groups which are Pre-k A and Pre-k B. These participants' age ranges from 2 to 3 years old. As it was mentioned in the first chapter, group A has sixteen participants, eleven boys and five girls. Group B has fifteen participants: ten boys and five girls, in total they are thirty-one participants.

Regarding the differences between participants, group A works pretty well. these participants follow rules and they are very curious and eager to learn; however, there are four students who have language deficiency. For this reason, teachers use different strategies to face this problem and to review what has been learned by these participants. Most of these participants in this group, enjoy listening to different English songs and they are able to understand the meaning of what they sing. Also, they are very visual, they work through the use of different flashcards, puppets, toys, or real objects.

On the other hand, participants in group B do not follow all the rules in the classroom and 2 of them do not pay attention during lessons. In addition, this group has five participants with language deficiency and, as in group A, teachers design different strategies to deal with language issues. Participants in this group also enjoy listening to English songs, however, they prefer activities in which they can move their bodies. Also, they are visual, but they do not respect turns. In this group there are two students who are able to understand everything the teacher says in English, and sometimes, they answer using simple sentences.

Particularly, this researcher wants to point out that in group B, there are two students who do not pay attention during the lessons. One of these participants seems to have problems due to the fact that his parents treat him as a baby, and it is hard for him to focus his attention on

the topic that are taught at school. Meanwhile, the other participant presents a case of attention deficiency, due to the fact that his mother is Chinese, and his father is Mexican. They constantly speak to him in Chinese and Spanish thus he has issues in understanding what people say to him. Also, he has a birth defect on his ear which does not allow him to hear perfectly.

Generally, as it was mentioned before, all participants of this study have a high economic status and their parents are aware of the importance of learning English. They constantly put their children in contact with the target language through the use of technology or books.

### **3.4 Description of the overall research design**

In order to collect the data about the number of words that participants can learn through the use of colored word flashcards, the researcher applied a vocabulary knowledge test. There was no problem applying the research instruments of this study since the principals allowed the researcher to carry out the study; this is because working with these participants will allow them to know if the proposed strategy worked.

The application of instruments took some time due to the fact that students missed classes because of the pollution situation in Puebla, health problems and events at school.

The purpose of the first research instrument was to identify if participants recognize any of the 8 words in the test. This pre-test was applied individually to give participants the opportunity to decide between the words and to avoid copying. Participants in group A understood the instruction and they worked without help. On the other hand, students in group B had troubles in understanding the activity and they were given some examples.

In the application of the pre-test, two participants in group B were insecure, one of them did not want to perform the activity because he was not able to understand even with examples, so he had to be guided. The other participant was insecure because she did not want to make any mistake, then she was motivated to continue even if she was not correct. It took one week to apply this pre-test, however only twenty-seven participants answered it because the other four did not attend classes.

After applying the pre-test, the flash cards were shown to the participants to make them get involved into the topic. They were suggested to repeat the word as they were looking at the image. Then, the words in black were shown to make them aware of the spelling of every word, after that, every participant was given a flash card and they had to place it in the correct word. Only two participants were able to match the word with the image, but the others only placed the image where they thought it was.

Later, the use of the flashcards was changed with group A, the researcher showed the words in color, then the participants had to look at the words, then, they had to tell which color was each one and after that, they were suggested to classify again the word with the image. The activities were done through games, in order to grab participants' attention and to promote participation. In addition to that, the flashcards were divided into groups of colors, all the words in yellow together, and the other colors as well.

On the other hand, participants in group B used the flashcards with the word in black, the same activities were done. The use of the words in black was challenging for students because many words start with "S". All this process of using color-coding strategy took around four weeks.

Finally, the post-test was applied after the proposed vocabulary was taught through the color-coding strategy in classes. All process was similar to the pre-test application but this time the post-test had 20 colored words. In the case of the post-test, the participants had to remember what was written in order to place the flashcards. Nonetheless, some participants needed some help and they asked to mention the words. The use of the color-coding strategy was of great importance in answering because, as it was mentioned before, some words start with “S”. Additionally, the spelling of words like *rainy*, *rainbow* and *raincoat* have the same letters, so they had to be aware of the sound and color of each word. Participants’ attitude was better than in the pre-test, thus it took one week and a half to apply the post- test for all the participants due to the events of the school.

### **3.5 Instruments**

In order to collect data for this study three instruments were mainly used: a test, a rubric and a checklist. The test was applied twice, once as pre-test and the other one as post-test in order to see if this experimental research had some outcomes. The aim of the test was to measure the range of vocabulary knowledge that each student had before starting using the material and color-coding strategy proposed for this study. Moreover, the rubric aimed to measure the development of these participant, thus, it can be established if these flashcards and color-coding strategy are worthy to teach and learn vocabulary in EFL.

Firstly, Dimitrov and Rumrill (2003) establish that “Pre-test-post-test designs are widely used in behavioral research, primarily for the purpose of comparing groups and/or measuring change resulting from experimental treatments” (p. 159). In other words, the use of a pre-test or post-test is helpful to identify if exists a difference before and after applying a proposed material.



The pre-test used in this research was designed by the author of this thesis (See Appendix A). It is a table divided in two sections; the first section on the left side has the words in black and the participants should listen to them in order to select the correct picture. On the right side, two images are shown, and the participants are asked to glue a sticker on the correct image after listening to the word (See Appendix A). After that, the results are register in a rubric to record the number of words that the students recognized. Meanwhile, the post-test is a chart which includes the 20 proposed words about weather and clothing vocabulary, those words were written according to the color-coding proposed. There the participants had to match the flashcard with the corresponding word, the flashcards were placed separately for participants to decide where to match them. This post-test was also designed by the author of this research. (See Appendix B)

Secondly, a rubric is defined as a tool that evaluates learning (Cooper and Gargan, 2009). In other words, it can be used in the classroom to monitor the learning process. In addition, Wiggins (1998) agrees that a rubric is a basic tool which is used in a classroom “to notice the most important points” (p. 153 cited in Cooper and Gargan 2009). It can be understood that in order to know which aspects can be improved in learning, the use of a rubric is important. A rubric is also defined as “a rule or guide. . . by which students’ performance or product is judged. It nails down the criteria, making them available to schools, teachers, parents, and students and providing clear direction and focus” (Schmoker, 2006, p. 70-71 cited in Cooper and Gargan 2009 p. 54). In other words, a rubric as the author says, is a rule or guide which evaluates students’ performance, it allows either teachers or students to know what to improve. The rubrics (See Appendices C and D) which were used in this study have three columns, in the first column you can see the scales, which are divided in *excellent (100-90)*,

*very good (89-80), good (79-70), fair (69-60), weak (59-50), needs improvement (49-40).*

The second column states the criteria to be evaluated, in the case of the pre-test 8 words are evaluated as maximum and for the post-test the 20 proposed words are presented. Finally, in the right side are presented the observations for each participant according to the scale they got (See Appendices C and D).

