# UNIVERSIDAD TÉCNICA DE AMBATO 



## DIRECCIÓN DE POSGRADOS

# MAESTRÍA EN LA ENSEÑANZA DEL IDIOMA INGLÉS COMO LENGUA EXTRANJERA 

"STRATEGIES AND TECHNIQUES BASED ON ENGLISH LANGUAGE SKILLS IN THE STUDENTS OF THIRD YEAR OF BACCALAUREATE AT "PRIMERO DE ABRIL HIGH SCHOOL"
Trabajo de Investigación, previo a la obtención del Grado Académico de Magíster en Enseñanza del Idioma Inglés como Lengua Extranjera.

| Autor: | Licenciado Ángel Gustavo Vaca Alarcón. |
| :--- | :--- |
| Director: | Master Dolores del Rocío Ortega Andrade |

## A la Unidad de Titulación de la Universidad Técnica de Ambato.

El Tribunal receptor del trabajo de investigación presidito por el Doctor Héctor Fernando Gómez Alvarado, Presidente del Tribunal e integrado por las Señoras: Licenciada Lorena Monserrath Meléndez Escobar Magister, Doctora Wilma Elizabeth Suarez Mosquera Magister, como Miembros del Tribunal designados por la Unidad de Titulación de la Universidad Técnica de Ambato, para receptar el trabajo de investigación con el tema: "STRATEGIES AND TECHNIQUES BASED ON FLEMING 'S VARK MODEL TO DEVELOP THE ENGLISH LANGUAGE SKILLS IN THE STUDENTS OF THIRD YEAR OF BACCALAUREATE AT PRIMERO DE ABRIL HIGH SCHOOL" elaborado y presentado por el señor Licenciado Ángel Gustavo Vaca Alarcón, para optar por el Grado Académico de Magíster en la enseñanza del Idioma Inglés como Lengua Extranjera, una vez escuchada la defensa oral del trabajo de investigación el tribunal aprueba y remite el trabajo para uso y custodia de las bibliotecas de la UTA.


Dr. Héctor Fernando Gómez Alvarado
Presidente del Tribunal


Lcda. Lorena Monserrath Meléndez Escobar Mg.
Miembro del Tribunal


Dra. Wilma Elizabeth Suarez Mosquera Mg.
Miembro del Tribunal

## AUTORÍA DEL TRABAJO DE INVESTIGACIÓN

La responsabilidad de las opiniones, comentarios y críticas emitidas en el Trabajo de Investigación presentado con el tema: "STRATEGIES AND TECHNIQUES BASED ON FLEMING 'S VARK MODEL TO DEVELOP THE ENGLISH LANGUAGE SKILLS IN THE STUDENTS OF THIRD YEAR OF BACCALAUREATE AT PRIMERO DE ABRIL HIGH SCHOOL" le corresponde exclusivamente a: el Licenciado Ángel Gustavo Vaca Alarcón, autor bajo la Dirección de la Master Dolores del Rocío Ortega Andrade, Directora del Trabajo de Investigación; y el patrimonio intelectual a la Universidad Técnica de Ambato.


Lcdo. Ángel Gustavo Vaca Alarcón
C.C. 050350439-1

## AUTOR



MSc. Dolores del Rocío Ortega Andrade

C.C. $040056466-2$

DIRECTORA

## DERECHOS DE AUTOR

Autorizo a la Universidad Técnica de Ambato, para que el Trabajo de Investigación, sirva como un documento disponible para su lectura, consulta y procesos de la investigación, según las normas de la Institución.

Cedo los derechos de mi trabajo con fines de difusión pública, además apruebo la reproducción de este, dentro de las regulaciones de la Universidad.


AUTOR

## GENERAL INDEX

A la Unidad de Titulación de la Universidad Técnica de Ambato. ..... i
AUTORÍA DEL TRABAJO DE INVESTIGACIÓN ..... iii
DERECHOS DE AUTOR ..... iv
GENERAL INDEX ..... v
LIST OF TABLES ..... ix
LIST OF GRAPHICS ..... xi
AGRADECIMIENTO ..... xiii
DEDICATORIA ..... xiv
RESUMEN EJECUTIVO ..... XV
EXECUTIVE SUMMARY ..... xvi
INTRODUCTION ..... 1
CHAPTER I ..... 3
THE PROBLEM ..... 3
1.1 Research topic ..... 3
1.2.1 Contextualization ..... 3
1.2.2 Critical analysis ..... 6
1.2.1.1 Problem scheme ..... 6
1.2.2 Critical analysis ..... 7
1.1.3 Prognosis ..... 8
1.1.4 Research problem formulation ..... 8
1.1.5 Research questions ..... 8
1.1.6 Delimitation of the research problem ..... 9
1.1.7 Temporal delimitation ..... 9
1.1.8 Spatial delimitation ..... 9
1.2 Justification ..... 9
1.3 Objectives ..... 11
1.3.1 General ..... 11
1.3.2 Specific ..... 11
CHAPTER II ..... 12
THEORETICAL FRAMEWORK ..... 12
2.1 Research background ..... 12
2.2 Philosophical foundation ..... 14
2.2.1 Epistemological basis ..... 15
2.2.2 Axiological basis ..... 15
2.3 Legal basis ..... 16
2.4 Key categories ..... 18
2.4.1. Independent Variable ..... 19
2.4.1.1. Strategies and techniques per each skill on Flemings' Vark model .. ..... 19
2.4.1.2. Flemings’ Vark ..... 24
2.4.1.2.1 Description of model ..... 25
2.4.1.3 Learning styles ..... 28
2.4.1.4 Strategies proposed by Fleming's VARK to improve learning styles ..... 30
2.4.2.5. Importance of knowing the learning styles ..... 31
2.4.6. Learning styles and the teacher ..... 33
2.4.2 Dependent Variable ..... 35
2.4.2.1. English language skills ..... 35
2.4.2.2. Skills Development ..... 38
2.4.2.2. Sensory Register ..... 38
2.5 Hypothesis ..... 39
2.6 Pointing of hypothesis variables ..... 39
CHAPTER III ..... 41
METHODOLOGY ..... 41
3.1 Approach ..... 41
3.2 Basic method of research ..... 41
3.3 Level or type of research ..... 42
3.4 Population and sample ..... 42
3.5 Operationalization of variables ..... 43
3.6 Collection of information ..... 45
3.6.1 Survey - Questionnaire (VARK TEST) ..... 45
3.6.2 Pretest and posttest - PET test ..... 46
3.7 Data collection and analysis ..... 48
CHAPTER IV ..... 49
ANALYSIS AND INTERPRETATION ..... 49
4.1 Analysis of results. ..... 49
4.1 Questionnaire (VARK TEST) ..... 49
4.2 Analysis of Pre-test, and Post-test results ..... 69
4.3 Hypothesis verification ..... 81
4.3.1 Confidence level ..... 81
4.3.2 Hypothesis Testing ..... 81
4.3.2 Estimation of P value ..... 82
CHAPTER V ..... 88
CONCLUSIONS AND RECOMMENDATIONS ..... 88
5.1 Conclusions ..... 88
5.2 Recommendations ..... 89
CHAPTER VI ..... 90
6.1 Informative data ..... 90
6.2 Background of the proposal ..... 90
6.3 Justification ..... 91
6.4 Objectives ..... 92
6.4.1 General objective ..... 92
6.4.2 Specific objectives ..... 92
6.5 Feasibility analysis ..... 93
6.6 Proposal fundamentals ..... 93
6.7 Methodology. Operating model ..... 95
6.8 Teachers' handbook guide ..... 97
BIBLIOGRAPHY ..... 111

## LIST OF TABLES

Table 1 Population ..... 42
Table 2 Operationalization of the Independent variables: Learning Styles ..... 43
Table 3 Operationalization of the dependent variable: Skills development ..... 44
Table 4 Instruction according to VARK ..... 47
Table 5 You are cooking something special for your family: would you ..... 49
Table 6 When choosing from a restaurant menu you would: ..... 50
Table 7 Besides the price, what else would influence you if you had to buy a science fiction book? ..... 51
Table 8 After you have finished a task, you would like to get some feedback. You would get the feedback: ..... 52
Table 9 You have a problem in one of your shoulders. Would you prefer the physician: ..... 54
Table 10 You are about to buy a cellphone or tablet. Besides the price, what else would influence your choice? ..... 55
Table 11 You are not sure how to spell "BEAUTIFUL" or "BEAUTIFULL". You would ..... 56
Table 12 I prefer to check webpages that contain: ..... 57
Table 13 You are planning a group vacation and you want their opinion. You would ..... 58
Table 14 You are using a book, CD or webpage to learn how to use your digital camera. You would like to: ..... 60
Table 15 You want to learn a new program, skill or game on your PC. You would ..... 61
Table 16 You are helping someone who is on the way to the airport, city center or train station. You would ..... 62
Table 17 Thinking about a moment in which you learn to do something new, you learnt better by: ..... 63
Table 18 You'd rather have a teacher or lecturer who: ..... 64
Table 19 A group of tourists is interested in learning about national parks and heritage in your area. You: ..... 65
Table 20 You have to give a speech in a graduation ceremony. You: ..... 66
Table 21 Pretest reslts ..... 70
Table 22 Posttest results ..... 72
Table 23 Comparison Group for individual questions ..... 74
Table 24 Comparison Group for totals ..... 77
Table 25 Kolmogorov-Smirnov ..... 82
Table 26 Estimation of P value ..... 83
Table 27 Total English PET ..... 85
Table 28 ..... 95

## LIST OF GRAPHICS

Graphic 1: Key categories
Graphic 2: When choosing from a restaurant menu you would_Toc22665233
Graphic 3: When choosing from a restaurant menu you would ..... 50
Graphic 4: Besides the price, what else would influence you if you had to buy a science fiction book ..... 51
Graphic 5: After you have finished a task, you would like to get some feedback. You would get the feedback ..... 53
Graphic 6: You have a problem in one of your shoulders. Would you prefer the physician ..... 54
Graphic 7: You are about to buy a cellphone or tablet. Besides the price, what else would influence your choice ..... 55
Graphic 8: You are not sure how to spell "BEAUTIFUL" or "BEAUTIFULL". You would: ..... 56
Graphic 9: I prefer to check webpages that contain ..... 57
Graphic 10: You are planning a group vacation and you want their opinion. You would ..... 59
Graphic 11: You are using a book, CD or webpage to learn how to use your digital camera. You would like to ..... 60
Graphic 12: You want to learn a new program, skill or game on your PC. You would ..... 61
Graphic 13: You are helping someone who is on the way to the airport, city center or train station. You would ..... 62
Graphic 14: Thinking about a moment in which you learn to do something new, you learnt better by ..... 63
Graphic 15: You'd rather have a teacher or lecturer who ..... 64
Graphic 16: A group of tourists is interested in learning about national parks and heritage in your area. You ..... 66
Graphic 17: You have to give a speech in a graduation ceremony. You ..... 67
Graphic 18: General interpretación of resultados ..... 68
Graphic 19: Comparison Group for individual questions ..... 76
Graphic 20: Comparison Group for totals ..... 79
Graphic 21: Reading score ..... 83
Graphic 22: Writing score ..... 84
Graphic 23: Score of the Speaking ..... 84
Graphic 24: Listening score ..... 85
Graphic 25: Total PET English Test score ..... 86
Graphic 26: Cambridge English Scale Score ..... 86

## AGRADECIMIENTO

El amor recibido, la dedicación y paciencia con la que cada día se preocupaban por mí, se ve reflejado en esta tesis y es por ello que a través de estas líneas quiero dejar plasmado mi más profundo agradecimiento a todas las personas que de una u otra forma ayudaron y formaron parte de este logro.

Gracias a Dios por la vida de mis padres, por bendecir cada día mi vida con la hermosa oportunidad de estar y disfrutar al lado de las personas que sé que me aman y a quienes amo Miguel, Josefina, Erika, Diego y Guadalupe gracias por ese apoyo incondicional a cada instante durante esta etapa de mi vida, me ayudaron a demostrar que el querer es poder. A mi Tutora, la Master Rocío Ortega quien con mucha paciencia y amor de madre orientó acertadamente al desarrollo de esta investigación.

A mis queridos compañeros que mediante el trajinar se convirtieron en mis grandes amigos, gracias Verito, Nelly y Nelson por su apoyo y consejos.

Gustavo

## DEDICATORIA


#### Abstract

El presente trabajo investigativo lo dedico con mucho amor a papito Dios y mi familia Miguel, Josefina, Erika, Diego y Guadalupe quienes con fe y amor me ensenaron a no desfallecer, pensar que cada día es una nueva oportunidad y que no hay peor lucha que la que no se hace.

El querer es poder y por ello se lo dedico a mi abuelita Manuelita quien me ha inculcado valores y a perseverar hasta alcanzar, se han convertido en mi motivación para seguir adelante y alcanzar las metas trazadas.


Gustavo

# UNIVERSIDAD TÉCNICA DE AMBATO 

DIRECCIÓN DE POSGRADO

# MAESTRÍA EN LA ENSEÑANZA DEL IDIOMA INGLÉS COMO LENGUA EXTRANJERA 

## TEMA:

# "STRATEGIES AND TECHNIQUES BASED ON FLEMING 'S VARK MODEL TO DEVELOP THE ENGLISH LANGUAGE SKILLS IN THE STUDENTS OF 

## THIRD YEAR OF BACCALAUREATE AT PRIMERO DE ABRIL HIGH SCHOOL"

AUTOR: Licenciado Ángel Gustavo Vaca Alarcón<br>DIRECTORA: Doctora Roció Ortega Magíster

FECHA: 22 de octubre de 2019

## RESUMEN EJECUTIVO

Esta investigación tuvo como objetivo analizar el efecto de las estrategias de aprendizaje basadas en el modelo VARK de Fleming con relación al desarrollo de las cuatro habilidades de la lengua en el idioma inglés de los estudiantes de tercer año de BGU de la Unidad Educativa "Primero de Abril" en Latacunga-Quito. Esta investigación se basó en un enfoque cualitativo y cuantitativo. Tuvo un diseño cuasiexperimental y se utilizó un solo grupo. Los sujetos considerados para esta investigación fueron los 33 estudiantes de tercer año de BGU. El grupo estuvo conformado por 13 mujeres y 10 varones. Los estudiantes tenían un nivel B1.2 en el idioma inglés. La recolección de los datos se realizó mediante la aplicación de una encuesta y un pretest y un posttest. El cuestionario VARK se aplicó con el propósito de identificar los estilos de aprendizaje de los estudiantes y mediante la aplicación del pretest y el posttest fue posible identificar el nivel de dominio del idioma inglés de los estudiantes. Tanto la encuesta como el pretest se aplicaron al comienzo de la propuesta y el posttest se realizó al final. El manual de estrategias se implementó en un período de 4 semanas al comienzo del año escolar 2018-2019. Los resultados demostraron que el uso de estrategias Vark logró la mejora de los resultados de los estudiantes en las cuatro habilidades del idioma inglés en la Unidad Educativa "Primero de abril", validando la efectividad de la propuesta.

Palabras clave: inglés, cuatro habilidades, lectura, escritura, comprensión auditiva, expresión oral, modelo VARK, estrategias, estilos de aprendizaje.

# UNIVERSIDAD TÉCNICA DE AMBATO 

## DIRECCIÓN DE POSGRADO

# MAESTRÍA EN LA ENSEÑANZA DEL IDIOMA INGLÉS COMO LENGUA EXTRANJERA 

TEMA:

# "STRATEGIES AND TECHNIQUES BASED ON FLEMING 'S VARK MODEL TO DEVELOP THE ENGLISH LANGUAGE SKILLS" 

AUTHOR: Licenciado Ángel Gustavo Vaca Alarcón
DIRECTORA: Doctora Roció Ortega Magíster
DATE: 22 ${ }^{\text {nd }}$ October, 2019

## EXECUTIVE SUMMARY

This research was aimed at analyzing the effect of learning strategies based on Fleming's VARK model on the development of the four speaking skills in the English language of third year BGU students at "Primero de Abril" school in Latacunga-Quito. This research was based on a qualitative and quantitative approach. It was a quasi-experimental design and a single group was used. The subjects considered for this research were the 33 students of senior school. The group was formed by 13 girls and 10 boys. The students had a B1.2 level in the English language. Data collection took place by the application of a survey and a pretest and a posttest. The VARK questionnaire was conducted with the purpose of identifying the learning styles of the students and through the application of the pretest and posttest it was possible to identify the English language proficiency level of the students. Both the survey and the pretest were applied at the beginning of the proposal and the posttest was conducted at the end of this. The strategies handbook was implemented in a period of 4 weeks at the beginning of the school year 20182019. The outcomes proved that the use of the Vark strategies achieved the improvement of the students' results in the four English language skills at Unidad Educativa "Primero de Abril" validating the effectiveness of the proposal.