Thirdly, a behavioral checklist was used to measure participants' motivation, behavior, curiosity, attitude, and participation since this type of checklists "allows you to see which particular type of behavior the student keeps repeating most ..., as well as the kind of tasks that seems to interest the student more than others" (Burns, 2010, p. 63). In other words, these checklists are helpful tools which are used to observe what happens during the lesson, focusing on the behavior. Thus, it provides a clear understanding of students' patterns and different strategies could be applied to improve them.

Particularly, the behavioral checklist used in this study has three columns. In the first one, there are considered if the participants were motivated, curious, participative, etcetera. Two small columns in the middle are having *yes/no* statements; thus, the researcher can say what she noticed during the application of the proposed material and the color-coding strategy. Finally, in the last column, some observations are written down. (See Appendices E and F).

### **3.6 Data analysis**

The pre-test was applied before using the colored word flashcards material in order to diagnose the number of words the students were able to recognize. Collected data is in the following tables:

Participant	identifies 8 words	Identifies 7 words	Identifies 6 words	Identifies 5 words	Identifies 4 words	Identifies 3 words	Identifies 2 words	Identifies 1 word
1				X				
2			X					
3					X			
4				X				
5						X		
6			X					
7					X			
8						X		
9					X			
10				X				
11					X			
12				X				
13			X					
14				X				
15		X						

*Table 3.1 First Test Application Group A*

Table 3.1 presents the results gathered in the pre-test applied to participants in group A. In the first column the number given to each participant is stated, in total they are fifteen. In the next columns, the number of words identified are established from eight to one. None of the participants was able to identify eight words. The highest number of identified words is seven. Also, three participants were able to identify six words, while five participants in group A recognized five words which was the majority of participants. Four participants identified four words and only two recognized three words.

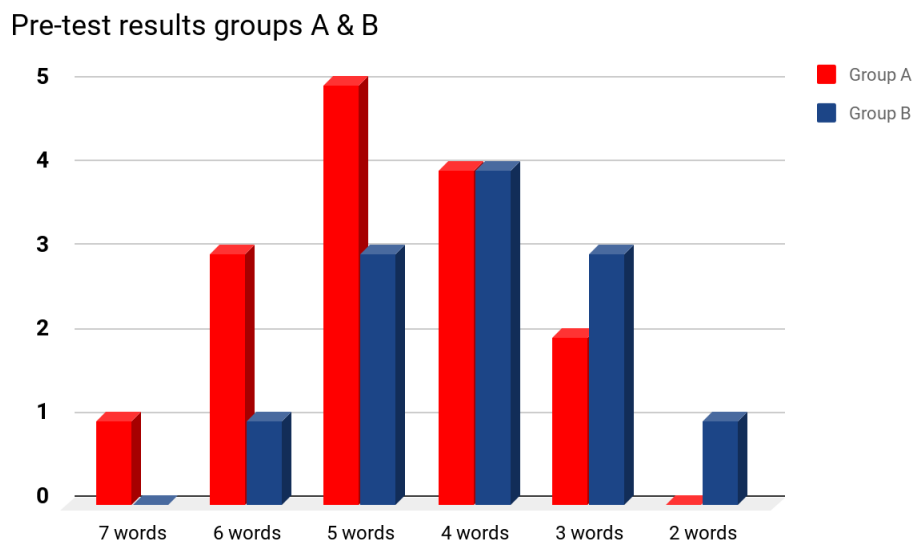
In group B, the participants followed the same strategies in answering, however, some of them were unmotivated. In addition, only twelve of them answered the pre-test due to the fact that the other four missed classes in that week. The results are shown on table 3.2.

Participant	Identifies 8 words	Identifies 7 words	Identifies 6 words	Identifies 5 words	Identifies 4 words	Identifies 3 words	Identifies 2 words	Identifies 1 word
17			X					
18						X		
19				X				
20				X				
21						X		
22					X			
23				X				
24					X			
25					X			
26					X			
27							X	
28						X		

*Table 3.2 First Test Application Group B*

It is seen in Table 3.2 that none of the participants in group B could identify eight or seven words and only one of them was able to recognize six words. Three of them identified five words of the pre-test and four were able to make four correct answers. Then, three participants identified three words out of eight while only one could recognized two. The last participant was insecure because she does not like to make mistakes and as she did not know the vocabulary she was not motivated to continue.

The results gathered by the pre-test showed that students from group A could reach better scores than students from group B. In order to have a clear understanding about these results, they are presented in the following graph.



*Graph 3.3 Comparison of pre-test results between group A and B*

As it is shown in graphs 3.3, the participants in group A had higher scores than participants in group B, to be clear, the highest number of words recognized in group A was five rather than group B whose highest number of words recognized were four. However, the results do not show that students from group A were better at recognizing words, but it showed that they used more strategies in answering and all the group was motivated. On the other hand, some participants in group B were insecure, unmotivated or they were playing while the test was applied. The results may be affected because of these variables.

In order to see the effectiveness of the proposed material, a post-test was applied. For this test, twenty words were used as total score. The next table is divided in 16 columns, the first one states the number given to the participants (sixteen for group A and fifteen more for group B). Then, the next columns state the number of words that each participant could

identify, from 20 to 6 or less. Table 3.4 shows the results obtained in group A, and Table 3.5 shows the results obtained from group B.

Number of words identified by each participant															
Participant	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6
1	X														
2							X								
3	X														
4					X										
5										X					
6	X														
7												X			
8					X										
9	X														
10							X								
11									X						
12													X		
13							X								
14								X							
15					X										
16															X

Table 3.4 Post-test results group A

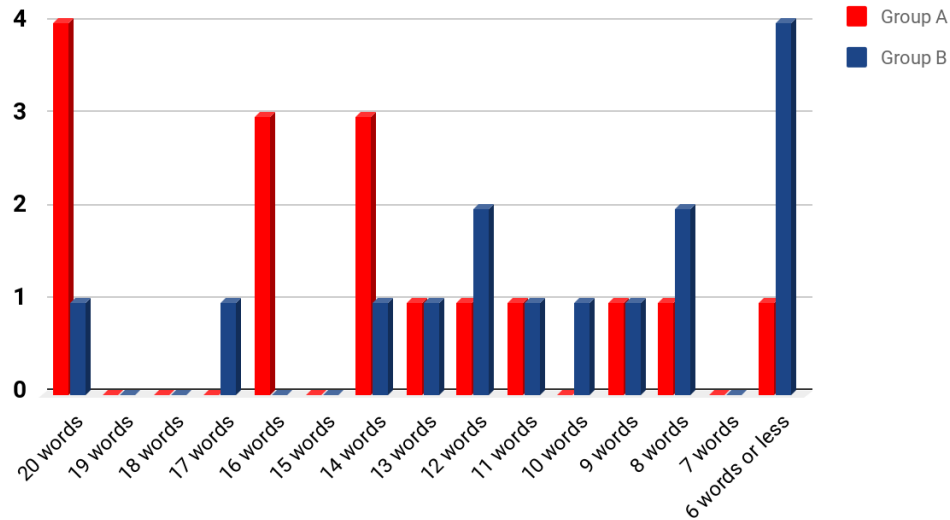
It can be seen in table 3.4 that after applying the proposed material the participants could identify more words. In this case the only strategy used by participants to recognize the words was the color-coding. Some of the participants answered the post-test with mistakes but after seeing the color on the word they were able to realize they were not correct. It seems that they were able to identify more words thanks to the fact that they practiced for 45 minutes daily. The following Table 3.5 shows the results gathered in group B.

Number of words identified by each participant															
participant	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6
17	X														
18												X			
19							X								
20															X
21									X						
22										X					
23													X		
24				X											
25															X
26															X
27								X							
28									X						
29													X		
30											X				
31															X

Table 3.5 Post-test results group B

As the reader can see, Group B had less time to work with the proposed material. To be specific, they had only 30 or less minutes but not daily, the proposed material was used three days a week because of some events at school. In addition, some participants in this group had problems in paying attention. They used to miss classes quite often, and they do not follow all the rules in the classroom. Also, they were not motivated, thus the proposed material was used in a different way. As a consequence, they had less time to work with all the words. The following Graph 3.6 shows the contrasting results gathered in both groups in the post-test.

Post-test results of groups A & B



Graph 3.6 Comparison of post-test results between group A and B

In both groups, as you can see, the results show that the strategy was useful because the participants can now recognize more words about weather and clothing. Also, it is important to mention that the participants did not only memorize the words, but they were able to understand the meaning and sometimes used them in their conversations. The comparison between both groups shows that group A reached higher scores in vocabulary learning through the use of color-coding strategy. Four participants in group A were able to recognize the twenty words while in group B only one participant was able to recognize them. In addition, two of the five participants made two mistakes, but they were able to recognize they were wrong before finishing the post-test thanks to the color-coding strategy.

To continue the comparison, it is seen in the graphs that only one participant on group B was able to recognize seventeen words. He also used the color-coding strategy, but he did not recognize three words because he did not attend classes some days. Later, you can see that three participants on group A identified sixteen words, while none participant in group B



could reach that score. Some of the confusing flashcards were *sun vs sunny*, *cloud vs cloudy* and *rainbow vs raincoat* flashcards. It means that they understood the concept, but they confused these words because of their spelling.

Generally, the participants on both groups were motivated in answering but they had troubles in some words because they were not sure, thus they used to stop the post-test. They were motivated by their classmates to continue.

To finish the comparison, one participant in group A recognized only six words because he missed two weeks of classes. Conversely, in group B, six or less words have the highest number of participants. This is because they do not like participating in class and they get constantly distracted. Mainly, group B's participants missed classes, also, some of them were sick and one of them has a birth defect on his ear and he doesn't listen very well.

### **3.7 Conclusion**

As a conclusion, it can be said that the implementation of the proposed material was very useful to increase vocabulary in the pre-k level of the institution in which this research took place. The participants were motivated and curious about this material because they were interested in learning in a different way. In this chapter, the description of the methodology was given, the qualitative approach is described as well as the experimental methodology in order to make it clear. Hence, the use of the approach and the methodology was of great importance because this researcher aimed to demonstrate a new strategy to work with nursery level children. In order to continue with the results a complete description is given in the following chapter.

## CHAPTER IV

### Results

#### 4.0 Introduction

This chapter presents the obtained results based on the research questions are stated. Also, the research is answered in order to give a better explanation of the results gathered in Chapter III. Later, a description of the proposed material and the importance of the use of color-coding as a teaching method is presented.

#### 4.1 Obtained results

In this section, the general results of this study are presented. Firstly, a comparison between the pre-test and post-test results are given; and secondly, interesting outcomes would be stated as well in this section of the thesis.