Keywords: English, four skills, reading, writing, listening, speaking, VARK model, strategies, learning styles.

## INTRODUCTION

There is a large body of research and educational theories that aim at improving the teaching - learning process and at understanding the complex world of education. The educational institutions of today are striving for the best methods and techniques to provide the necessary tools that allow the student to process the accumulation of information found in written and electronic media.

Concerning this, the current models and theories about learning styles offer a conceptual framework that helps to understand the behaviors observed in students on a daily basis. These theories and models analyze the students' favorite representation system related to behavior, learning, reading, spelling, memory, imagination, the storage of information and communication.

However, is not easy to implement those methods since there is a lack of beneficial work, partially due to the continuous use of traditional teaching by teachers. These methods limit the student's application of learning strategies to organize their information and thus promote the ability to learn to learn and the consolidation of meaningful learning.

That is the case observed during the experience of working with the senior high school students at "Primero de Abril" School. It was identified that students had a very low level of English. The reasons are diverse, from the lack of practice of the language to their own lack of interest and attitude for a subject that still seems to be unnecessary for them. All this resulted in students' low production both productive and receptive language skills.

In this context, it was observed that students' language proficiency level is related to the way they learn. In this sense, the VARK Model developed by Neil Fleming in collaboration with Colleen Mills was presented as an alternative to studying students' attitude and behavior towards learning. VARK
has become a simple instrument to determine the preferences of the sensory modality when processing information.

The present investigation is structured by five chapters; each of them contains information related to the topic presented.

CHAPTER I: In this section the problem is identified, the contextualization, the critical analysis, the prognosis, the delimitation of the study, the formulation of the problem, research questions, the justification and the general and specific objectives are presented.

CHAPTER II: It contains the research background, the philosophical foundations, the legal basis, the key categories, the variables and finally the hypothesis.

CHAPTER III: It refers to the methodology, covers topics such as approach and research modality, the level or type of research, the population and sample, the operationalization of variables, the collection of information that includes the techniques and instruments.

CHAPTER IV: The analysis and interpretation of the results of the research techniques and instruments used is carried out, which supports the verification of the hypothesis.

CHAPTER V: The conclusions and recommendations after the results of the investigation are established.

CHAPTER VI: Finally, it is presented the proposal which includes the justification, general and specific objectives, methodology, administration of the proposal, description of the proposal and evaluation.

## CHAPTER I

## THE PROBLEM

### 1.1 Research topic

Strategies and Techniques based on Fleming's VARK Model to develop the English language skills in the students of third year BGU "B" at "Primero de Abril High school".

### 1.2 Problem statement

How do strategies based on Fleming's VARK model enhance the development of the four language skills in English of third year BGU students at "Primero de Abril" school during the academic year 2018-2019?

### 1.2.1 Contextualization

The teaching and learning of languages has been subject to studies throughout history aiming to the discovery of the best methods and approaches to have a more effective teaching and learning process. The designing of strategies and techniques has been, for many years, the subject study of linguists and specialists who have devoted time and effort to such matter (Gledhill \& Kübler, 2016).

Ecuador is a Spanish speaking country where teachers of English language constantly look for methods, strategies and techniques that may allow them to teach English using state-of-the-art activities and proposals, so that students can be part of meaningful learning. The question that arises is what meaningful learning means in such context. In short, teachers want their students to be able to communicate and use the language for a good interaction, i.e. teachers want students to apply the acquired knowledge and take advantage of the teaching and learning process (Serrano, Vizcaíno, Cazco, \& Kuhlman, 2015).

Currently, the Ecuadorian language system faces a great number of difficulties within the process itself, such misunderstanding, lack of vocabulary or difficulties to complete listening activities, to name some. All this results in students' low production both written and oral, including also their fear for failure, or their uncertainty in the abilities they have acquired (Serrano, Vizcaíno, Cazco, \& Kuhlman, 2015).

During the experience of working with the senior high school students at "Primero de Abril" High school, it was identified that students have a very low level of English as they enter from second high school to third high school grade. The reasons are diverse, from the lack of vocabulary knowledge to their own lack of interest for a subject that still seems to be unnecessary for them.

The problem emphasizes when students who come from other institutions are inserted in eighth grade, and their expected level is not appropriate. This situation occurs since our institution takes in students from rural or other urban areas where English has never been a priority and consequently their level of English is low. Socio-economic differences also bring about the impossibility of accessing good education, so when these students enter the "Primero de Abril" School they face difficulties first in adapting to the new, more demanding curriculum and then in increasing their level easily and fast.

More noticeable at the beginning of the school year will these problems show, when students enter the eighth grade of basic education. Apparently, there is not a systematic process of teaching English language in the schools they come from. This has caused a gap between the students who come from rural and urban areas and those already in the senior high school at "Primero de Abril" School, which directly impacts the teaching and learning process.

All the above mentioned have become the object of study of this research, since it is a necessity to find the best strategies and solutions to the existing problems, always in line with state of the art techniques and strategies available. Applying the VARK model will ensure the application of suitable
and updated techniques to foster the development of language skills by students.

### 1.2.2 Critical analysis

### 1.2.1.1 Problem scheme



Figure 1Problem scheme
Elaborated by: Vaca, G. (2019)

### 1.2.2 Critical analysis

The main problem of this research is the low level of proficiency in the English language of third year BGU students. This problem has mainly arisen from the fact that the students that start $8^{\text {th }}$ grade in the school come from different institutions and they do not have the same level in the language and along the high school it have been really difficult for them to achieve the required level.

This section explains why third year BGU students from "Primero de Abril" school do not achieve the required level in the English language.

Firstly, non-flexible activities or strategies refer to the lack of implementation of activities in which the different abilities of the students can be considered. It have been evidenced that teachers do not have a set of strategies to be used in class in order to develop all skills by making students learn in accordance to their particular learning style. Thus, learning styles are to be accounted for in the class, not only in the planning of the class, but also in the class itself. Having a set of strategies and further activities will make a difference in the process. If this is not taken into account, students will not acquire any knowledge and they will not be able to produce the language correctly.

Secondly, all students from this generation are digital natives for this reason the implementation of traditional teaching methods does not motivate the students to learn. They need being taught with methods that make them eager to learn, they need to listen, to watch, to move, to interact. If students are all the class sitting in their desks just listening to the teacher and completing exercises in a book they will probably will not have any interest for the class and a negative attitude toward their learning.

Finally, if the teacher does not relate the contents proposed by the Ministry of Education through the curriculum with the real context of the students, the
achievements will not be positive. Students need to identify themselves with the topics they are learning, those must be familiar with the purpose of encouraging understanding and language production.

### 1.1.3 Prognosis

If the problems which arise in class, due to the differences in learning styles are not solved, there will be disadvantageous consequences for students in their near future. On the one hand, students will have difficulties when accessing university studies, since a B2 level is now necessary for graduation. Besides, by not applying the VARK model in class, there won't be a change in the methods used, continuing with the traditional teaching methods, which have proven to be ineffective in today's education.

On the other hand, by putting into practice the strategies hereafter proposed there will be a noticeable improvement in the acquisition of the contents and therefore in the communicative competences of students

### 1.1.4 Research problem formulation

How do strategies based on Fleming's VARK model enhance the development of the four language skills in English of third year BGU students at "Primero de Abril" school during the academic year 2018-2019?

### 1.1.5 Research questions

What is the language proficiency level of third year BGU students regarding the four macro skills of the English language?

What kind of strategies based on Fleming's VARK model can be suitable for their implementation in mixed ability class for third year BGU students at "Primero de Abril" school?

What changes can be observed on students' English performance after using strategies based on Fleming's VARK during the class?

### 1.1.6 Delimitation of the research problem

Field: Education

Area: EFL and English Language Learning.

Aspect: Fleming's VARK model in the English language classroom.

### 1.1.7 Temporal delimitation

- Academic year 2018-2019.


### 1.1.8 Spatial delimitation

- Third year BGU students at "Primero de Abril" school, Latacunga, Ecuador.


### 1.2 Justification

Nowadays, due to the importance of English as the lingua franca, it is a must for best way to teach the language. For this reason, this research based on the use of VARK model is considered important for the development of the different language skills since it focuses on the students' individual learning preferences.

On the other hand, teachers are constantly trying to stay updated with new methodologies, techniques and strategies in order to develop a fluent communication and make students learn, acquire and practice the language naturally. In this case, the VARK model proposes innovative strategies considering the styles of learning like visual learning (pictures, movies), auditory learning (music), reading and writing (making textbooks, taking notes), or kinesthetic learning (movement, experiments).

Considering that there is no a systematic process of teaching the English language in all institutions of the country, it has caused a gap between the students who come from rural and urban areas, making the teaching and learning process more difficult. In this context, from the social point of view this research will benefit those students that come from other institutions (rural or urban) and have a low level in the language since they have not been taught English previously or do not have a strong learning base.

On the other hand, applying the VARK model is significant because it ensures that the students will show a correct use of English in daily situations, inside and outside the boundaries of the school. It will facilitate the acquisition of knowledge in an easy and interesting way even when traditional teaching methods seems to be the most common in some schools and have been proven to be ineffective in today's education. It will also allow for the collection of enough data to develop and improve the English learning process of third year BGU students at "Primero de Abril" School.

### 1.3 Objectives

### 1.3.1 General

- To determine the effect of strategies based on Fleming's VARK model on the development of the four speaking skills of third year BGU students at "Primero de Abril" school.


### 1.3.2 Specific

- To identify the language proficiency level of the students to know their weaknesses and strengths regarding the four macro skills of the English language.
- To analyze which Fleming's VARK model strategies can be suitable for their implementation in mixed ability class of third of baccalaureate at "Primero de Abril" high school.
- To assess the effect of the use of strategies based on Fleming's VARK model on students' English performance.


## CHAPTER II

## THEORETICAL FRAMEWORK

### 2.1 Research background

The research background mentioned below describes studies that have been carried out previously. All of them are related to the subject studied in this research.

Bakri, Rahman, \& Jassruddin (2019) in the 2015/2016 academic year conducted a study in order to discover if visual, auditory and kinesthetic learning styles (VAK) improved the students' speaking skill. This consisted of a pre-experimental design to analyze the effect of the VAK learning style with a pre-tested and post-tested group, using oral tests. The sample consisted of twenty-nine language students at a school in Makassar-Indonesia. The students had an intermediate level of oral competence. Participants were selected through intentional sampling. Data were collected through an oral expression test. The results of the data analysis indicated that there was a significant difference in the students' speaking skill before and after using the VAK method. The findings evidenced that the posttest was greater than the pretest in terms of understanding, accuracy and fluency. Based on the result of the analysis, it was concluded that the use of the VAK method has a positive impact on the development of English speaking skill and the method can be used as a preliminary strategy to assess the level of student learning.

Fatimah (2018) conducted a study focused on investigating the learning style of eleventh grade students at MAN Salatiga High School during the 2017/2018 academic year using the Fleming's model in which learning is divided into
four styles: Visual, Aural, Reading/Writing and Kinesthetic. The research was quali-quantitative. The population was made up of 32 students from XI grade that completed the VARK questionnaire to determine what kind of learning style they had. In addition to the questionnaire, an interview was also conducted to find out what learning strategy they used to learn English. The result showed that the most common style is Aural and Read/Write (AR) preference. Similarly, the researcher discovered that the preferred strategies of 20 students relate to their learning style preferences. Then, there were 8 students to whom the strategies do not relate to their learning style preference. It is concluded that learning can be more effective if their suitable strategies are employed. Finally, 4 students did not study in their houses so they did not use any strategy.

Moayyeri (2015) developed a research in different Iranian universities with the aim of studying the impact of the learning preferences of undergraduate students (VARK model) on language performance. Three groups of participants from different fields of study were randomly selected. Then, from each field of the study, 30 students were selected by convenience sampling. The total number of the population including the four sciences (life, humanities, basic sciences and engineering) was 360 . To collect the information, two instruments were used, a VARK questionnaire and a standardized proficiency test. After selecting the participants, the researcher applied the two instruments. The tests were analyzed and the results indicated that the reading style is the dominant learning style among Iranian EFL students and there is a significant relationship between students' fields of study and their learning styles. In addition, students with reading style have the highest level in the language and students with visual learning style have the lowest level.

Alqunayeer \& Zamir (2015) developed an investigation with the purpose of identifying the learning style preferences of the students in the English classroom based on the VARK learning style model. Data were collected through version 7.1 of the VARK questionnaire. Likewise, the research carried out a comparative analysis between boys and girls of the same level. Data analysis highlighted a significant difference between the learning preferences of boys and girls. It was concluded that girls are better learned in an auditory way (they like to discuss issues with other students and their teachers, communicate their ideas, and discuss various topics of interest). While children are kinesthetic learners (they prefer camps, practical activities that allow them to use their senses). The study suggests the implementation of better teaching methods, techniques and strategies, considering students' learning styles. Therefore, it is recommended that teachers modify or adapt their teaching strategies according to the learning preferences of their students.

All the previous studies relate with the present research since the goal of investigation is to determine the effect of the Fleming's model (VARK) on the development of the different language skills of the students of third year BGU.

### 2.2 Philosophical foundation

The main objective of learning a second or foreign language is communication. However, if languages are not taught effectively, i.e., as a set of skills that make up the language, there won't be a clear and appropriate communication process. Nyo, Khaing and Maung (2014) states that teachers must guide the language learning process of their students help them and go with them in the development of all their communicative skills. Therefore, a correct use and management of communicative skills is essential to maintain a dialogue and to achieve the goal of learning another language.

According to the characteristics of this research it is engraved in a SocialCritical Paradigm. Ibid (2008) holds that it is particularly important that researchers interact with the participants as it creates a climate of trust and understanding, so that they can show the participant views accurately. Those views are the results provided by the application of the strategies based on the VARK model.

It will bring about feasible solutions so as to achieve the learning goal both inside and outside the English classroom with the purpose of communicating effectively. With the implementation of the strategies proposed, it will be verified that learning has a social base and that as students become more critical of their reality the process can take place more effectively and with more real results.

### 2.2.1 Epistemological basis

This research had an epistemological foundation since it considers learning theories. Teachers are in charge of making choices concerning the approach to be used in class, depending on the students they have, their level and specific needs. Learning happens all throughout life. Therefore, this research is a critical learners' opportunity to improve in the English language by increasing their skills in their stronger area of learning through the effective application of the VARK model in the class.

### 2.2.2 Axiological basis

Not only does the teaching-learning process of languages involve the mere teaching of language contents, but also it definitely includes the teaching of values. This research focuses on students' active participation since the application of the VARK model requires collaborative work in order to
improve all skills. Consequently, the application of values is important to raise learners' self-confidence as well as a welcoming interaction environment.

### 2.3 Legal basis

Based on the decisions made by the Ministry of Education Fuente especificada no válida. in the Acuerdo Ministerial 0052-14, the following is decreed:

Artículo 1- Dispone que el idioma inglés sea enseñado obligatoriamente desde 2do grado de educación básica hasta 3er año de bachillerato tanto en el Régimen Sierra como Costa y en todas las instituciones académicas del país.

Artículo 3- Dispone que es requerido para los docentes que se incorporen a la planta docente en el área de inglés, la presentación del certificado B2 para evidenciar su nivel de inglés, para garantizar que los estudiantes puedan acceder al aprendizaje significativo del idioma.

Artículo 4. Dispone los aprendizajes del idioma inglés de todos los alumnos de todas las escuelas del país sea valorado una vez al año de forma coordinada con el Viceministro de educación y el Instituto Nacional de Evaluación Educativa.