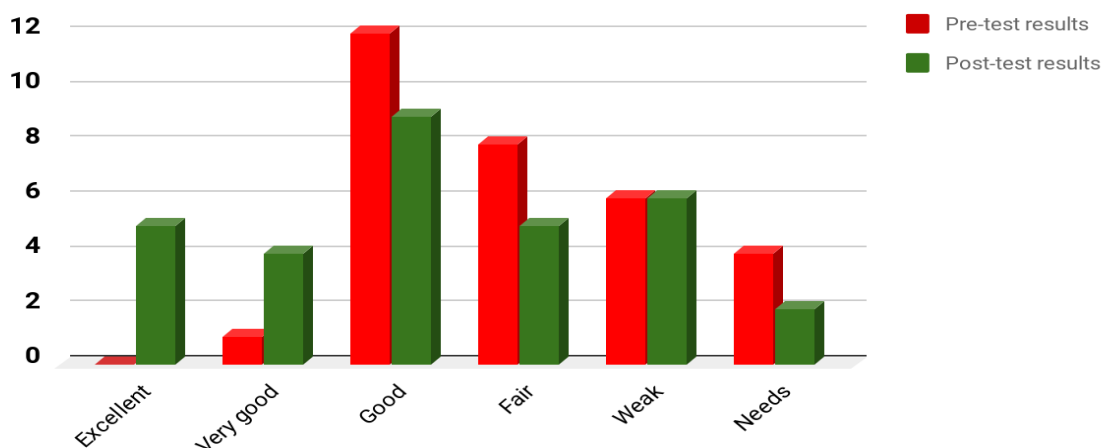
##### 4.1.1 General pre-test vs post-test results

As it is mentioned before, this study seeks to prove the effectiveness of the colored coding strategy to increase vocabulary in pre-k level. Then, to prove this, some flashcards and color-coding strategy were proposed and used in class for one month. The eight proposed words for the pre-test were: *sun, rainy, cloud, rainbow, windy, sneakers, dress* and *umbrella*. (See appendix A). Meanwhile the proposed words for the post-test were: *sunny, snowy, sneakers, short, raincoat, sweater, sun, dress, sandals, boots, cloudy, rainbow, rainy, gloves, stormy, scarf, t-shirt, umbrella, cloud, windy*. (See appendix B)

As it is seen in Graph 4.1, the scores in the pre-test were lower than in the post-test results. It probably means that the strategy used by participants were not good enough to match

written words with images. Moreover, the results of the post-test show that the participants scores increase, and all participants could learn a higher number of new words. After the proposed material and strategy was applied, in total, five participants reached excellent scores, four of them got very good scores, and nine students achieve good scores. Although most of the participants accomplish exceptional scores, in total thirteen of them still need to work harder (See Graph 4.1).

### General Results



*Graph 4.1 General Results pre-test vs post-test*

Regarding the pre-test, it was a useful research instrument to see or identify the vocabulary knowledge that participants had about weather and clothing before using the material and strategy proposal. Some of the strategies that participants used to answer correctly or wrongly this pre-test were that they only: guessed, compared pronunciation with Spanish language, discriminated previous chosen words by gluing the sticker in the same column, did zig-zag or chose their answers based on their likes. Moreover, even when some participants were able to discriminate words, it did not mean that participants knew or learnt the words during

this pre-test. The only difference between both groups, is that group B was kind of unmotivated during the application of this pre-test.

Regarding the post-test, they are useful tools to measure how much students have improved during a period of study (Kuehn, 2019). Hence, to prove the efficiency of the proposed material and strategy, a post-test was applied. Particularly, this post-test results demonstrate that most of the correct answers were because the participants did use the color-coding strategy, and the incorrect ones were because they did not use it. Additionally, one of the differences between both groups is that, even when group B had a significant advance in the vocabulary learning through the use of the proposed material and color-coding strategy, they obtained a lower positive result than group A.

To sum up, the contrasting results between the pre-test and the post-tests proves that the proposed material worked because the participants' knowledge related to the vocabulary about weather and clothing increased considerably. As a matter of fact, it can be claimed that the color-coding strategy and flashcards were useful. Generally, participants acquired the words by playing, by living experiences, and the most important comparing words with colors and by relating colored words with the proposed flashcards; thus, participants were not only memorizing new vocabulary, but they were able to understand and use it.

#### **4.1.2 Interesting obtained outcomes while using proposed strategy, material and vocabulary**

As previously stated, the general obtained results demonstrate that the color-coding strategy worked. However, the researcher of this study believes that some important facts should be highlighted.

Firstly, after the use of the proposed flashcards and strategy, the results shown that words such as *rainbow/rainy*, *sunny/sun* and *cloudy/cloud* were very confusing for participants because of the initial letters and its pronunciation. Only 9 participants used the color-coding strategy to recognize the correct word. In addition, this researcher believes that even if they were not correct in matching words with colored words, it does not mean they did not learn the vocabulary. In the case of words like *dress*, *scarf* or *gloves* seemed to be difficult words to practice for participants. Nevertheless, color-coding strategy seemed to help a lot when inferring meaning. Furthermore, colors like *yellow* and *orange* were confused by participants as well as images with the same color as the written words.

Secondly, words such as *stormy*, *umbrella* and *rain* were some of the easiest words to match. This study's participants had meaningful learning because they were able to understand what they were seeing, and also because they applied learnt cloths and weather vocabulary to their daily life. These words were easy to match because they were practiced constantly. Furthermore, weather in the afternoons was stormy or raining, then, the participants used to come to class and talk about their experiences watching the storm and listening to the thunders. Also, participants always asked to show the stormy flashcard, as well as play the thunder sounds. Hence, participants were applying what they learnt during class, and as a result, a meaningful learning impacted them.

Finally, due to the fact that a couple of words were in specific colors which were, sometimes, their favorite ones, colors such as *purple* and *red* were remembered easily. And in spite of the fact that group B practiced less time with the proposed material and strategy than group A, the use of this strategy was effective because all participants were able to learn and

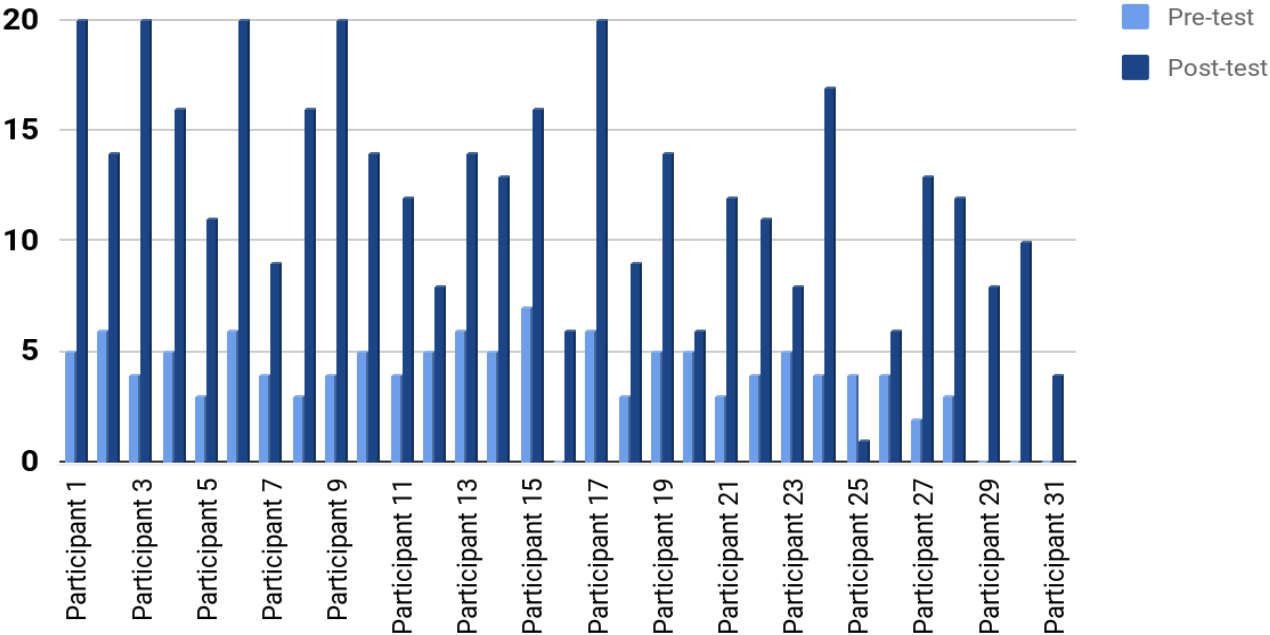
practice new vocabulary (weather and clothes) and colors. Additionally, participants were motivated when using this proposed material.

**4.2 Answer to research questions**

This chapter presents the results gathered in this research. Two research questions were presented in Chapter I and they aimed to be answered in this section of the thesis. Therefore, the answers related to effectiveness and behavioral changes caused by the application of the color-coding strategy are given in the following paragraphs.

**4.2.1 Answer to RQ1: *How effective is the use of color-coding strategy to teach and learn weather and clothing vocabulary in English language for students of Pre k level?***

**Vocabulary learning improvement**



*Graph 4.2 Vocabulary learning improvement after using color-coding strategy*

In order to prove the efficiency of the color-coding strategy, pre-tests, posts-tests and rubrics were used to measure the participants knowledge before and after using the proposed color-coding strategy to teach and learn weather and clothing vocabulary.

Based on the information displayed in Graph 4.2, it can be stated that all the participants achieved the learning goal established at the beginning of this study. It means that the number of words that each participant knows and masters at the present increased after implementing the use of color-coding strategy. With these results it can be proved that the color-coding strategy is an effective teaching tool to help language learners to learn and teach new English language words. In addition, this study demonstrates that the color-coding strategy is useful and works perfectly with children who are developing English as a second or foreign language (ESL or EFL). In fact, it fosters students' learning regarding to the spelling and sounds of the words.

According to Anuthama (2010), students' attention and concentration is better when they have colored words. Then, it can be concluded that the use of the color-coding strategy was effective according to the results because Graph 4.2 demonstrated that participants from both groups increased vocabulary considerably. Also, they acquired the proposed vocabulary in a short period of time in a creative and fun way. Thus, the use of this strategy is useful for students to learn and for teachers to teach not only weather and clothing vocabulary.

Mainly, the reasons for some participants to obtain a low improvement in their correct words were that they missed classes, they were late, or they did not use the strategy while they answered the post-test. Even though, previous research about the impact of using colors to increase memory shows that colors call the attention better than other variables (Dzulkifli

and Mustafar, 2013). Thus, the use of colors has a different impact in our memory than other strategies.

#### **4.2.2 Answer to RQ2: *What are the observed behavioral changes in EFL Pre k level students, when applying color-coding strategy to teach weather and clothing vocabulary?***

As it has been said before, the use of colors is an excellent tool when teaching and learning vocabulary to children. Moreover, it helps learners to retain more information and to increase their attention span (Dzul kifli and Mustafar, 2013). As a matter of fact, this study seeks to see some of the behavioral benefits that the color-coding strategy brings to language teaching and learning process. In order to identify those advantages, the researcher observed how participants dealt with this strategy and all information was recorded in a behavioral checklist.

Results of this observation demonstrated that this strategy encouraged students to *participate actively* in the classroom. It was also observed that the majority of the participants were *interested* on every activity because of the colorful flashcards applied. Therefore, it was detected that through colors students can learn easily new words in English; specifically, in this study, it was vocabulary related to weather and clothing. In addition, this strategy helped students to identify different variations of colors, for instance, different types of blue, red, or pink.

Another advantage identified through the color-coding strategy was that it promoted learners' *curiosity*. It was noticed that during the lessons in which this strategy was applied learners had an eager wish to learn the new words. They always asked to the teacher keep working with them. Through the observation it was also found that participants behaved in a correct



way they respected each other, they were *tolerant* to their classmates work and they were very *respectful* with everyone. Additionally, during the use of the proposed material, participants felt comfortable due to the fact that material was colorful. Consequently, participants felt very *comfortable* and *motivated* every time they used the color-coding material. Thus, the use of colors was effective to retain, identify, match and learn the new weather and clothing vocabulary in participants.

To sum up, during the use of the color-coding strategy, participants had a *positive behavior*, due to the fact that they had fun when the material was used in class. In addition, this material was designed to called students' attention, as a result, they enjoyed this visual and colorful aid. Moreover, participants' parents had a positive attitude towards all these academic and behavioral improvements since they realized that their children improved their English level as well as they used the new vocabulary with them naturally.

#### **4.3 Material Proposal through the use of color-coding Teaching strategy**

Nowadays, learning a foreign language is of great importance, thus teachers and students must be aware of the strategies they can use to improve students' language learning. Then, the use of the color-coding strategy facilitates the process by memorizing better (Anonimo, 2019). In other words, the strategy of using colors can be helpful to acquire new vocabulary easily for children.