Also, this research is legally supported in the Organic Law of Intercultural Education (LOEI), (2011):

Art. 2. Lit. f. Desarrollo de procesos. - Los niveles educativos deben adecuarse a ciclos de vida de las personas, a su desarrollo cognitivo, afectivo y psicomotriz, capacidades, ámbito cultural y lingüístico, sus necesidades y las del país.

Art 10. Lit. h Atender y evaluar a las y los estudiantes de acuerdo con su diversidad cultural y lingüística y las diferencias individuales y comunicarles
oportunamente, presentando argumentos pedagógicos sobre el resultado de las evaluaciones.

Art. 2 Lit. w. Calidad y calidez.- Garantiza el derecho de las personas a una educación de calidad y calidez, pertinente, adecuada, contextualizada, actualizada y articulada en todo el proceso educativo, en sus sistemas, niveles, subniveles o modalidades; y que incluya evaluaciones permanentes. Así mismo, garantiza la concepción del educando como el centro del proceso educativo, con una flexibilidad y propiedad de contenidos, procesos y metodologías que se adapte a sus necesidades y realidades fundamentales.

Art. 2. Lit. bb. Plurilingüismo.- Se reconoce el derecho de todas las personas, comunas, comunidades, pueblos y nacionalidades a formarse en su propia lengua y en los idiomas oficiales de relación intercultural; así como en otros de relación con la comunidad internacional.

### 2.4 Key categories



Graphic 3Key categories
Elaborated by: Vaca, G. (2019)

### 2.4.1. Independent Variable

### 2.4.1.1. Strategies and techniques per each skill on Flemings' Vark model

Generally speaking, when we think on strategies for each skill what comes to our mind are the four linguistic skills: listening, speaking, reading and writing. Richards (1983) states that some people frequently use a combination of abilities. For example: Speech and Writing involve production of one part of the language user what are called productive skills. Listening and Reading are the receptive ones. However other skills such as pronunciation, grammar, vocabulary, or spelling all play a role in effective communication.

The amount of attention we give to each skill area will depend both, on the level and styles of your learners, and their situational needs. Most of the time, beginners are those who are not literate and they benefit most from listening and speaking with relatively little work on reading and writing.

Once brief introduction to the topic has been made, the language skills are defined. Widdowson (1988) defines listening skill as the development of student's ability to understand and respond to spoken language. Listening is the language skill which learners usually find the most difficult. This often is because they feel under unnecessary pressure to understand every word.

For this reasons teachers must consider student's psychological characteristics, strengthen confidence, and tell them that it is OK not to understand every single word, use visual materials and help them to improve strategies for listening.

Listening refers to the skill of understanding spoken language. It is an essential skill, present in most of the activities we carry out throughout our lives. Humans are able to listen to a wide variety of things, for example; what someone says during a conversation, face to face or on the telephone; announcements giving information, for example, at an airport or railway station; the weather forecast on the radio; a play on the radio; music; someone
else's conversation (eavesdropping); a lecture; professional advice, for example, at the doctor's, in the bank; instructions, for example, on how to use a photocopier or other machinery; directions; a taped dialogue in class.

Acording to Richards (1983) there is a typology of the listening activities. There are three types: pre-, while-, and post-listening.

Pre- Listening activities should create in learner's expectations and interesting in the way they are going to listen to. Some of this type of activities may be: looking at pictures and talking about them; making lists of ideas; predicting, speculating; and reviewing grammar structures.

While- Listening activities are usually of general understanding for the first listening. They may include: marking or checking items in pictures, true or false responses, gap filling, predicting, putting pictures in order, following a route in order to instructions.

Finally Post- Listening have as aim the reflection on the language, mainly on relevant points about grammar and vocabulary. Examples of these activities are: chart competitions, summarizing, identifying relationships with the speakers, role play or simulations.

Our students need a lot of listening practice in order to get used to English sounds, as well as English stress, rhythm and intonation. The text should be relatively short, and they should listen several times.

The second basic skill this paper deals with is speaking, undoubtedly important in a second language acquisition process Madrid \& Mc Laren (1995):

Speaking is one of the most difficult skills language learners have to face. In spite of this, it has traditionally been forced into the background while we, teachers of English, have spent all our classroom time trying to teach our students how to write, to read and sometimes even to listen in a second language because grammar has a long written tradition.

Speaking is generally thought to be the most important of the four skills. Indeed, one frustration commonly voiced by learners is that they have spent years studying English, but still they cannot speak it.

The most difficult aspect of spoken English is that it is always accomplished via interaction with at least one other speaker. This is one reason why many of us were shocked and disappointed when we used our second or foreign language for the first time in real interaction.

Children have to feel sure, in a comfortable environment, without being afraid of making mistakes. In this way they will decide to talk in English. In the earlier stages students learn vocabulary for basic concepts, conversational routines, and polite formulas such as simple greetings Widdowson (1988).

Hearing this language over and over again, our students will be able to make utterances in English. It is important to bear on mind that the more input they receive the more output they can produce.

On the other hand we have to prepare our speaking lesson, to teach new items. An oral lesson is divided into three stages: presentation, practice and production; usually preceded by a warm up activity.

The aim of presentation stage is to present the meaning and form of a new language. We can carry out this stage in different ways: showing pictures or flash cards to introduce the new vocabulary or other similar activities.

The practice stage can be done in groups or in pairs. When students practice speaking they should do it as much as possible, without referring a written text. Guided oral practice is useful. We must make sure that they have something to say, and that what they are saying is meaningful to them.

The production stage as regards our students use the language in freer, more creative ways and checked how much they have learned. We do not interfere too much, so it is important they have clear instructions for purposeful tasks. At this
stage they can do different activities such us games, roles plays and discussions (Richards, 1983).

As teachers we have to bear in mind some aspects when we elaborate our reading plans. Aiming with some authors in the definition of reading to understand its basis and complex system it is important to let established. Goodman (1988) defines reading as the process of understanding some type of information or ideas stored in a medium and transmitted through some type of code, usually a language, which can be visual or tactile. Additionally a strategy guide of activities can help the students learning and the teaching process.

Reading strategies are similar to the listening ones as both are receptive skills. Wong (2011) distinguishes three types of reading activities to develop general understanding, pre- reading, while- reading, and the post- reading activities. The most common activities used for developing the reading skill are the following: playing games, arranging jumbled sentences or paragraphs or skimming for gist. Also in relation to these types of activities many authors agree with the following stages of the reading process. In this context Routman (2003) states:

## Pre-reading

This step permits the students to be motivated and interested in constructing meaning from the text they pretend to read. In this stage, review previous knowledge and prerequisites are revised; the previous experiences permit to construct this knowledge. The requisites indicate the conditions and the purpose of the task: questions, vocabulary, extension, and context.

Pre-reading skill can be developed through activities such as:

- Activating previous knowledge: students are requested to say what they know about the topic and infer its possible relation to the text.
- Interpreting haplographies in the text implies that the readers observe and describe the graphic information, and then interpret it in a creative way.
- Predicting meaning: From observing specific parts of the text, source, text structure, year of publication, author, title, graphics, pictures, keywords, subtitles, references, etc., students make predictions.
- Identifying the purpose of text: The students identify the possible purpose of the texts: informing, education, entertaining, etc.


## During-reading

In the same way this phase is the reading stage itself, which implies both in the mechanical aspects and the construction of meaning. The level of comprehension depends on, basically, on the importance that readers and teachers have given to the skills of this stage. Reading is not just about decoding linguistic signs; in contrast, it means understanding, comprehending, interpreting, constructing meaning, discovering and creating. Readers should make emphasis on the global representation of the texts, further than the linguistic components, words, sentences.

## How to comprehend a reading

Today, more than ever, reading comprehension is essential to be able to live in this world, where messages, data and icons are ubiquitous in any daily activity. In the information society it is important to understand what we read both for the acquisition of knowledge, and to unravel the reality that surrounds us. When reading it is important:

- Read and reread the text several times until understand it.
- Make predictions during the reading.
- Make connections with previous experiences.
- Identify the main ideas.


## Post-reading

To finish, in this step teacher and readers get to know how much the reader has understood. The kind of questions proposed could determine the level of comprehension of the students. They could:

- Prove predictions.
- Question their interpretation.
- Communicate their ideas about the text.
- Associate the meaning of the text with their previous experiences.
- Summarize the text.
- Discuss about the text.

Focusing on writing it tends to be difficult for baccalaureate students because they can write a bit more but the real idea isn't that; they face lot of difficulties when they have to write even a simple sentence. Jordan (1999) states that writing is the act of putting down the graphic symbols that present a language in order to convey some meaning so that the reader can grasp the information which the writer has tried to impart. As regards writing activities for our students could be the following: crosswords, making personal dictionaries, writing letters among others.

### 2.4.1.2. Flemings' Vark

## VARK Model within learning styles.

VARK model was introduced under Neil D. Fleming's authorship who is a professor of New Zealand and who has taught in universities, training centers, secondary schools and others. Before working for eleven years in the development of the faculty at the University of Lincoln, he was for nine years a
senior inspector of more than 100 secondary schools located in South IslandNew Zealand. This involved being a critical observer of more than 9000 'lessons' in the classrooms.

The Vark model assumes that if students can identify their own style, then they can adapt to the teaching styles of their teachers and act on their own modality in an attempt to increase learning performance. Vark is the acronym in English formed by he initial letters of four modal preferences (Fleming, 2001)
a) Visual (visual): preference for graphic and symbolic ways of representing information.
b) Read-write: preference for printed information in the form of words.
c) Auditory (aural): preference to listen to the information.
d) Kinesthetic (kinesthetic): perceptual preference related to the use of experience and practice, whether real or simulated.

Fleming came up with the idea of the VARK model while working as an inspector of New Zealand's educational system; he noticed that some great teachers were not reaching some students while other poor teachers were getting there. When he moved to Lincoln University, he decided to find out why this happened. He created the VARK exam based on previous experiences and worked with students and professors at the University of Lincoln.

### 2.4.1.2.1 Description of model

Neil Fleming, in collaboration with Collen Mills (2006) developed a simple instrument to determine the preferences of sensory modality when processing information. Rather than being a diagnostic tool, the instrument was intended to serve as a catalyst for reflection: from the comments as "haaa !, now I understand why I learn faster and better when I am in certain situations ..." this instrument was called VARK (Visual, Aural, Read / Write, Kinesthetic by its acronym English) (Visual, Auditory, Reading/ Writing and Kinesthetic).

Additionally, according to the results of studies carried out in some countries with the use of VARK, there was a noticeable use in the students because the teachers detected the teaching preferences according to the learning styles of the students. Correa (2008) says that the sight, the ear and the movement mark our first learning and once acquired the reading-writing ability; this point becomes another pillar of acquisition and filter of the information. The model VARK-Visual, Aural, Read / Write, Kinesthetic retakes these forms of appropriation and generates a response to the needs of those who live the educational process, and throughout the work on the subject will discover the way to bring it to the classroom to promote learning.

Initially the instrument consisted of 13 questions with three and four possible answers, then in September 2006 with the intention of giving greater reliability to the instrument; a modification was made to 16 questions with 4 answers each (Fleming, 2001).

## A. Visual

Some authors aim on the idea that it has to do with represented or printed information as tools to explain a concept or content. Murphy (2010) says that visual students like to use figures, pictures, and symbolic tools such as graph, flowcharts, hierarchies, models, and arrow which represent printed information. They also are able to explain a concept to others by drawing a figure or picture.

On the other hand, Zapalska and Brozik (2006) mention that students predisposing with this style are likely to be provided with demonstration and can learn through description. These students prefer to use list to maintain their advance rate in learning as well as arranging their ideas and mind. Apart from that, visual students are easy to be disturbed or change in focus by movements or actions, whereas, noise, usually do not bother them.

## B. Aural

The auditory system does not allow relating concepts or elaborating abstract concepts with the same ease as the visual system and also it is not so fast. It is, however, fundamental in the learning of languages, and of course, of music. Zapalska and Zapalska and Brozik (2006) pointed that these kinds of students give more attention to the words delivered by teachers. They prefer to listen than writing lecture notes. After lectures end, they choose to discuss topics which were taught with classmates, as a way to clarify their understanding.

Students who memorize aurally cannot forget a word, because they cannot continue. It's like cutting the tape from a cassette. On the contrary, a visual student who forgets a word does not have major problems, because he continues to see the rest of the text or information. Armstrong (2004) mentions that aural students usually read easily, narrate skillfully, write story or poetry naturally, learn foreign language fast, have good vocabulary, spell smoothly, like to write letters, and own strong ability in remembering names or facts. It's very important to foster in our students the concepts learn from pictures and incorporate vocabulary in order to talk fluently even when they forget a word.

## C. Reading / writing

Preference for printed information in the form of words. Students learn better from reading where they make their summaries, files, literary compositions. They prefer to look for information on their own and structure it to their best understanding, taking some authors’ opinions like Othman (2010) in this case states that students like list, glossary, textbooks or lecture notes. These students like to arrange lecture notes into sketch form, paraphrase classroom notes, and study multiple choice exam questions.

Thus, according to Zapalska \& Brozik (2006) these students enjoy taking notes. It is easier for them to take notes from lectures or from complex reading materials. After observing there is an agreement on the idea the students learn better from summaries they do by their own real experiences than bring they printed materials

## C. Kinesthetic

Perceptual preference related to the use of experience and practice, whether real or simulated. This intelligence includes physical abilities such as coordination, balance, dexterity, strength, flexibility and speed as well as selfperceptive abilities, tactile abilities and the perception of measurements and volumes. This helps us acquire information and we develop it at the age of 3 to 10 years.

On the other hand, Othman (2010) pointed, view kinesthetic learning style as able to increase students' learning motivation. This motivation was extremely closer their own experiences through learning.

Another point of view was taken from the idea stated by Amir (2010) in his study also has proven that VARK learning style can enhance students' understanding as well as raise learning motivation and interest among students.

In the initial approach it is good to deal with issues related to the students' feelings. Teachers must always start the dialogue by asking How are you? or similar expressions that show our interest in them. Fleming (2001) mentioned that while people speak they must use words that reflect sensations. They can be: palpate, tempt, sound, pulsate, correspond, compete, belong, share, import, sniff, inquire, inquire, find out, investigate, taste, taste, taste, taste, taste, please, satisfy, please, dislike, dislike.

### 2.4.1.3 Learning styles

## Definition

There is no single definition of learning styles, but there are many authors who give their own definition of the term, such as those presented below:

Hernández and Juarez (2014) define learning styles as the cognitive and physiological aspects by which students perceive and interact within the
learning processes. The term "Learning Styles" refers to the fact that when we want to learn something, each of us uses our own method or set of strategies. Although the concrete strategies we use vary according to what we want to learn (Bakri, Rahman, \& Jassruddin, 2019).

These preferences or tendencies to use more certain ways of learning than others constitute our learning. Honey and Mumford (1992) define learning styles as: "a description of the attitudes and behavior which determine an individual's preferred way of learning" (p. 1). They identify four types of learning styles that have their own strengths and weaknesses and might be important in a given situation. Those are activists, reflectors, theorists, and pragmatists.

This author recognizes each type as:

## Activists

Activists are people who learn by doing. They like to involve themselves in new experiences, and will 'try anything once'. They tend to act first and consider the consequences afterwards.

## Reflectors

Reflectors learn by observing and thinking about what happened. They like to consider all the possible angles and implications before coming to a considered opinion. They spend time listening and observing, and tend to be cautious and thoughtful.

## Theorists

Theorists like to understand the theory behind the actions. They need models, concepts and facts in order to learn. They like to analyze and synthesize, and feel uncomfortable with subjective judgments.

## Pragmatists

Pragmatists are keen on trying things out. They look for new ideas that can be applied to the problem in hand. They like to get on with things and tend to be impatient with open-ended discussions; they are practical, down-to-earth people.

### 2.4.1.4 Strategies proposed by Fleming's VARK to improve learning styles

VARK is known as visual-auditory-kinesthetic learning style model. The VARK concept theories were first developed by psychologists such as Fernald, Keller, Orton, Gillingham, Stillman and Montessori, beginning in the 1920's. Fleming, (2006) states: "The model is used to evaluate the category of people's communication preference. In the acronym VARK, V means visual, A refers to aural, R stands for read/write, and K means kinesthetic" (p. 25). Fleming conducted a learning style survey and reached the following conclusions:

- Learning style preferences can influence individual behaviors.
- By understanding students' learning style preferences, strategies can be developed to enhance learning
- Matching strategies for learning of a person with his learning style preferences can motivate learners.
- The matching could promote a deeper approach to learning and effective metacognition.
- Understanding learners' learning styles is important for learning.