The proposed material for this study were the color-coding strategy and flashcards of weather and clothing to identify and learn new vocabulary in pre-k level. Cross (1991 cited in Habibi, 2017) stated that a “flashcard is a simple picture on a piece of card or paper, which is probably the most widely visual aids in language teaching. It is used as a personal dictionary for

students with disability that can improve their vocabulary” (p. 200). In other words, although a flashcard is a simple resource, the use of it is helpful for students to increase vocabulary. Supportingly, Doff, (1998 cited in Nugroho, 2012) agrees that a flashcard is a card containing a simple picture that teachers or students use to memorize new vocabulary. Thus, the use of flashcards is a simple but effective material to use in order to teach new vocabulary of EFL to children, teenagers, young adults and adults.

For this study the researcher proposes the use of two types of flashcards. The first one is word flashcards which are defined by Nugroho, 2012 as “cards with words printed on them” (p.23). This author also states that these flashcards can be placed on the board or in a certain order to acquire the spelling of the word. Hence, as its name says, the word flashcards include only the word to be acquired. These proposed flashcards are in color, and black & white, all of them saying the name of the picture flashcards thus students can identify, match and learn them.

As already stated, the second type of proposed flashcards are picture flashcards. This type of flashcard is characterized to have attractive pictures or to be enjoyable for students. (Nugroho, 2012, p. 23). Thus, as it is mentioned, this picture flashcards should be bright and attractive to call students’ attention. Therefore, when using them with the color-coding strategy, this researcher mixed both types of flashcards using colorful and childish pictures and words. There were 20 flashcards as they are presented below.

				
<b>Sun</b>	<b>Sunny</b>	<b>Sneakers</b>	<b>Stormy</b>	<b>Scarf</b>
				
<b>Sweater</b>	<b>Snowy</b>	<b>Short</b>	<b>Sandals</b>	<b>Umbrella</b>
				
<b>Rainbow</b>	<b>Raincoat</b>	<b>Rainy</b>	<b>T-shirt</b>	<b>Boots</b>
				
<b>Cloud</b>	<b>Cloudy</b>	<b>Dress</b>	<b>Gloves</b>	<b>Windy</b>

Figure 4.3 Flashcards

As you can see in Figure 4.3, these flashcards are bright, they catch students' attention and they are simple to understand. Also, under the flashcard, the colored-word is written. From these 20 flashcards, nine words start with *S*, three start with *R*, two with *C*, and there is only one flashcard for each of the following letters: *D*, *B*, *U*, *T*, *W* and *G*. In addition, some colors are repeated to make the activity more challenging. The sets of colors and words are as follows:

- Color red: *Sun, Umbrella, Sneakers*
- Color blue: *Sunny, Snowy, Short, Sweater*
- Color green: *Rainy, Boots, Gloves*
- Color pink: *Rainbow, Dress, Scarf*
- Color yellow: *Cloud, Raincoat.*
- Color purple: *Windy, T-shirt, Sandals*
- Color gray: *Stormy*
- Color orange: *Cloudy*

Each word had a different color. Different kinds of blue, red, yellow, pink, green and purple were used to make participants notice that every word had a particular color. At the beginning, participants of group B worked with the word flashcards in black, because as the research is experimental the variables changed a little but after they started using the color flashcards. Anyways, as stated in RQ1 answer, all participants had an effective use of this color-coding strategy. Figure 4.4 shows the proposed black & white flashcards.

<b>Sun</b>	<b>Sunny</b>	<b>Sneakers</b>	<b>Stormy</b>	<b>Scarf</b>
<b>Sweater</b>	<b>Snowy</b>	<b>Short</b>	<b>Sandals</b>	<b>Umbrella</b>
<b>Rainbow</b>	<b>Raincoat</b>	<b>Rainy</b>	<b>T-shirt</b>	<b>Boots</b>
<b>Cloud</b>	<b>Cloudy</b>	<b>Dress</b>	<b>Gloves</b>	<b>Windy</b>

Figure 4.4 Black-word flashcards

Every picture flashcard measured 30 centimeters approximately, as it is mentioned, they are bright and childish. In the case of the black and colored words flashcards, the font used was Comic Sans MS and the size was 100 points. Moreover, the proposed material was based on the use of the color-coding strategy to make easier the vocabulary identification and learning.

“Color-coded material is generally a more effective study aid than black-and-white material, because it improves your ability to encode, store, and retrieve the material that you’re trying to learn.” (Anonym, 2019) Thus, the use of colors makes an impact in the way people learn and it is helpful to retain new information. Previous researchers show that the use of color in foreign language teaching and learning is useful. Hence, some authors use different colors in the vocabulary to be learnt, and teachers organized colors depending on the new vocabulary’s gender, verbs, feelings, numbers, etcetera.

Nonetheless, the colors on the word are not categorized by gender or topic, the colors were chosen by schemes only for the purpose of remembering that every word had a different color. Both flashcards (picture and word) were used separately; besides, the participants were asked frequently to place the correct word-flashcard with its picture flashcard or vice versa. To exemplify, some of the class activities to use the proposed material were: drawing, ordering and matching them correctly, looking for them in several places around the classroom, or place them by sets of colors, etcetera. The main idea was to keep students practicing this new vocabulary frequently in class.

#### **4.4 Conclusion**

In this chapter, the results for the research were explained. Firstly, a comparison between the results in the pre-test and the post-test were stated. Later, the answer for research question 1 and 2 were justified and explained. Finally, this chapter was presenting a description of the

material proposal. In order to conclude this thesis, the following chapter will state some conclusive information of this research.

## **CHAPTER V**

### **Conclusion**

#### **5.0 Introduction**

This chapter presents some research contributions for ELT field. Also, the limitations of the study are presented here, it means that everything that affected the development of this research is stated in this section. Finally, some suggestions which can be helpful for other researchers to make this study different or better are presented.

#### **5.1 Research contributions**

This research has proposed the use of the color-coding strategy to learn vocabulary. Furthermore, it was shown that this strategy can be worthy not only for pre k educational level but for different educational levels where vocabulary learning is needed. Even when few researches about the use of color-coding in education has been done, this thesis developed a proposal which can be used in the ELT field in benefit of both, EFL teachers and learners.