The strategies proposed by Fleming allow the teacher to differentiate the different learning styles presented by their students. According to the VARK model (2006) the strategies are mentioned as follows:
A. Teaching strategies for visual style

- Written instructions
- Concept maps
- Diagrams, models, synoptic tables
- Computer animations
- Videos, transparencies, photographs, illustrations.
B. Teaching strategies for the auditory style
- Verbal instructions
- Repeat similar sounds
- Audios
- Debates, discussions and confrontations
- Brainstorming
- Read the same text with different reflection
- Guided and commented reading.
C. Teaching strategies for the reading / writing style.
- One minute writings
- Literary compositions, diaries, logs and reports.
- Preparation of summaries, reviews and text synthesis.
- Review of texts from classmates.
D. Learning strategies for the kinesthetic style
- Role playing and dramatizations
- Group dynamics that require sitting and standing
- The board to solve problems.
- Manipulation of objects for explanation of phenomena

Gestures to accompany the oral instructions.

### 2.4.2.5. Importance of knowing the learning styles

The importance, both for teachers in the first instance and for the educational institution to which they belong, lies in the fact that, knowing the learning style that characterizes the students of a given group, they can consider learning
experiences that allow students to get a greater performance of the teachinglearning process according to their style. Consequently, the students learning styles can indicate what are the cognitive activities that teachers must include in the educational practice to invite students to the harmonious development of all their abilities.

The "learning styles" approach suggests that people tend to learn better if teaching - learning methods conform to our preferences for perceiving and processing information.

Blair (2002) says that it is important to take into account and know what the students' learning style is, since each one varies in their cognitive potentials and in their intellectual styles. It is to label students in a single learning style. Education that promotes the development of skills taking into account the diversity in each person's style makes learning more effective and enriching for people.

What differs is satisfaction; students facing situations that consider their style report higher levels of satisfaction with learning, although the learning outcome does not differ greatly.

Defining their own style, and knowing it has a varied utility since it is not only applicable to the classroom and the students, but it is also applicable to any person. It is known that students are in a continuous learning process and identify what style prevails in them gives teachers a way to perfect the way they learn and develop those styles that they have not exercised.

The latest researches of today have resulted in a new focus on how humans learn: there is no single way to learn, each person has a personal way or style to establish a relationship with the world and therefore to learn.

Chastain (1998) states that in the teaching-learning process it is essential that the teacher knows the learning styles their students have. Each student learns in
a different way, so detecting it serves to create learning environments where didactic strategies are used that allow him to build his learning and that propitiate learning to learn: A greater emotion in learning greater production.

It is appropriate for teachers to have knowledge about new educational topics and above all to put them into practice. Then it is necessary to know the learning styles of the students:

- To know the student's attitudes to learning.
- To examine and apply specific techniques according to the learning style.
- To examine and apply general approaches depending on the types of thinking they require.
- Apply linear or sequential techniques, so that the student makes use of visual and spatial thinking.
- To recommend the use of ICT's, to overcome the deficiencies of conventional systems.
- To help the student to be more successful in their telematic environments.
- To adapt and modify the pedagogical design, according to the learning styles.

To modify and adapt the design of material and give instructions to the individual needs of students according to their learning style

### 2.4.6. Learning styles and the teacher

The mastery by the teacher of a "theory of learning" that takes into account the styles and deep approaches with particular dimensions of the own scientific learning, should be applicable within the didactic approach since it is in force statement that makes, regarding the improvement of the quality of teaching.

Rayib (2008) points out that the teacher should be familiar with a theory of learning styles that would allow him to know what cognitive strategies are used by his students, and in what way he can promote those approaches that guarantee a more meaningful learning.

If the teacher does not know the theory of learning, she or he will have the interest in knowing the learning styles of the students, that is, how students learn best, and that they rely on it to achieve meaningful learning. Current pedagogical tendencies show a growing interest among educational didactics and psychologists for moving away more and more from purely instructive models, to focus on the study and understanding of the learning process itself.

Armstrong (2004) expressed that the purpose of applying the theory of learning was perfect for teacher since learning would be more effective, and student would be better and would understand more their lessons, becoming eager and motivated to learn.

Within the framework of these trends, the need to take into account the set of individual variables that affect students' school performance (motivation, prior knowledge, aptitudes, belief system, styles and learning strategies, among others), part of the challenges faced by educators in the framework of the improvement process that schools experience in most countries.

However, there are many obstacles that hinder this process, among them, the impossibility of many education professionals to address the individual differences of the students, by not having in their possession a theoretical frame of reference, in which they could find answers to basic questions that all teachers ask themselves:

- How do my students learn?
- Why do they learn when they learn?
- Why sometimes do not manage to learn at least to the degree that I had proposed? Why, in the case of two students of the same age, of the
same sociocultural environment and with similar intellectual capacities, in the same learning situation and within the same context, one learns and the other does not?
- Why can the same reading method, used by the same teacher, be a cause of failure, frustration and even rejection for some students, while for others it can be an excellent method?
- Why does the performance of some increase when they work as a team while others need silence and individual work to perform at their best?

Many of these questions are closely related to the concept of "learning styles", which education psychologists define as the particular ways of behaving of each person in the learning process. Data showed by the Observatory of Quality of Education of the District of Barranquilla reveal that one of the causes of school dropout is the low academic performance and disciplinary problems among others. This could improve if the teacher knows how the student learns, to reach him. The style of learning of the teacher greatly influences his style of teaching, so it is important to diagnose not only the learning styles of the students, but also those of the teachers.

### 2.4.2 Dependent Variable

### 2.4.2.1. English language skills

The study aimed to analyze specific language skills of speaking, listening, writing and reading that are often divided into sub-skills or micro skills, which are specific behaviors that language users do in order to be effective in each of the skills.

It means that, learners developing the skill of listening need to have the sub-skills to be able to recognize contracted forms in connected speech. In the classroom learners spend time developing a wide range of sub-skills as they build each of the four skills. Amongst the sub-skills focused on are scanning and skimming in reading, organizational and editing skills in writing, recognition of connected
speech and understanding in listening, pronunciation and intonation in speaking. (Harmer, 2007)

Learners spend time developing a wide range of sub-skills as they build each of the four skills. The amount of attention we give to each skill area will depend both, on the level of your learners, and their situational needs.

### 2.4.2.1.1. Productive and receptive skills

## Receptive Skills

Reading and listening are called receptive skills because when we listen and read something we receive the language, understand it and decode the meaning. Those skills comprise silent reading and following the media aids.

Listening is decoding information through the ears it involves identifying the sounds of a speech and processing them into words and sentences.

## Listening sub-skills

Listening for gist:

This is when we listen to something to get a general idea of what it's about, of what's being said. We don't want or need to understand every word.

Listening for specific information:

This is when we listen to something because we want to discover a particular piece of information. We know in advance what we're hoping to find out. We can ignore other information which doesn't interest us.

Listening in detail:

This is when we listen, we listen very closely, paying attention to all the words and trying to understand as much information as possible.

## Reading sub-skills

Comprehension
Understanding the plan of the text
Making predictions
Guessing the meaning of unfamiliar words
Skimming and scanning
Understanding the organization of the text
Note-making

## Productive Skills

Writing and speaking are called the productive skills because when we speak and write we are producing the language, understand it and encode the meaning. Those skills are more complicated that it seems. (Jeremy, 2007) establish "Productive skills is the term for speaking and writing, skills where students actually have to produce language themselves" (p. 9) The main function od spoken language is to socialize with friends.

According to Chastain (1998), speaking is a productive skill that involves many components, such as grammar, strategy, sociolinguistics and discourse; for him speaking is more than simply making the right sounds, choosing the right words or getting the constructions correct.

## Speaking sub-skills

Depending on the level and ability of your students, in the sphere of speaking there are several sub-skills worth looking at:

Pronunciation
Stress, rhythm and intonation
Using the correct form of words
Word order
Using appropriate vocabulary
Language register

## Building an argument

## Writing sub-skills

Know Orthography
Know the system of the second language
Word order
Use good standard grammar
Know how to express a particular meaning using different grammatical forms
Use of synonyms and antonyms
Writing strategies
Be able to structure a text into paragraphs

### 2.4.2.2. Skills Development

Language is without a doubt crucial to learning. Communication cannot make sense without understanding or production. Learners need to develop their language skills, and specifically at a certain level of study. There are included the receptive skills for listening and reading and the productive ones for speaking and writing

### 2.4.2.2. Sensory Register

Looking for a certain and concrete definition of what a Sensory register means there is an agreement with the concept stated by some authors. (Harrison, 2013) states: "The sensory register is a memory system that works for a very brief period of time that stores a record of information received by receptor cells until the information is selected for further processing or discarded". (p. 12) Children have experienced some problems with the Sensory Language what make obvious that speech and language abilities are not more cognitive functions but are dependent of the Nervous Central System joined with the process of getting information at any level.

In addition to weakness in language, the children also face difficulties with slow processing, perceptual, gross and fine motor skills and cognitive aspects. It seems that auditory processing is identified as a potential risk for the development of an excellent speech and language communication (Kruger, 2008). These difficulties have been evidence later in a poor self-regulation of actions and behaviors such as anxiety, impulsivity and in completing assignments by their own.

Working memory is Short Term Memory we use to store and process information we are currently thinking about. Harrison (2013) stablishes that the working memory has been defined by some as the current contents of consciousness. It operates like a sketchpad or desktop in the sense that it allows a person to comprehend, retrieve, and manipulate information

It's very important to identify each of the terms establishes by some writers on the topic. Klein (2010) states that the information processing model posits that Long-Term Memory is a system that encodes, stores, and retrieves information (students may understand the metaphor of a computer here. This concept was closely connected to the short term on the contrary when the first one store the last one was Encoding information.

### 2.5 Hypothesis

The application of strategies based on Fleming's VARK model has a positive effect on the development of the four speaking skills of third year BGU students at "Primero de Abril" school.

### 2.6 Pointing of hypothesis variables

## Independent Variable

Strategies and techniques per each skill on Flemings' Vark model

## Dependent Variable

English language skills

## CHAPTER III

## METHODOLOGY

### 3.1 Approach

The present investigation is based on a qualitative and quantitative approach. Naranjo (2010) mentions that a research is qualitative since the data obtained from the tabulation is interpreted and analyzed by comparing and contrasting with the information described in the theoretical framework. In this research, this process was carried out through the analysis and interpretation of the data obtained through the application of a pretest and a posttest and a survey to the students.

Also, is research was quantitative because the data obtained from the tests and the survey were tabulated and represented statistically to identify the logical reality that looked for the causes and facts that were studied in the present investigation, regarding the four language skills and the students learning styles.

### 3.2 Basic method of research

A field investigation was carried out since there was direct contact with the reality and the participants of this study, in this way it was possible to obtain more information related to the objectives of this research.

It was a bibliographic research since different bibliographical sources such as books, academic articles, and previous researches were revised for the theoretical support of this research.

A quasi-experimental pre and posttest design with a single group was used. In this type of design, the independent variable (learning styles) was intentionally manipulated to observe its effect on the dependent variable (skills development). In this research, participants were not randomly assigned; all the participants ( 33 students) were exposed to the treatment. The quasi-experiment
was carried out to assess the effectiveness of the implementation of a handbook about Learning Strategies based on the VARK Model. In order to collect the data to measure the dependent variable, a pretest and a posttest were conducted to the 33 participants before and after the implementation of the proposal.

### 3.3 Level or type of research

This research was exploratory since it was necessary to visit "Primero de Abril" school to determine the existence of academic problems to solve. Visiting this place and exploring deeply about the difficulties that teachers are dealing with in the EFL classroom allowed the researcher to identify problems with the proficiency level of the students in the English language. Then, the variables were defined, the hypothesis was established and finally it was possible to verify if the results benefited the solution of the problem.

Also, this research was descriptive since the most relevant characteristics of the problem were determined, in order to understand it better.

### 3.4 Population and sample

The subjects considered for this research were the 33 students of third year BGU of "Primero de Abril" school located in Latacunga-Ecuador. The group was formed by 13 girls and 10 boys. The students had a B1.2 level in the English language.

Table 1
Population
Population

Students 33

Total
33

[^0]
### 3.5 Operationalization of variables

Table 2
Operationalization of the Independent variables: Learning Styles

| Independent Variable | Dimensions | Indicators | Items | Technique | Instrument |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Strategies and techniques per each skill on Flemings' Vark model <br> Characterization <br> The strategies and techniques based on the Vark model allows the students to develop all their language skills, these activities are very significant: Visual as the depiction of information in maps, spider diagrams, charts, graphs, flow charts, labeled diagrams; Aural as the lectures, group discussion, radio, email, using mobile phones, speaking, web-chat and talking things through; Read/write as the text-based input and output, manuals, reports, essays and assignments, addicted to PowerPoint, the Internet, lists, diaries, dictionaries, thesauri, quotations and words and; Kinesthetic as the demonstrations, simulations, videos and movies of "real" things, as well as case studies, practice and applications, (hands-on) | Visual <br> Aural <br> Reading/writing <br> Kinesthetic | Depiction of information in maps. Diagrams use Graphic organizers. <br> Listening practice Speaking practice Media <br> Reports <br> Essays <br> Visual and information resource <br> Role - play <br> Case study <br> Hands on | -14 questions <br> -4 indicators for each question. <br> -Each indicator was related to a different learning style (visual, aural, readingwriting, kinesthetic) | Survey | Online VARK questionnaire |

Table 3
Operationalization of the dependent variable: Skills development

| Independent Variable | Dimensions | Indicators | Items | Technique | Instrument |
| :---: | :---: | :---: | :---: | :---: | :---: |
| English Language Skills <br> Characterization <br> The English language skills refers to the set of linguistic processes that are developed during life in order to communicate in daily life situations, specifically human beings develop receptive skills (listening and reading) and productive skills (speaking and writing) in this way we can communicate efficiently in society. | Receptive Skills <br> Productive Skills | Reading <br> Listening <br> Writing <br> Speaking | Part 1. <br> Reading and writing <br> Part 2. <br> Listening <br> Part 3. <br> Speaking | Pre-Test <br> Post-Test | PET TEST |

Elaborated by: Vaca, G. (2019)

### 3.6 Collection of information

Data collection took place by the application of a survey and a pretest and a posttest, suitable for the study herein conducted, which included all the necessary elements to prove the hypothesis and which, at the same time, resulted in a series of measures to take and put into practice to solve the problem of the current research.

### 3.6.1 Survey - Questionnaire (VARK TEST)

Chastain (1998) defines the questionnaire as: "the instrument that links the approach of the problem to the responses that were obtained from the population." (pp. 358). Thus, a suitable questionnaire was designed, one that helped the gathering of information, which was then analyzed and from which problems were identified. The questionnaire was structured according to the variables to investigate.

The VARK questionnaire was conducted with the purpose of identifying the learning styles of the students and in this way to get a clear idea about the causes of the problem (low proficiency level of the students in the English language).

The questionnaire contained 14 questions related to the students' preferences according to different daily life situation.

Each question contained 4 answers from which the students should select that or those that best suited them. The answers were based on the four sensorial modalities proposed by Fleming (2002) in his VARK model: Visual, aural, reading and writing and kinesthetic.

This survey was applied at the beginning of the school year to the 33 students of third year BGU at "Primero de Abril" school.

### 3.6.2 Pretest and posttest - PET test

A pretest and a posttest were conducted in order to collect the data to identify the English language proficiency level of the students of third year BGU. The test was aimed at determining the weaknesses and strengths of the students in the four language skills (reading, writing, listening and speaking). The test used in this study was the PET (Preliminary English Test) from Cambridge University.

This test was designed for students with intermediate English level. Like all of the Cambridge English exams, the PET Exam is a pass/fail test and for those who pass, it delivers a certificate that does not expire. The PET exam can be either a paper-based test or a computer-based test. In both versions, the PET lasts 140 minutes in total.