#### **5.2 Limitations of the study**

As mentioned in chapter III, this research took place in a private kindergarten in Zavaleta in Puebla city. The students who attend to this school have a good economic status and most of the time they travel to some countries where English is spoken so quite frequently, then, these participants are in touch with the target language. The institution allowed this researcher to carry out this study and work with the participants during the classes. However, during the time this study was carried out some issues arose. First, it was not possible to take pictures or make some videos while the participants were working with the proposed material or while

they were answering the pre-test and post-test. It seems that this situation did not affect the results, but additional observations could have been better with some extra visual aid.

Secondly, some participants did attend to school when the pre-test was applied, so it was not possible to know their previous knowledge about the two topics worked in this research. Another limitation that this study faced was that some participants got sick and missed classes and they did not have the opportunity to practice regularly the words with the flashcards designed for the researcher. It seems that the lack of time affected the final results of these participants as well.

The fourth limitation faced in this study was the number of classes in which the material designed was used. The proposed material was not used daily because teachers and students were required to do some extra activities for the graduation ceremony and the festival to celebrate the Father's Day. Unfortunately, these activities took a lot of time and they limited the time assigned to the English lessons and the activities designed by the researcher. It is believed that the results would have been better if it had been carried out in other period of the school year. Generally, as it can be seen, developing this research was mainly affected for the time. In the following paragraph some suggestions will be given taking into account some of the problems that affected this research.

### **5.3 Suggestions for further research**

As mentioned before, little research has been done about the color-coding teaching method in the educational field. Then, it is suggested firstly to conduct more studies using the similar research procedure to compare the findings with the ones obtained in the present study.



Secondly, other pieces of research using the color-coding strategy can be carried out in different levels to learn vocabulary, or to practice the different parts of speech such as verbs, adjectives and adverbs. Besides, a study which explores how the color-coding strategy engages students' motivation. In addition, a similar study can be carried out in a different period of a school year in which there no exists many extra activities. As other authors had been working through the use of this method, the colors can be used with different purposes, for example, color pink for feminine vocabulary, blue for masculine, red for verbs, etcetera. This is because the use of the colors has no limitations and every researcher can decide how to categorize those colors. Finally, a similar research can be done in a public school or a non-bilingual institution as well.

#### **5.4 Conclusion and Reflection**

Developing this thesis has been meaningful for me. Firstly, I have improved the way I teach my students. Since I started working in the nursery level, I felt challenged for the way they learn, I discovered they are able to perform different tasks. However, they must feel visually motivated and curious about what they are learning. In the process, I have been looking for different strategies which help me developing my work. I am committed in looking for new attractive and fun ways to teach because I have always wanted to be the teacher I never had.

For me, working in this research using the color-coding strategy was very useful. I love using colors for everything and then I was intrigued about how I could implement it in my classes. Then, I was asked for the institution where I work to make a spelling presentation with my pre-k level students, I felt worried because in this level the students cannot write, and they do not know words or letters. For this, I started researching for a strategy that could help me reaching that goal. I read that the use of colors could help, so I started working with the words

in color and in two weeks all my students were able to recognize 16 written words. Also, they were able to make the word by putting letter by letter. The use of the strategy was successful, and I wanted to learn more about it. After that, I had the opportunity to write a research and I wanted to focus on this strategy.

During the process as a researcher, I learnt new characteristics of the level I am working with, also I learnt some issues about memorizing, identification and learning. In addition, I discovered that the use of colors can be used in different ways, and that this strategy causes an impact in the way we learn. Moreover, doing this research helped me practicing my English, because, in the level I am working, I do not have a fluent conversation with students, as well, I do not practice my listening and writing skills. So, during the months I worked on this research I practiced more, and it helped me to overcome some issues I was not comfortable with.

To end up, this thesis has only been a benefit for me, because I am more mature about how to research, I learnt new teaching strategies, and I feel great about the results I got from this.

## References

- Azabdaftari, Behrooz, Mozaheb, Amin. (2012). Comparing Vocabulary Learning of EFL Learners by Using Two Different Strategies: Mobile Learning vs. Flashcards. Northern Ireland, UK: ERIC.
- Breen, M. (2014). *Learner contributions to language learning. New directions in research.* USA. Routledge.
- Broughton G., Brumfit C., Flavell R., Hill P., Pincas, A. (2002). *Teaching English as a foreign language.* USA and Canada. Routledge.
- Budden, J. (2009). *Using flashcards with young learners.* Spain.
- Burns, A. (2010). *Doing Action Research in English Language Teaching. A guide for practitioners.* New York. Routledge.
- Burns, A., Richards J. (2018) *The Cambridge guide to learning English as a second language.* United Kingdom. Cambridge University Press.
- Chamot, A. U. (2005). Language learning strategy instruction: Current issues and research. *Annual review of applied linguistics*, 25, 112-130.
- Chu, Y. W. (2014). Teachers' Beliefs in Teaching English for Kids at a Kindergarten: A Case Study of Students from the Department of Applied English. *English Language Teaching*, 7(10), 100-112. <https://eric.ed.gov/?id=EJ1075929>
- Cooper, B. S., & Gargan, A. (2009). Rubrics in education. *Phi Delta Kappan*, 91(1), 54-55.
- Creswell, J. (2009). *Research design, qualitative, quantitative, and mixed methods approaches.* United States of America. Sage
- Dzulkifli, M., Mustafar, M. (2012). *The influence of color on memory performance: A review.* Selangor, Malaysia.
- Espinosa, L. (2010). Second language acquisition in early childhood. *Early Childhood Education. Westport, CT: Greenwood Publishing Group.*
- Kafadar, T. & Tay, B. (2014). Learning strategies and learning styles used by students in social studies. Turkey: ResearchGate.
- Kothari, C.R. (2004). *Research methodology, Methods and techniques.* Ansari Road, Daryaganj, New Delhi. New age international publishers
- Mujis D., Reynolds D. (2017). *Effective teaching: evidence and practice.* UK. Sage
- Dzulkifli, M. A., & Mustafar, M. F. (2013). The influence of colour on memory performance: A review. *The Malaysian journal of medical sciences: MJMS*, 20(2), 3.

- Nemati, A. (2009). Memory vocabulary learning strategies and long-term retention. *International Journal of Vocational and Technical Education*, 1(2), 014-024.
- Nugroho, Y. (2012). *Improving students' vocabulary mastery using flashcards*. Surakarta
- Onnis, L. (2014). *Second language acquisition*. Singapore
- Ortega, L. (2014). *Understanding second language acquisition*. Routledge.
- Oxford, R. L. (2003). Language learning styles and strategies: Concepts and relationships. *Iral*, 41(4), 271-278.
- Pruisner, P. A. (1993). *From Color-coding to Color Cue: Remembering Graphic Information*.
- Rivers, W. M. (2018). *Teaching Foreign Language Skills Rev Ed*. University of Chicago Press.
- Secretaria de educación pública (2017). Estrategia nacional de inglés. México. <https://www.gob.mx/sep/videos/estrategia-nacional-de-ingles>
- Stufflebeam, D. L. (2000). Guidelines for developing evaluation checklists: the checklists development checklist (CDC). *Kalamazoo, MI: The Evaluation Center*.









Appendix A

Research Instrument: Pre-test

Vocabulary knowledge test

Glue a sticker on the correct image.

Participant \_\_\_\_\_

Sun		
Rainy		
Cloud		
Rainbow		

<p>Windy</p>		
<p>Sneakers</p>		
<p>Dress</p>		
<p>Umbrella</p>		

## Appendix B

### Research instrument: Post-test

#### Vocabulary knowledge post-test

Match the corresponding flashcard to the written colored-word.

Sunny	Snowy	Sneakers	Short	Raincoat
Sweater	Sun	Dress	Sandals	Boots

Cloudy	Rainbow	Rainy	Gloves	Stormy
Scarf	T-shirt	Umbrella	Cloud	Windy





## Appendix C

### Research Instrument: Rubric pre-test

#### VOCABULARY KNOWLEDGE RUBRIC PRE-TEST GROUP A

Participant:

Scale	Criteria	Observations
<b>Excellent</b> <b>100-90</b>	Identifies all the vocabulary in the pre-test (8 words). Recognizes the word asked compared with the other. Understands word meaning. (8 words)	
<b>Very good</b> <b>89-80</b>	Recognizes 7 words and classifies which is the word asked. Understands the meaning of the recognized words.	
<b>Good</b> <b>79-70</b>	Identifies 6-5 words by the sound.	
<b>Fair</b> <b>69-60</b>	Identifies 4 words by listening the sound.	
<b>Weak</b> <b>59-50</b>	Identifies 3-2 words by guessing and following a pattern	
<b>Needs improvement</b> <b>49-40</b>	Identifies 1 word by guessing. Does not identify any word.	

Score:

## Appendix D

### Research Instrument: Rubric post-test

#### VOCABULARY KNOWLEDGE RUBRIC GROUP A POST-TEST






Participant:



Scale	Criteria	Observations
<b>Excellent</b> <b>100-90</b>	Identifies all the vocabulary about weather and clothing (20 words). Recognizes the word spelling and is able to classify the image with the word. Understands word meaning. (20-18 words)	
<b>Very good</b> <b>89-80</b>	Recognizes 17-15 words and classifies them with their image. Identifies the spelling of the recognized words.	
<b>Good</b> <b>79-70</b>	Identifies 14-12 words and is able to identify the spelling of those words.	
<b>Fair</b> <b>69-60</b>	Identifies 11-9 words by listening to the sound. Recognizes the first letter of each word.	
<b>Weak</b> <b>59-50</b>	Identifies 8-6 words by listening the sound of each word.	
<b>Needs improvement</b> <b>49-40</b>	Identifies 5-1 words by listening.	

Score:

## Appendix E







### Research Instrument: Behavioral Checklist


Criteria	Yes	No	Observations
Are the participants motivated while they use the color-coding strategy and the proposed material during classes?			The participants are motivated while they use the color-coding and the material in class. They try to understand the meaning of the new vocabulary. In addition, they want to learn more about the weather because they liked the proposed material.
Does the use of the color-coding strategy affect their behavior?			The participants follow rules when they notice the proposed material is about to be used. They participate, and respect turns.
Are the participants curious about working with the color-coding strategy?			The participants are curious because they want to learn more, their parents have commented they like observing the weather in the afternoons since they are using the proposed material. Also, they are curious because the color is something that calls their attention.
Do the participants show a positive attitude towards the color-coding strategy?			The participants have a positive attitude with the use of the color-coding-strategy, they are happy when they see the flashcards, they like to participate anytime I ask something about the material.  They are tolerant, and they like to help each other.
Does the color-coding strategy call participants' attention during the class?			This strategy is useful because they pay attention in order to remember the words of the day.

<p>Do the participants act in an active way while the proposed material is used?</p>			<p>The participants are active because they like participating, they wait their turn to participate with the proposed material.</p>
<p>Are the participants comfortable working through the use of the color-coding strategy?</p>			<p>They are comfortable because they like colorful materials, also, they like using different material in the classes.</p>

## Appendix F

### Research Instrument: Behavioral Checklist group B

Criteria	Yes	No	Observations
Are the participants motivated while they use the color-coding strategy and the proposed material during classes?			The participants are motivated while they use the color-coding and the material in class. They laugh and have fun during the lesson.
Does the use of the color-coding strategy affect their behavior?			The participants behave during the practice, they like listening and participating in the class.
Are the participants curious about working with the color-coding strategy?			The participants are very curious, they are visual, and they observe the colors on the material. They want to learn more about the new vocabulary.
Do the participants show a positive attitude towards the color-coding strategy?			The participants have a positive attitude, they are happy about learning and they respect their classmates while they are participating.
Does the color-coding strategy call participants' attention during the class?			The strategy calls their attention, however, with two participants in this group, the proposed material has to be used in different ways.
Do the participants act in an active way while the proposed material is used?			The participants are active, they like working with the proposed material.

<p>Are the participants comfortable working through the use of the color-coding strategy?</p>		<p>They are comfortable because they like colorful materials, they needed to practice the colors and through the use of this strategy they were able to improve it.</p>
---	---	---