The PET exam tests the four skills: listening, reading, writing, and speaking. It is structured as follow:

Part 1 (90 minutes) - The first section of the PET Exam tests reading comprehension and writing ability at the same time. It is subdivided into 8 subsections with a total of 42 questions. The first 5 subsections focus on reading comprehension and the last 3 focus on writing skills. There are multiple-choice and fill-in-the-blank questions, but also two writing prompts (a postcard and either a letter or a story).

Part 2 ( 30 minutes of recordings +6 minutes extra to transfer answers to the answer sheet) - The second section of the PET exam test listening comprehension. You hear each recording twice and must answer questions about the recording. There are a total of 25 questions in this part, each worth 1 point. The question types are multiple-choice, fill-in-the-blank, and true/false.

Part 3 (10 to 12 minutes) - The last section of the PET exam tests speaking ability. Students are put into pairs and asked to have a conversation with an
examiner and then with each other. There is a second examiner listening. The speaking test starts with the examiner asking questions about each student. The examiner then presents a situation and the students discuss possible solutions. Finally, the examiner gives the students a picture and the students describe and discuss it. The speaking test may be given on a different day from the first two parts of the PET Exam, depending on the exam center's scheduling.

PET Exam scores today range from 120 to 170 . A score of 140 or above is considered a "pass" and students with that score will receive the PET Exam certificate, which corresponds to a level B1 in English on the CEFR. Students scoring 160 or above on the PET Exam will receive a Cambridge Preliminary English Test certificate for level B2.

The KET first part of the PET Exam is worth $50 \%$ of the total score and the second and third parts of the PET Exam are each worth $25 \%$ of the total score. Each student receives his PET results broken down by the three parts of the exam, as well as an overall result.

All 33 students from third grade BGU of "Primero de Abril" school were tested before the implementation of the proposal and after the treatment, the results showed the differences among the students' levels as well as differences within students' self-skill level.

### 3.6.3 Strategies of instructions according to VARK

Table 4
Instruction according to VARK

| Week 1 | Week 2 | Week 3 | Week 4 | Week 5 | Week 6 |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Vark <br> Questionnaire | Pre- Test | Visual- <br> Aural | Read- Write <br> $/$ | Sensory <br> Register | Post-Test |


| for Young <br> people |  | activitie | Kinesthetic |  |  |
| :--- | :--- | :--- | :--- | :--- | :--- |

Elaborated by: Vaca, G. (2019)

### 3.7 Data collection and analysis

After having collected the data, they were analyzed following the procedure described below:

- The survey and the pretest and posttest were tabulated to obtain a numerical outcome that allowed determining the results of each question or item.
- The tables were designed, each one with alternatives, frequency and percentage which contain numerical values.
- The graphs were made with the results obtained previously for a better understanding of the statistical values of each of the questions or items.
- Then, the analysis and interpretation of the data in a quantitative and qualitative way was done.

The hypothesis was verified through the application of statistical methods.

## CHAPTER IV

## ANALYSIS AND INTERPRETATION

### 4.1 Analysis of results

### 4.1 Questionnaire (VARK TEST)

The following is the result of the application of the VARK questionnaire to participants of the study.
Table 5
You are cooking something special for your family: would you

| INDICATORS | LEARNING <br> STYLES | Nro | \% |
| :--- | :--- | :--- | :--- |
| 1. Ask your friends for suggestions Aural $\mathbf{6}$ <br> 2. Check on the recipe book for ideas. Visual $\mathbf{4}$ <br> 3. Use a cooking book where you <br> could find a good recipe Reading / Writing  | $\mathbf{9}$ | $\mathbf{2 7}$ |  |
| 4. Cook something you know you <br> would succeed at | Kinesthetic | $\mathbf{1 4}$ | $\mathbf{4 3}$ |

Elaborated by: Vaca, G. (2019)


Figure 1: You are cooking something special for your family: would you

Interpretation: in chart $1,18 \%$ of the surveyed students show a visual learning style, while $12 \%$ of them show an aural learning style. On the other hand, $27 \%$ showed a Reading and Writing learning style, while $43 \%$ of the students showed a kinesthetic learning style.

Interpretation: These results represent the way students can learn when they need to follow instructions. Most of them follow directions based on their previous experiences, while other students prefer to use written instructions to feel themselves more confident when doing something.

Table 6
When choosing from a restaurant menu you would:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Listen to the waiter's recommendation | Aural | 5 | 13 |
| 2. look at what other costumers are eating or at the pictures in the menu | Visual | 5 | 13 |
| 3. read the description of the dish in the menu | Reading / Writing | 8 | 21 |
| 4. Choose something you have already tried in that same place | Kinesthetic | 20 | 53 |

Elaborated by: Vaca, G. (2019)


Graphic 4When choosing from a restaurant menu you would

Análysis: in chart 2, $13 \%$ of the surveyed students show a visual learning style, while $13 \%$ of them shows an aural learning style. In contrast $21 \%$ showed a Reading and Writing learning style, while $53 \%$ of the students showed a kinesthetic learning style.

Interpretation: The results indicate that most of the students learn from previous experiences, when they have to make new decisions they think about previous results. Others prefer to read and choose from written descriptions what would be better for them to learn. In a lower percentage, students consider others decisions important when they have to make their own decisions, these students enjoy working in couples or groups. It means that teachers have to propose activities base on the preferences of their students when they want to teach decisions making.

Table 7
Besides the price, what else would influence you if you had to buy a science fiction book?

| INDICATORS |  | LEARNING STYLES | Nro |
| :--- | :--- | :--- | :--- |
| 1. A friend's recommendation <br> 2. It contains real life stories, | Visual | $\mathbf{1 0}$ | $\mathbf{3 1}$ |
| experiences and examples <br> 3. By quickly skimming through the <br> book | Reading / Writing | $\mathbf{5}$ | $\mathbf{2 7}$ |
| 4. The design in the cover is appealing | Kinesthetic | $\mathbf{9}$ | $\mathbf{2 7}$ |

Elaborated by: Vaca, G. (2019)


Graphic 2: Besides the price, what else would influence you if you had to buy a science fiction book

Analysis: In chart $3,31 \%$ of the surveyed students show a visual learning style, while 27 \% of them shows an aural learning style. $15 \%$ showed a Reading and Writing learning style, while 27 \% showed a kinesthetic learning style.

Interpretation: The results indicate that in some situations, depending on the topic, students need to listen to the teacher or others explanations to be curious about learning. If the lesson contains interesting topics, students will be eager to learn more just by listening. Other students will be attracted by the physical design of the activities, this happens because they are practical students and enjoy creating their own products.

Table 8
After you have finished a task, you would like to get some feedback. You would get the feedback:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :--- | :--- | :--- | :--- |
| 1. By listening to someone's opinion <br> about you | Aural | $\mathbf{8}$ | $\mathbf{2 4}$ |
| 2.Using graphics that show what you <br> have accomplished <br> 3. Using written descriptions of the <br> results <br> 4. Using examples of what you have <br> done <br> Reading / Writing | $\mathbf{8}$ | $\mathbf{2 4}$ | $\mathbf{2 1}$ |

Elaborated by: Vaca, G. (2019)


Graphic 3: After you have finished a task, you would like to get some feedback. You would get the feedback

Analysis: In chart 4, $24 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. $21 \%$ showed a Reading and Writing learning style, while $31 \%$ showed a kinesthetic learning style.

Interpretation: The results evidenced that students require multiple modalities for receiving feedback, students like to listen to the teachers explaining what they did well or bad, and why, and how with the purpose of learning from their own mistakes or keep on working well or improving every day. But they need to have the certainty through clear explanations including conversations, graphics or example to have a better performance next time.

Table 9
You have a problem in one of your shoulders. Would you prefer the physician:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :--- | :--- | :--- | :--- |
| 1. Told you what was wrong Aural $\mathbf{7}$ <br> 2. Showed you a diagram of what's Visual $\mathbf{2 1}$ <br> wrong $\mathbf{8}$ $\mathbf{2 4}$ <br> 3. Gave you something to read or <br> sent you a link on the internet so Reading / Writing $\mathbf{9}$ <br> you could find information <br> 4. Used a model to illustrate what is <br> wrong Kinesthetic $\mathbf{2 8}$ |  | $\mathbf{9}$ | $\mathbf{2 7}$ |

Elaborated by: Vaca, G. (2019)


Graphic 4: You have a problem in one of your shoulders. Would you prefer the physician

Analysis: In chart 5, $21 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. $28 \%$ showed a Reading and Writing learning style, while $27 \%$ showed a kinesthetic learning style.

Interpretation: The previous results indicate that some of the students are independent learners, they enjoy reading to get their own conclusion and manage their own learning. Other students are encouraged when teachers explain them the lessons through drawings or pictures, while others find
motivation and feel that they learn through videos, these kind of students are also independent learners.

Table 10
You are about to buy a cellphone or tablet. Besides the price, what else would influence your choice?

## INDICATORS LEARNING STYLES Nro \%

1. Listening to the clerk's Aural $\quad \mathbf{6}$ recommendation
2. looking at the pictures and features
3. reading the manual and reviews
about the product online
$\begin{array}{lll}\text { Reading / Writing } & 5\end{array}$
4. Trying both devices to see which one suits you best


Graphic 5: You are about to buy a cellphone or tablet. Besides the price, what else would influence your choice

Analysis: In chart 6, $18 \%$ of the surveyed students show a visual learning style, while $15 \%$ of them shows an aural learning style15 \% showed a Reading and Writing learning style, while $52 \%$ showed a kinesthetic learning style.

Interpretation: There are some students that consider important to compare and contrast in their learning process, most of them do it by experiencing both situations and obtain their own results, others prefers to read or do research to know and analyze both characteristics in detail, these students are curious learners. There are some other students that just watching pictures or images can make comparisons and build their learning through imagination.

Table 11
You are not sure how to spell "BEAUTIFUL" or "BEAUTIFULL". You would

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Ask a teacher or classmate to spell it out | Aural | 12 | 37 |
| 2. Mind picture both words so that you can decide properly | Visual | 5 | 15 |
| 3. Look it up in the dictionary | Reading / Writing | 4 | 12 |
| 4. Write both words down and choose | Kinesthetic | 12 | 36 |

Elaborated by: Vaca, G. (2019)


Graphic 6: You are not sure how to spell "BEAUTIFUL" or "BEAUTIFULL".
You would:

Analysis: In chart 7, $37 \%$ of the surveyed students show a visual learning style, while $15 \%$ of them shows an aural learning style. $12 \%$ showed a reading and writing learning style, while $36 \%$ showed a kinesthetic learning style.

Interpretation: When most of the students do not understand something, they like to talk with others and exchange ideas trying to clarify their doubts, it means that those activities when they have to solve a problem they like to do it in cooperative groups. Also, there are other students that like to solve difficult situations by themselves, these students are good at talking about their own points of view, writing essays and individual analysis.

Table 12
I prefer to check webpages that contain:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. TV or music channels | Aural | 8 | 24 |
| 2. Visual features and amazing designs | Visual | 7 | 21 |
| 3. written descriptions and explanations | Reading / Writing | 6 | 18 |
| 4. interactive click boards where I can access to other pages | Kinesthetic | 12 | 37 |

Elaborated by: Vaca, G. (2019)


Graphic 7: I prefer to check webpages that contain

Analysis: In chart 8, $24 \%$ of the surveyed students show a visual learning style, while $21 \%$ of them shows an aural learning style. $18 \%$ showed a Reading and Writing learning style, while $37 \%$ showed a kinesthetic learning style.

Interpretation: The results indicate that students use to get bored easily since they like to explore different things at the same time. To deal with kinesthetic students, teachers must create different activities and strategies to make the class dynamic. Also, showing videos can make the class more interesting, since there are some students than enjoy learning with this kind of resources. Considering that there are students with different learning styles in the same class teachers can prepare different activities for all the students and apply them in different classes but maintaining some frequency for the students to be expectant and motivated all the time.

Table 13
You are planning a group vacation and you want their opinion. You would:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :--- | :--- | :--- | :--- |
| 1. Describe some of the most   <br> outstanding points Aural $\mathbf{7}$ <br> 2. Show places through the use <br> of maps or webpages Visual $\mathbf{2 1}$ <br> 3. Provide a copy of the itinerary <br> 4. Pay them a phone call or send Reading / Writing  | $\mathbf{7}$ | $\mathbf{2 1}$ |  |
| a text message or email |  | $\mathbf{8 4}$ |  |

Elaborated by: Vaca, G. (2019)


Graphic 8: You are planning a group vacation and you want their opinion. You would

Analysis: In chart 9, $21 \%$ of the surveyed students show a visual learning style, while $21 \%$ of them shows an aural learning style. $24 \%$ showed a Reading and Writing learning style, while $34 \%$ showed a kinesthetic learning style.

Interpretation: When students are planning something they prefer to have it all organized and have all the ideas visible. Since plans have to be carried out thinking about all the details, for this students have a kinesthetic and reading/writing learning styles, because this kind of activities demand from them more organization and responsibility.

Table 14
You are using a book, CD or webpage to learn how to use your digital camera. You would like to:

## INDICATORS LEARNING STYLES Nro \%

1. have the opportunity to ask questions about the use of the Aural 84 camera
2. have diagrams and schemes about the use of the camera
3. Write down the main points of what to do
4. have samples of good and
bad photos and how to Kinesthetic $10 \quad 31$ improve them
Elaborated by: Vaca, G. (2019)


Graphic 9: You are using a book, CD or webpage to learn how to use your digital camera. You would like to

Analysis: In chart 8, $24 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. $21 \%$ showed a Reading and Writing learning style, while $31 \%$ showed a kinesthetic learning style.

Interpretation: Considering that most of the students are digital natives, they need to keep in contact with technologies so if teachers show them pictures, videos, images they will find the activities more familiar and the learning will be more significant.

Table 15
You want to learn a new program, skill or game on your PC. You would

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Ask for suggestions to people who have experience using the program | Aural | 8 | 24 |
| 2. Follow the photos on the book that comes with the program | Visual | 8 | 24 |
| 3. Read the instruction manual | Reading / Writing | 7 | 21 |
| 4. Use the keyboard to find out for yourself | Kinesthetic | 10 | 31 |

Elaborated by: Vaca, G. (2019)


Graphic 10: You want to learn a new program, skill or game on your PC. You would

Interpretation: In chart $11,24 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. $21 \%$ showed a Reading and Writing learning style, while $31 \%$ showed a kinesthetic learning style.

Interpretation: The outcomes for this question indicate that students are very practical and independent in their learning; they like to do research by themselves so they can produce their own learning.

Table 16
You are helping someone who is on the way to the airport, city center or train station. You would:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Tell the address | Aural | 6 | 19 |
| 2. Draw a map | Visual | 9 | 28 |
| 3. Write down instructions | the Reading / Writing | 8 | 25 |
| 4. Walk with the person | Kinesthetic | 9 | 28 |

Elaborated by: Vaca, G. (2019)


Graphic 11: You are helping someone who is on the way to the airport, city center or train station. You would

Interpretation: In chart 12, $19 \%$ of the surveyed students show a visual learning style, while $28 \%$ of them shows an aural learning style. $25 \%$ showed a Reading and Writing learning style, while $28 \%$ showed a kinesthetic learning style.

Interpretation: The results indicate that those students who process visual information, they retain significantly more information. Others, have space
memory and find easier the information they need, others need to listen to internalize the information and learn. If teachers need to teach their students activities about location, it is important to use strategies through which students can find memorize and learn through this kind of activities.

Table 17
Thinking about a moment in which you learn to do something new, you learnt better by:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Listening to someone's instructions and asking questions | Aural | 8 | 24 |
| 2. With diagrams and schemes | Visual | 8 | 24 |
| 3. Reading instructions and manuals | Reading / Writing | 9 | 28 |
| 4. Watching a demonstration | Kinesthetic | 8 | 24 |

Elaborated by: Vaca, G. (2019)


Graphic 12: Thinking about a moment in which you learn to do something new, you learnt better by

Interpretation: In chart 13, $24 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. 28\% showed a Reading and Writing learning style, while $24 \%$ showed a kinesthetic learning style.

Interpretation: When a teacher is introducing a new topic to the students it is very important to give them the instructions it will help them to do the activity with more accuracy. More of the students in this class have a reading/writing style when start to study something new. For those students than have another learning style in this case, a short activity to make the new topic more attractive can be done at the same time. Strategies for different learning styles can be combined.

Table 18
You'd rather have a teacher or lecturer who:

| INDICATORS |  | LEARNING STYLES | Nro |
| :--- | :--- | :--- | :--- |
| 1. Asks questions to the <br> audience | Aural | $\mathbf{7}$ | $\mathbf{2 1}$ |
| 2. uses diagrams and schemes <br> to explain contents <br> 3. uses leaflets and books <br> 4. Uses demonstrations, <br> Reading / Writing <br> models and practical sessions | Kinesthetic | $\mathbf{7}$ | $\mathbf{1 8}$ |

Elaborated by: Vaca, G. (2019)


Graphic 13: You'd rather have a teacher or lecturer who

Analysis: In chart $14,21 \%$ of the surveyed students show a visual learning style, while $18 \%$ of them shows an aural learning style. $21 \%$ showed a Reading and Writing learning style, while 40 \% showed a kinesthetic learning style.

Interpretation: The results evidence that most of the students are kinesthetic since they enjoy using examples and representations to produce their learning. Students require teachers that use this kind of resources during the classes to make learning more significant.

Table 19
A group of tourists is interested in learning about national parks and heritage in your area. You:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Talk to him about the places in your area | Aural | 9 | 28 |
| 2. Show them around your area so they could see for themselves | Visual | 8 | 24 |
| 3. lend them a book or guide book so they could find the information | Reading / Writing | 8 | 24 |
| 4. Walk with them as you showed them the area they are interested in | Kinesthetic | 8 | 24 |

Elaborated by: Vaca, G. (2019)


Graphic 14: A group of tourists is interested in learning about national parks and heritage in your area. You

Analysis: In chart 15, $28 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. $24 \%$ showed a Reading and Writing learning style, while 24 \% showed a kinesthetic learning style.

Interpretation: When students feel completely confident about a topic, they prefer to speak about this and demonstrate other they knowledge, so it is important that the teachers teach lessons in which the students feel confident and learning is guarantee. This will make them feel they are learning for life.

Table 20
You have to give a speech in a graduation ceremony. You:

| INDICATORS | LEARNING STYLES | Nro | \% |
| :---: | :---: | :---: | :---: |
| 1. Practice the speech in advance orally | Aural | 5 | 15 |
| 2. Create an outline to follow the notes | Visual | 8 | 24 |
| 3. Write and then read the speech out loud | Reading / Writing | 9 | 27 |
| 4. Use reality to make the speech sound real | Kinesthetic | 11 | 34 |

Elaborated by: Vaca, G. (2019)


Graphic 15: You have to give a speech in a graduation ceremony. You

Analysis: In chart 16, $15 \%$ of the surveyed students show a visual learning style, while $24 \%$ of them shows an aural learning style. $27 \%$ students showed a Reading and Writing learning style, while $34 \%$ showed a kinesthetic learning style.

Interpretation: Most of the students in an English class tend to be more kinesthetic when they have to talk. It is more significant for students to give a speech about real life situations that talking about topics with no meaning or about topics that are not important for them.


Graphic 16: General interpretation of results

## Analysis and interpretation:

As a whole, the group of 33 students on which the VARK test was applied showed a predominant KINESTHETIC learning style, with a $35 \%$ of answers. The other 3 learning styles had similar percentages, with $22 \%$ of students answering to the AURAL learning style, $21 \%$ of students answering to the VISUAL learning style and $22 \%$ of students answering to the READING/WRITING learning style. After obtaining these results, the planning of the corresponding lessons took place so as to delimit the best strategies to be used, considering the learning styles of students to be essential in designing activities and exercises so that students were able to acquire the contents to the best of their skills in the PRE-PET-TEST we applied to.

### 4.2 Analysis of Pre-test, and Post-test results

The hereafter is a table that gathers the information related to such Pre-test, which was applied to the students of senior high school at "Primero de Abril" School. The corresponding results are shown quantitative and with percentages.

This test is a very feasible tool that was used to determine the level of students, considering all the four skills, speaking, writing, reading and listening.

All 33 students were tested and the results showed the differences among the students' levels as well as differences within students' self-skill level.

As it is shown in the table, receptive skills, i.e. listening and reading were two skills were students struggled to the extent of achieving low performances. To mention, $34 \%$ of correct answers for the reading skill and $38,66 \%$ of correct answers for the listening skill.

Out of the 33 students that were tested, the maximum grade was obtained at $68 \%$ correct answers for the listening section and the lowest at a $16 \%$. In the case of Reading, the maximum grade was obtained at a rate of $51 \%$, whereas the lowest grade obtained arose $14 \%$.

Better results were obtained in the productive skills, where students performed for higher percentages. $42,91 \%$ of correct answers for the writing section and $49 \%$ of correct answers for the speaking section were the result obtained. From such figures, the highest obtained percentage for the writing section was $56 \%$, whereas the lowest was $32 \%$. In the case of the speaking section, students' best performance was $60 \%$ of correct answers, whereas the lowest grade obtained was $37 \%$ of correct answers.

The following are the tables that gather the results that have been herein described:

Table 21
Pretest reslts

| SCORES OF THE CAMBRIDGE PET TEST PRE－TEST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PET TEST PRACTES |  | READING |  |  |  |  |  |  | WRITING |  |  |  |  | LISTENING |  |  |  |  |  | SPEAKING |  |  |  |  |  |  | TOTAL SCORE |  |  |
|  |  |  | $\begin{gathered} \frac{0}{n} \\ z \\ 0 \\ 2 \\ n \\ n \\ \frac{1}{6} \\ \frac{a}{a} \end{gathered}$ |  |  | (SLNIOd 0I) ऽ LY甘d |  |  |  |  |  |  |  |  |  |  |  | $\mathfrak{G}$ |  |  |  |  |  |  | 0 |  |  | $\begin{aligned} & \text { E } \\ & \text { N } \\ & \text { N } \end{aligned}$ | $\begin{aligned} & \text { T1 } \\ & 0 \\ & 0 \\ & 0 \\ & \text { in } \end{aligned}$ |
| $\underset{\mathrm{o}}{\mathbf{N}}$ | STUDENTS＇ <br> NAME |  |  |  | $\begin{aligned} & \text { D } \\ & \text { 品 } \\ & \text { O} \\ & \text { n } \end{aligned}$ | $\begin{aligned} & \text { 츠N } \\ & \frac{3}{6} \\ & \text { 采 } \\ & 0 \\ & 0 \end{aligned}$ | TOTAL READING（35 POIN | READING PERCENTAGE |  |  |  |  | WRITING PERCENTAGE |  |  |  |  | TOTAL LISTENING（25 POIN | LISTENING PERCENTAGE | Grammar \& Vocabulary | $\begin{aligned} & \ddot{6} \\ & \ddot{U} \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ | $\begin{aligned} & \tilde{0} \\ & .0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | $\begin{aligned} & \text { స్ } \\ & \text { 人̀ } \\ & \text { O} \end{aligned}$ | TOTAL SPEAKING（30 POIN |  |  |  |  |
| 1 | AMORES AMORES DANIEL OMAR | 0 | 1 | 4 | 0 | 0 | 5 | 14 | 2 | 2 | 10 | 14 | 56 | 5 | 4 | 4 | 2 | 15 | 60 | 3 | 2 | 3 | 2 | 5 | 15 | 50 | 49 | 45 | 120 |
| 2 | CAIZA CASNANZUELA PAOLA ALEXANDRA | 1 | 2 | 3 | 4 | 0 | 10 | 29 | 2 | 2 | 8 | 12 | 48 | 4 | 2 | 2 | 1 | 9 | 36 | 2 | 1 | 3 | 3 | 5 | 14 | 47 | 45 | 40 | 115 |
| 3 | CALVACHE QUISPE OMAR JESUS | 1 | 2 | 5 | 1 | 0 | 9 | 26 | 1 | 2 | 9 | 12 | 48 | 6 | 4 | 1 | 3 | 14 | 56 | 2 | 2 | 3 | 2 | 5 | 14 | 47 | 49 | 44 | 120 |
| 4 | CANDO JAMI MARLENE NOEMI | 2 | 2 | 2 | 1 | 3 | 10 | 29 | 2 | 2 | 0 | 4 | 16 | 6 | 3 | 1 | 1 | 11 | 44 | 1 | 1 | 3 | 2 | 4 | 11 | 37 | 36 | 31 | 104 |
| 5 | CHICAIZA BRONCANO DANIELA ALEXANDRA | 1 | 0 | 4 | 3 | 2 | 10 | 29 | 0 | 2 | 7 | 9 | 36 | 5 | 5 | 2 | 0 | 12 | 48 | 2 | 2 | 3 | 2 | 5 | 14 | 47 | 45 | 40 | 115 |
| 6 | CHILUISA REMACHE VIVIANA LISETH | 2 | 3 | 5 | 2 | 2 | 14 | 40 | 2 | 1 | 9 | 12 | 48 | 4 | 4 | 2 | 5 | 15 | 60 | 3 | 1 | 3 | 2 | 5 | 14 | 47 | 55 | 49 | 123 |
| 7 | CUYO GUTIERREZ PAOLA ARACELI | 4 | 1 | 7 | 3 | 4 | 19 | 54 | 2 | 2 | 7 | 11 | 44 | 4 | 3 | 3 | 1 | 11 | 44 | 1 | 2 | 3 | 2 | 4 | 12 | 40 | 53 | 46 | 121 |
| 8 | CUYO VEGA NESTOR MOISES | 2 | 3 | 7 | 0 | 5 | 17 | 49 | 3 | 1 | 8 | 12 | 48 | 4 | 2 | 1 | 3 | 10 | 40 | 2 | 1 | 3 | 3 | 5 | 14 | 47 | 53 | 46 | 121 |
| 9 | EGAS CRESPO DAYER STIF | 0 | 1 | 0 | 0 | 2 | 3 | 9 | 1 | 0 | 2 | 3 | 12 | 2 | 2 | 2 | 0 | 6 | 24 | 3 | 2 | 3 | 2 | 5 | 15 | 50 | 27 | 24 |  |


| 10 | Garzon orejuela cintia NateIt | 4 | 2 | 5 | 1 | 5 | 17 | 49 | 0 | 1 | 8 | 9 | 36 | 3 | 2 | 3 | 1 | 9 | 36 | 3 | 3 | 3 | 2 | 6 | 17 | 57 | 52 | 44 | 120 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 |  | 3 | 3 | 5 | 1 | 3 | 15 | 43 | 2 | 2 | 9 | 13 | 52 | 2 | 1 | 0 | 2 | 5 | 20 | 2 | 1 | 3 | 1 | 4 | 11 | 37 | 44 | 38 | 113 |
| 12 | Lind | 1 | 1 | 4 | 1 | 4 | 11 | 31 | 4 | 2 | 8 | 14 | 56 | 5 | 2 | 0 | 3 | 10 | 40 | 3 | 2 | 3 | 3 | 6 | 17 | 57 | 52 | 46 | 121 |
| 13 |  | 2 | 2 | 3 | 2 | 4 | 13 | 37 | 0 | 3 | 8 | 11 | 44 | 1 | 5 | 1 | 0 | 7 | 28 | 4 | 3 | 3 | 2 | 6 | 18 | 60 | 49 | 42 | 118 |
| 14 | Lescano Coyachanin YOLANDAGADALUPE | 1 | 2 | 3 | 3 | 2 | 11 | 31 | 0 | 1 | 7 | 8 | 32 | 6 | 1 | 2 | 5 | 14 | 56 | 2 | 1 | 3 | 1 | 4 | 11 | 37 | 44 | 39 | 114 |
| 15 | LAASHA PASTE MARLIN | 3 | 3 | 4 | 1 | 3 | 14 | 40 | 3 | 2 | 7 | 12 | 48 | 1 | 3 | 3 | 1 | 8 | 32 | 3 | 2 | 3 | 1 | 5 | 14 | 47 | 48 | 42 | 118 |
| 16 |  | 0 | 0 | 4 | 0 | 2 | 6 | 17 | 1 | 0 | 0 | 1 | 4 | 5 | 1 | 0 | 4 | 10 | 40 | 1 | 1 | 3 | 2 | 4 | 11 | 37 | 28 | 24 |  |
| 17 |  | 2 | 3 | 6 | 0 | 3 | 14 | 40 | 4 | 2 | 7 | 13 | 52 | 1 | 1 | 0 | 2 | 4 | 16 | 3 | 1 | 3 | 2 | 5 | 14 | 47 | 45 | 39 | 113 |
| 18 | MUSOREMACHE ROMEL | 1 | 2 | 3 | 1 | 4 | 11 | 31 | 4 | 3 | 8 | 15 | 60 | 1 | 4 | 0 | 2 | 7 | 28 | 3 | 1 | 3 | 2 | 5 | 14 | 47 | 47 | 42 | 118 |
| 19 |  | 4 | 2 | 1 | 0 | 3 | 10 | 29 | 2 | 3 | 10 | 15 | 60 | 0 | 5 | 1 | 2 | 8 | 32 | 2 | 2 | 3 | 3 | 5 | 15 | 50 | 48 | 43 | 119 |
| 20 | PANCHI SINCHIGUANO KATERIN GISSEL | 2 | 1 | 2 | 1 | 1 | 7 | 20 | 1 | 2 | 10 | 13 | 52 | 2 | 4 | 2 | 1 | 9 | 36 | 3 | 2 | 3 | 3 | 6 | 17 | 57 | 46 | 41 | 116 |
| 21 | PULLUPAXAI LECHON Jonathan josue | 3 | 1 | 2 | 1 | 3 | 10 | 29 | 1 | 2 | 11 | 14 | 56 | 0 | 5 | 0 | 1 | 6 | 24 | 2 | 2 | 3 | 1 | 4 | 12 | 40 | 42 | 37 | 112 |
| 22 |  | 1 | 2 | 0 | 0 | 2 | 5 | 14 | 2 | 3 | 11 | 16 | 64 | 4 | 3 | 1 | 3 | 11 | 44 | 2 | 2 | 3 | 2 | 5 | 14 | 47 | 46 | 42 | 118 |
| 23 |  | 1 | 1 | 2 | 2 | 2 | 8 | 23 | 1 | 1 | 8 | 10 | 40 | 5 | 1 | 2 | 2 | 10 | 40 | 2 | 3 | 3 | 2 | 5 | 15 | 50 | 43 | 38 | 113 |
| 24 |  | 1 | 1 | 5 | 1 | 5 | 13 | 37 | 2 | 2 | 7 | 11 | 44 | 3 | 2 | 3 | 0 | 8 | 32 | 2 | 2 | 3 | 4 | 6 | 17 | 57 | 49 | 42 | 118 |
| 25 | ROJAS VASQUEZERIKA LISBETH | 5 | 5 | 5 | 0 | 1 | 16 | 46 | 3 | 3 | 11 | 17 | 68 | 6 | 3 | 3 | 5 | 17 | 68 | 4 | 3 | 3 | 4 | 7 | 21 | 70 | 71 | 63 | 134 |
| 26 |  | 2 | 0 | 5 | 3 | 3 | 13 | 37 | 0 | 2 | 8 | 10 | 40 | 5 | 2 | 5 | 0 | 12 | 48 | 3 | 1 | 3 | 4 | 6 | 17 | 57 | 52 | 45 | 120 |
| 27 | SUAREZ TRAVEZ ANDRE MISELI | 1 | 0 | 3 | 1 | 1 | 6 | 17 | 1 | 1 | 9 | 11 | 44 | 1 | 3 | 1 | 1 | 6 | 24 | 4 | 2 | 3 | 2 | 6 | 17 | 57 | 40 | 35 | 109 |
| 28 | Tacochuoutarco MARIA BELLEN | 1 | 0 | 4 | 2 | 3 | 10 | 29 | 1 | 2 | 7 | 10 | 40 | 2 | 1 | 3 | 2 | 8 | 32 | 3 | 2 | 3 | 4 | 6 | 18 | 60 | 46 | 40 | 115 |
| 29 <br> 29 |  | 4 | 1 | 4 | 1 | 1 | 11 | 31 | - 2 | 1 | 8 | 11 | 44 | 0 | 3 | 1 | 3 | 7 | 28 | 2 | 2 | 3 |  | 5 | 14 | 47 | 43 | 38 | 113 |
| 30 | TAIPE TACO NATALI <br> ELIZABETH | 2 | 3 | 3 | 2 | 2 | 12 | 34 | 2 | 2 | 9 | 13 | 52 | 3 | 2 | 0 | 0 | 5 | 20 | 3 | 1 | 3 | 3 | 5 | 15 | 50 | 45 | 39 | 114 |
| 31 |  | 0 | 0 | 3 | 1 | 1 | 5 | 14 | 0 | 2 | 8 | 10 | 40 | 5 | 1 | 2 | 1 | 9 | 36 | 3 | 2 | 3 | 3 | 6 | 17 | 57 | 41 | 37 | 112 |
| 32 | TARLUZA CERNA LEYDI | 2 | 2 | 2 | 2 | 1 | 9 | 26 | 1 | 1 | 9 | 11 | 44 | 4 | 3 | 5 | 1 | 13 | 52 | 3 | 1 | 3 | 3 | 5 | 15 | 50 | 48 | 43 | 119 |
| 33 | VASOUEZCHUQUTTARCO | 0 | 1 | 3 | 1 | 1 | 6 | 17 | 0 | 2 | 8 | 10 | 40 | 6 | 3 | 3 | 1 | 13 | 52 | 1 | 1 | 3 | 3 | 4 | 12 | 40 | 41 | 37 | 112 |
|  | MEAN | 1,8 | 1,6 | 3,6 | 1,3 | 2,4 | 10,6 | 30,3 | 1,6 | 1,8 | 7,8 | 11,1 | 44,5 | 3,4 | 2,7 | 1,8 | 1,8 | 9,7 | 38,7 | 2,5 | 1,7 | 3,0 | 2,4 | 5,1 | 14,7 | 49,1 | 46,1 | 40,6 | 116,7 |
|  | MODE | 1 | 1 | 3 | 1 | 3 | 10 | 29 | 2 | 2 | 8 | 11 | 44 | 5 | 3 | 2 | 1 | 9 | 36 | 3 | 2 | 3 | 2 | 5 | 14 | 47 | 49 | 40 | 118 |
|  | STANDARD DESVIATION | 1,3 | 1,2 | 1,7 | 1,1 | 1,4 | 3,9 | 11,3 | 1,2 | 0,8 | 2,6 | 3,4 | 13,7 | 2,0 | 1,3 | 1,4 | 1,5 | 3,2 | 13,0 | 0,8 | 0,7 | 0,0 | 0,9 | 0,8 | 2,4 | 7,9 | 7,7 | 6,8 | 5,2 |
|  | VARIATION COEFFICIENT | 0,7 | 0,7 | 0,5 | 0,8 | 0,6 | 0,4 | 0,4 | 0,8 | 0,4 | 0,3 | 0,3 | 0,3 | 0,6 | 0,5 | 0,8 | 0,8 | 0,3 | 0,3 | 0,3 | 0,4 | 0,0 | 0,4 | 0,2 | 0,2 | 0,2 | 0,2 | 0,2 | 0,0 |

Elaborated by: Vaca, G. (2019)

Table 22
Posttest results

| SCORES OF THE CAMBRIDGE PET TESTPOST－TEST |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PET TEST PRACTES |  | READING |  |  |  |  |  |  | WRITING |  |  |  |  | LISTENING |  |  |  |  |  | SPEAKING |  |  |  |  |  |  | TOTAL SCORE |  |  |
|  |  |  |  |  | 0 5 0 0 $n$ $\vdots$ $\vdots$ $\vdots$ 2 | (SLNIOd 0I) ¢ LyVd | $\underset{\infty}{\infty}$ |  |  |  |  | 0 |  |  | 0 <br>  <br>  <br> 0 <br> 0 <br>  <br>  <br> 2 |  |  | 馬 |  |  | 2 <br> 2 <br> 0 <br> 0 <br> 2 <br> $n$ <br> 2 <br>  <br>  |  | 0 5 0 0 $n$ $\vdots$ $\vdots$ $\vdots$ 2 2 | $\begin{aligned} & \pi \\ & \tilde{n} \\ & 0 \\ & 0 \\ & 0 \\ & \vdots \\ & n \\ & \frac{n}{a} \\ & \underset{a}{n} \end{aligned}$ | $\boldsymbol{\sigma}$ |  |  | $\begin{aligned} & 5 \\ & 5 \\ & \hline \end{aligned}$ |  |
| － | NAME |  |  |  |  |  | TOTAL READING（35 POI | READING PERCENTAGE |  |  |  |  |  |  |  |  |  | TOTAL LISTENING（ 25 PO | LISTENING PERCENTAG |  | $\begin{aligned} & \dot{0} \\ & \tilde{E} \\ & \stackrel{0}{n} \\ & \dot{0} \end{aligned}$ | $\begin{aligned} & \text {. } \\ & \text {. } \\ & \text { H } \\ & 0 \\ & 0 \\ & 0 \\ & 0 \\ & 0 \end{aligned}$ |  | $\begin{aligned} & \text { స్ } \\ & \text { 人े } \\ & \text { だ } \end{aligned}$ | TOTAL SPEAKING（30 PO | SPEAKING PERCENTAGE | TOTAL ENGLISH PET TE |  |  |
| 1 | AMORES AMORES DANIEL OMAR | 5 | 3 | 5 | 5 | 5 | 23 | 66 | 5 | 5 | 11 | 21 | 84 | 4 | 4 | 4 | 3 | 15 | 60 | 4 | 2 | 3 | 4 | 5 | 18 | 60 | 77 | 67 | 138 |
| 2 | CAIZA CASNANZUELA PAOLA ALEXANDRA | 5 | 3 | 5 | 5 | 4 | 22 | 63 | 4 | 4 | 10 | 18 | 72 | 5 | 3 | 3 | 2 | 13 | 52 | 4 | 1 | 3 | 3 | 5 | 16 | 53 | 69 | 60 | 132 |
| 3 | CALVACHE QUISPE OMAR JESUS | 5 | 5 | 4 | 5 | 5 | 24 | 69 | 3 | 5 | 11 | 19 | 76 | 6 | 4 | 4 | 4 | 18 | 72 | 3 | 2 | 3 | 4 | 5 | 17 | 57 | 78 | 68 | 138 |
| 4 | CANDO JAMI MARLENE NOEMI | 5 | 3 | 5 | 5 | 5 | 23 | 66 | 3 | 4 | 12 | 19 | 76 | 6 | 4 | 3 | 3 | 16 | 64 | 4 | 1 | 3 | 3 | 4 | 15 | 50 | 73 | 64 | 135 |
| 5 | CHICAIZA BRONCANO DANIELA ALEXANDRA | 5 | 4 | 4 | 4 | 4 | 21 | 60 | 3 | 5 | 12 | 20 | 80 | 5 | 3 | 3 | 2 | 13 | 52 | 3 | 2 | 3 | 4 | 5 | 17 | 57 | 71 | 62 | 134 |
| 6 | CHILUISA REMACHE VIVIANA LISETH | 5 | 5 | 4 | 5 | 5 | 24 | 69 | 4 | 4 | 13 | 21 | 84 | 4 | 4 | 3 | 3 | 14 | 56 | 4 | 1 | 3 | 3 | 5 | 16 | 53 | 75 | 65 | 136 |
| 7 | CUYO GUTIERREZ PAOLA | 5 | 4 | 4 | 4 | 5 | 22 | 63 | 5 | 5 | 10 | 20 | 80 | 5 | 3 | 3 | 4 | 15 | 60 | 3 | 2 | 3 | 4 | 4 | 16 | 53 | 73 | 64 | 135 |
| 8 | CUYO VEGA NESTOR MOISES | 5 | 4 | 4 | 5 | 5 | 23 | 66 | 4 | 4 | 11 | 19 | 76 | 4 | 5 | 2 | 3 | 14 | 56 | 4 | 1 | 3 | 3 | 5 | 16 | 53 | 72 | 63 | 134 |
| 9 | EGAS CRESPO DAYER STIF | 4 | 3 | 5 | 4 | 4 | 20 | 57 | 3 | 4 | 8 | 15 | 60 | 2 | 3 | 4 | 2 | 11 | 44 | 4 | 2 | 3 | 4 | 5 | 18 | 60 | 64 | 55 | 128 |


| 10 | GARZON OREJUELA CINTIA NAYELI | 5 | 3 | 5 | 5 | 5 | 23 | 66 | 3 | 4 | 10 | 17 | 68 | 5 | 2 | 3 | 4 | 14 | 56 | 4 | 3 | 3 | 1 | 6 | 17 | 57 | 71 | 62 | 134 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 11 | GUAMAN BORJA PATRICIA ELIZABETH | 4 | 5 | 5 | 4 | 4 | 22 | 63 | 5 | 4 | 10 | 19 | 76 | 2 | 3 | 4 | 3 | 12 | 48 | 2 | 1 | 3 | 3 | 4 | 13 | 43 | 66 | 58 |  |
| 12 | LANDA QUIMBITA STEEVEN DANILO | 5 | 3 | 2 | 4 | 4 | 18 | 51 | 5 | 5 | 10 | 20 | 80 | 5 | 5 | 1 | 2 | 13 | 52 | 3 | 2 | 3 | 4 | 6 | 18 | 60 | 69 | 61 |  |
| 13 | LEMA GUANOLUISA FRANKLIN ALEXANDER | 5 | 3 | 5 | 4 | 5 | 22 | 63 | 4 | 5 | 11 | 20 | 80 | 5 | 3 | 2 | 3 | 13 | 52 | 4 | 3 | 3 | 3 | 6 | 19 | 63 | 74 | 65 | 136 |
| 14 | LESCANO COYACHAMIN YOLANDA GUADALUPE | 5 | 5 | 5 | 5 | 4 | 24 | 69 | 4 | 4 | 8 | 16 | 64 | 6 | 2 | 4 | 4 | 16 | 64 | 3 | 1 | 3 | 4 | 4 | 15 | 50 | 71 | 62 | 134 |
| 15 | LLASHA PASTE MARILIN NAYELI | 4 | 4 | 5 | 4 | 5 | 22 | 63 | 4 | 5 | 8 | 17 | 68 | 1 | 4 | 3 | 3 | 11 | 44 | 3 | 2 | 3 | 3 | 5 | 16 | 53 | 66 | 57 | 130 |
| 16 | LOPEZ AGUILAR ANGHELO ANTONNY | 4 | 3 | 5 | 5 | 5 | 22 | 63 | 5 | 5 | 5 | 15 | 60 | 5 | 3 | 1 | 2 | 11 | 44 | 3 | 1 | 3 | 4 | 4 | 15 | 50 | 63 | 54 | 127 |
| 17 | MOLINA VELASCO ANDY RAFAEL | 5 | 4 | 5 | 4 | 5 | 23 | 66 | 4 | 4 | 13 | 21 | 84 | 4 | 2 | 2 | 3 | 11 | 44 | 3 | 1 | 3 | 3 | 5 | 15 | 50 | 70 | 61 | 133 |
| 18 | MUSO REMACHE ROMEL ADRIAN | 5 | 3 | 4 | 5 | 4 | 21 | 60 | 5 | 5 | 13 | 23 | 92 | 5 | 3 | 1 | 4 | 13 | 52 | 3 | 1 | 3 | 4 | 5 | 16 | 53 | 73 | 64 | 135 |
| 19 | Palacios caizalitin ana Gabriela | 5 | 5 | 5 | 4 | 3 | 22 | 63 | 4 | 5 | 13 | 22 | 88 | 0 | 4 | 1 | 3 | 8 | 32 | 4 | 2 | 3 | 3 | 5 | 17 | 57 | 69 | 60 | 132 |
| 20 | (eanchis inchiguano | 5 | 3 | 4 | 4 | 3 | 19 | 54 | 4 | 5 | 10 | 19 | 76 | 4 | 3 | 3 | 2 | 12 | 48 | 4 | 2 | 3 | 4 | 6 | 19 | 63 | 69 | 60 | 132 |
| 21 | PULLUPAXI LECHON JONATHAN JOSUE | 4 | 3 | 5 | 4 | 3 | 19 | 54 | 4 | 4 | 6 | 14 | 56 | 4 | 4 | 1 | 3 | 12 | 48 | 3 | 2 | 3 | 2 | 4 | 14 | 47 | 59 | 51 | 125 |
| 22 | PUMASHUNTA PULLOTASIG ELSAROCIO | 5 | 4 | 5 | 5 | 4 | 23 | 66 | 4 | 4 | 10 | 18 | 72 | 4 | 5 | 3 | 2 | 14 | 56 | 2 | 2 | 3 | 3 | 5 | 15 | 50 | 70 | 61 | 133 |
| 23 | QUIMBITA CAMPOVERDE ALISON GEOMARA | 5 | 3 | 4 | 5 | 4 | 21 | 60 | 4 | 5 | 6 | 15 | 60 | 5 | 3 | 2 | 4 | 14 | 56 | 2 | 3 | 3 | 3 | 5 | 16 | 53 | 66 | 57 | 130 |
| 24 | QUISHPE CAJAS JOHANA PAOLA | 4 | 5 | 5 | 5 | 5 | 24 | 69 | 5 | 5 | 5 | 15 | 60 | 5 | 4 | 1 | 3 | 13 | 52 | 3 | 2 | 3 | 4 | 6 | 18 | 60 | 70 | 60 | 132 |
| 25 | ROJAS VASQUEZERIKA LISBETH | 5 | 5 | 5 | 5 | 5 | 25 | 71 | 5 | 5 | 13 | 23 | 92 | 6 | 5 | 3 | 2 | 16 | 64 | 4 | 3 | 3 | 4 | 7 | 21 | 70 | 85 | 74 | 143 |
| 26 | $\begin{aligned} & \text { SHIGUILEMA KERLY } \\ & \hline \text { DAYANA } \end{aligned}$ | 5 | 4 | 5 | 5 | 4 | 23 | 66 | 5 | 5 | 10 | 20 | 80 | 4 | 5 | 4 | 4 | 17 | 68 | 3 | 1 | 3 | 4 | 6 | 17 | 57 | 77 | 68 | 138 |
| 27 | SUAREZ TRAVEZ ANDREA MISHELL | 5 | 4 | 5 | 5 | 5 | 24 | 69 | 5 | 5 | 12 | 22 | 88 | 4 | 5 | 2 | 3 | 14 | 56 | 4 | 2 | 3 | 2 | 6 | 17 | 57 | 77 | 67 | 138 |
| 28 | TACO CHUQUITARCO MARIA BELEN | 5 | 3 | 4 | 5 | 4 | 21 | 60 | 5 | 5 | 5 | 15 | 60 | 2 | 3 | 5 | 5 | 15 | 60 | 3 | 2 | 3 | 4 | 6 | 18 | 60 | 69 | 60 | 132 |
| 29 | TAPE GUAMUSHIG PAMELA ELIZABETH | 5 | 4 | 4 | 4 | 4 | 21 | 60 | 5 | 5 | 6 | 16 | 64 | 4 | 4 | 4 | 3 | 15 | 60 | 2 | 2 | 3 | 3 | 5 | 15 | 50 | 67 | 59 | 131 |
| 30 | Talpe taco natali ELIZABETH | 4 | 3 | 4 | 5 | 3 | 19 | 54 | 5 | 4 | 10 | 19 | 76 | 3 | 5 | 3 | 4 | 15 | 60 | 3 | 1 | 3 | 4 | 5 | 16 | 53 | 69 | 61 | 133 |
| 31 | TIGASI ALOMOTO MISHEL STEFANIA | 5 | 4 | 5 | 3 | 3 | 20 | 57 | 4 | 5 | 8 | 17 | 68 | 2 | 5 | 4 | 5 | 16 | 64 | 3 | 2 | 3 | 3 | 6 | 17 | 57 | 70 | 61 | 133 |
| 32 | TOAQUIZA CERNA LEYDI MELANI | 5 | 3 | 1 | 4 | 4 | 17 | 49 | 5 | 5 | 8 | 18 | 72 | 3 | 5 | 4 | 3 | 15 | 60 | 4 | 1 | 3 | 4 | 5 | 17 | 57 | 67 | 59 | 131 |
| 33 | VASQUEZCHUQUITARCO ROSA ANABEL | 4 | 4 | 4 | 5 | 4 | 21 | 60 | 4 | 4 | 11 | 19 | 76 | 4 | 3 | 3 | 4 | 14 | 56 | 4 | 1 | 3 | 3 | 4 | 15 | 50 | 69 | 61 | 133 |
|  | MEAN | 4,8 | 3,8 | 4,4 | 4,5 | 4,3 | 21,8 | 62,2 | 4,3 | 4,6 | 9,7 | 18,5 | 74,2 | 4,0 | 3,7 | 2,8 | 3,2 | 13,7 | 54,9 | 3,3 | 1,7 | 3,0 | 3,4 | 5,1 | 16,5 | 55,1 | 70,5 | 61,6 | 133,4 |
|  | MODE | 5 | 3 | 5 | 5 | 5 | 23 | 66 | 5 | 5 | 10 | 19 | 76 | 4 | 3 | 3 | 3 | 14 | 56 | 3 | 2 | 3 | 4 | 5 | 16 | 53 | 69 | 61 | 132 |
|  | STANDARD DESVIATION | 0,4 | 0,8 | 0,9 | 0,6 | 0,7 | 1,9 | 5,4 | 0,7 | 0,5 | 2,5 | 2,5 | 10,0 | 1,5 | 1,0 | 1,1 | 0,9 | 2,1 | 8,2 | 0,7 | 0,7 | 0,0 | 0,7 | 0,8 | 1,6 | 5,3 | 4,9 | 4,5 | 3,6 |
|  | VARIATION COEFFICIENT | 0,1 | 0,2 | 0,2 | 0,1 | 0,2 | 0,1 | 0,1 | 0,2 | 0,1 | 0,3 | 0,1 | 0,1 | 0,4 | 0,3 | 0,4 | 0,3 | 0,1 | 0,1 | 0,2 | 0,4 | 0,0 | 0,2 | 0,2 | 0,1 | 0,1 | 0,1 | 0,1 | 0,0 |

Elaborated by: Vaca, G. (2019)

Table 23
Comparison Group for individual questions

| Skils/questions | Results |  |
| :---: | :---: | :---: |
|  | Pretest | Posttest |
| Reading |  |  |
| What does it say? | 1,8 | 4,8 |
| All want to watch a TV programme. | 1.6 | 3,8 |
| The icehoteñ | 3.6 | 4,4 |
| Moonshine | 1.3 | 4,5 |
| The Skywalk | 2.4 | 4,3 |
| Writing |  |  |
| Sentences about a hairdresser's | 1.6 | 4,3 |
| Write an email to Alex | 1.8 | 4,6 |
| Write an answer to one of the questions | 7.8 | 9,7 |
| Listening |  |  |


| Choose the correct picture and put a tick ( $\checkmark$ ) in the box below it. | 3.4 | 4,0 |
| :---: | :---: | :---: |
| You will hear a man called Simon Webster talking about being a racing driver. | 2.7 | 3,7 |
| You will hear a woman talking on the radio about a new sports centre. | 1.8 | 2,8 |
| You will hear a conversation between a boy, Oliver, and a girl, Hannah, about a party. | 1.8 | 3,2 |
| Speaking |  | 5,1 |
| Grammar \& vocabulary | 2.5 | 3,3 |
| Discourse | 1.7 | 1,7 |
| Pronunciation | 3,0 | 3,0 |
| Interaction | 2,4 | 3,4 |
| Global | 5.1 | 5,1 |

[^1]

Graphic 17: Comparison Group for individual questions
The results of the previous graph allow to determine a comparison between the behavior of the averages between the pretest and posttest.

In the case of Reading, it can be seen how the average posttest scores are higher than the average pretest scores in all 5 parts; This indicates that, the use of VARK strategies improve the performance of the students who were part of the study.

Similar results are presented in the case of Writing; where, in the three parts that make up this criterion, higher averages are observed in the case of the posttest, which again indicates an improvement in student performance.

In the case of Listening, positive results are observed in the application of VARK strategies because, there are higher average scores in the posttest, for all the parts that compose it.

Finally, in the case of Speaking, we can see higher average scores in the posttest for the case of Grammar \& Vocabulary and Interaction. However, there are equal scores for Discourse, Pronunciation and Global. This indicates that if analyzed in separated, the VARK strategies in the six weeks improved only the performance of the Grammar \& Vocabulary and Interaction.

Table 24
Comparison Group for totals

| Skils/questions | Results | Pretest |
| :--- | :--- | :--- |
| Reading |  | Posttest |
| Total Reading (35 points) | 10,6 | 21,8 |
| Reading percentage | $\mathbf{3 0 , 3 \%}$ | 62,2 |
| Writing | 11,1 | 18,5 |
| Total Writing (25 points) | 44,5 | 74,2 |
| Reading percentage |  |  |
| Listening |  |  |


| Total listening (25 points) | 9,7 | 13,7 |
| :--- | :--- | :--- |
| Reading percentage | 38,7 | 54,9 |
| Speaking | 14,7 | 16,5 |
| Total Speaking (30 points) | 49,1 | 55,1 |
| Reading percentage | 46,1 | 70,5 |
| Total English PET Test | 40,6 | 61,6 |
| Average percentage PET Test | 116,7 | 133,4 |
| Cambridge English scale score |  |  |

Source: Students' pretest and posttest results Elaborated by: Vaca, G. (2019)


## Graphic 18: Comparison Group for totals

The results described below evaluate in a global way the behavior of the averages between the pretest and posttest, for the criteria of Reading, Writing, Listening and Speaking. In addition, the score obtained in the English PET Test and its valuation in the Cambridge English Scale Score are fully analyzed.

In the case of Reading, it can be seen how the average posttest score is higher than the average pretest score; this indicates that the use of VARK strategies in the six application weeks did help improve the performance of the students who were part of the study.

Similar results are presented in the case of Writing; where, there is a higher average in the posttest in relation to the pretest which indicates a positive impact of VARK strategies. In the case of Listening, the averages match the two previous criteria and show a higher score for the posttest; therefore, a positive impact of VARK strategies.

Finally, in the case of Speaking, there is also a higher average in the case of posttest, which coincides in that VARK strategies do improve student performance.

When totaling the results of the PET test, a higher average is evidenced again in the case of the posttest; the same happens in the case of the Cambridge English Scale Score. These differences will be analyzed in the hypothesis verification to determine if these improvement in the average scores is a signified at a 95\% confidence level.

With the results at hand, both from the VARK test and the PET test, several weeks of classes were planned to work directly with different strategies, which were determining for the obtaining of better results in the Post-test.

### 4.3 Hypothesis verification

The data collection included two groups, the Pretest and the Posttest, these two groups formed by the same sample during two different moments. A pre-test and a subsequent test were carried out after the intervention that consisted of a didactic strategy applied by the teachers. The following hypothesis test was necessary to demonstrate that there is a difference in the results obtained.

### 4.3.1 Confidence level

There are many social studies that suggest presenting statistical results with $95 \%$ confidence at the time of hypothesis verification. According to this, a significance of $5 \%$ is considered; that is, $\alpha=0.05$; indicating that, a $5 \%$ risk is assumed, which will help us to reject or not reject the hypotheses raised in this work with a 95\% confidence level.

This level of confidence will be adopted both to reject or not the hypotheses described as well as to determine the truth or not that the data conform to a normal distribution, which will help us determine which statistical test is the most appropriate to make the comparison of means.

### 4.3.2 Hypothesis Testing

It is important to adequately consider the way in which the comparison of means is to be carried out, since it is necessary to know if the data available in the sample satisfy the assumption of normality, to know whether parametric or non-parametric tests will be used.

Taking into account that the sample consists of 33 students, the Shapiro-Wilk test is applied, because the groups have few individuals. It was established that the distribution of the sample should conform to a normal distribution if the value of $\mathrm{p} \geq 0.05$ is met; In this case, the T-Student test is used. Otherwise, the data does not fit a normal distribution and in this case the Wilcoxon test is used.

Table 25
Kolmogorov-Smirnov

|  |  | Kolmogorov-Smirnov |  |  |  |
| :--- | :--- | :---: | :---: | :---: | :---: |
|  | Test | Est. | GL | p | Test |
| Reading | Pretest | 0,106 | 33 | 0,200 | Wilcoxon |
|  | Posttest | 0,157 | 33 | 0,039 |  |
|  | Pretiting | Posttest | 0,190 | 33 | 0,004 |
|  | Listening | Pretest | 0,096 | 33 | 0,063 |
|  | Posttest | 0,129 | 33 | 0,200 |  |
|  | Pretest | 0,168 | 33 | 0,181 | T-Student |
| Speaking | Posttest | 0,141 | 33 | 0,019 |  |
| Total English | Pretest | 0,141 | 33 | 0,093 | Wilcoxon |
| PET Test | Posttest | 0,135 | 33 | 0,135 | T-Student |
| Cambridge | Pretest | 0,142 | 31 | 0,115 |  |
| English Scale | Posttest | 0,124 | 31 | 0,200 | T-Student |
| Score |  |  |  |  |  |

Elaborated by: Vaca, G. (2019)

The results obtained in the Shapiro-Wilk test show that the p -values have different values, which indicates that the behavior of the dimensions (Reading, Writing, Listening, Speaking, PET, Cambridge Score) in some cases complies with the assumption of normality and in other cases this does not happen.

On the one hand, in the case of Reading, Writing and Speaking; there are $p$ values less than 0.05 either in the pretest or in the posttest; in these cases, a nonparametric means comparison test such as the Wilcoxon test will be used. In the case of the Listening, Total English PET test and for the Cambridge English Scale Score there is a $p$ value greater than 0.05 both in the pretest and in the posttest; therefore, parametric tests can be used to compare means and the T-Student test will be used.

### 4.3.2 Estimation of P value

First, the interpretation of the results of the non-parametric tests applied for the criteria of Reading, Writing and Speaking; for this, the graphics of the rejection and non-rejection zones are used according to the value of Z .

Table 26
Estimation of P value

|  | Mann- <br> Whitney | Wilcoxon | $\mathbf{Z}$ | $\mathbf{P}$ |
| :--- | :---: | :---: | :---: | :---: |
| Reading | 4,500 | 565,500 | $-6,943$ | 0,000 |
| Writing | 25,000 | 586,000 | $-6,680$ | 0,000 |
| Speaking | 282,500 | 843,500 | $-3,407$ | 0,001 |
| Elaborated by: Vaca, G. $(2019)$ |  |  |  |  |



Graphic 19: Reading score

For the Reading score, there is a value $\mathrm{Z}=-6.943$ which indicates that it is less than -1.96 ; this value has a significance of $\mathrm{p}=0.000$ which indicates that it is less than 0.05 . These results allow us to determine that there is significant statistical evidence to reject the null hypothesis: The means in the pretest and posttest for Reading are equal; and the alternative hypothesis is chosen.


Graphic 20: Writing score
For the Writing score, there is a value $\mathrm{Z}=-6.680$ which indicates that it is less than -1.96 ; this value has a significance of $\mathrm{p}=0.000$ which indicates that it is less than 0.05 . These results allow us to determine that there is significant statistical evidence to reject the null hypothesis: The means in the pretest and posttest for Writing are equal; and the alternative hypothesis is chosen.


Graphic 21: Score of the Speaking

For the score of the Speaking, there is a value $\mathrm{Z}=-6.680$ which indicates that it is less than -1.96 ; this value has a significance of $\mathrm{p}=0.001$ which indicates that it is less than 0.05 . These results allow us to determine that there is significant statistical evidence to reject the null hypothesis: The means in the pretest and posttest for Speaking are equal; and the alternative hypothesis is chosen.

Now, the interpretation of the results of the parametric tests applied for the criteria of Listening, Total English PET Test and Cambridge English Scale Score is performed; for this, the graphs of the rejection and non-rejection zones are used according to the value of $t$.

Table 27
Total English PET

|  | $\mathbf{t}$ | GL | P |
| :--- | :---: | :---: | :---: |
| Listening | $-6,074$ | 64 | 0,000 |
| Total English PET | $-15,396$ | 64 | 0,000 |
| Test |  |  |  |
| Cambridge English <br> Scale score | $-14,635$ | 60 | 0,000 |

Elaborated by: Vaca, G. (2019)


Graphic 22: Listening score

For Listening score, there is a value $\mathrm{t}=-6.074$ which indicates that it is less than -1.998 ; this value has a significance of $\mathrm{p}=0.000$; with 64 degrees of freedom which indicates that it is less than 0.05 . These results allow us to determine that there is significant statistical evidence to reject the null hypothesis: The means in the pretest and posttest for Listening are equal; and the alternative hypothesis is chosen.


Graphic 23: Total PET English Test score

For the Total PET English Test score, there is a value $\mathrm{t}=-15.396$ which indicates that it is less than -1.998; this value has a significance of $\mathrm{p}=0.000$; with 64 degrees of freedom which indicates that it is less than 0.05 . These results allow us to determine that there is significant statistical evidence to reject the null hypothesis: The means in the pretest and posttest for the Total PET English Test are equal; and the alternative hypothesis is chosen.


Graphic 24: Cambridge English Scale Score

For the Cambridge English Scale Score, there is a value $\mathrm{t}=-14.635$ which indicates that it is less than -1.99 ; this value has a significance of $\mathrm{p}=0.000$;
with 60 degrees of freedom which indicates that it is less than 0.05 . These results allow us to determine that there is significant statistical evidence to reject the null hypothesis: The means in the pretest and posttest for the Cambridge English Scale Score are equal; and the alternative hypothesis is chosen.

## CHAPTER V

## CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusions

The purpose of this research was to determine if the teaching strategies based on Fleming's Vark model had a positive effect in students of third year BGU at "Primero de Abril" school. The proposal was implemented and the following conclusions came up.

- At the beginning of the proposal, the proficiency level of the students in the English language was low. The results of the pretest indicated that the students had difficulties with the four language skills: reading, writing, speaking and listening. Considering this situation, and to help students to improve their English' competence, the implementation of a strategies handbook based on Flemings' Vark model about learning styles was proposed.
- I was demonstrated through the application of the Vark test that students have different learning styles, some of them learn better through the use of visual resources, others are aural students that prefers to learn through conversations, debates or listening to their teachers, many students are also kinesthetic that prefer examples from real life, and learn from their own experiences. In many cases students' learning styles are multimodal and can learn in different ways. This information allowed the researcher to design the best strategies to encourage their language development according to their learning styles.
- Six weeks after the implementation of Flemings' Vark model and its related activities with the groups, most of students demonstrated acceptance and comprehension of the use of this. The students tested
improved significantly their receptive skills (listening and reading), and the productive skills (speaking and writing).

Finally, the implementation of the strategies handbook based on Vark model had the expected results. Third year BGU students improved the four language skills according to the level required for them.

### 5.2 Recommendations

It would be appropriately to assess the skills level of the students in order to determine if the teachers are making use of the correct strategies and techniques, in this way it is easy to determine the weaknesses and strengths not only of students but of teachers as well. By being aware of the problems all over the spectrum it will be easier to correct and improve, after assessment, the best strategy to apply to improve the four skills.

It is recommended for the teachers to be updated on the use of the Vark Model due to the wide range of activities that can be applied to improve the skills in English. Learning skills can be found on internet and there are many examples but the most important is to know how and when could be implemented. That is why, teachers must expend time in studying the correct methodology to be apply on each case and according the different styles.

It is suggested to explain students how to think of the use of the Vark Model and reflect on the use of this strategy and the way to improve the given strategies, it would be of great importance to promote the creation by the students of new combination or even new models of learning.

Finally, with the aim to reinforce the ideas and the information contained of this proposal, it is important that teachers continue studying, designing and applying in real classrooms the strategies of the Vark Model proposed in this paper to contribute positively in the teaching learning process of English.

## CHAPTER VI

## THE PROPOSAL

Topic: "Teacher's Handbook: Learning Strategies based on the Vark Model"

### 6.1 Informative data

Academic Institution: Unidad Educativa"Primero de Abril".

Students: Ninth-grade students

Expected time for the implementation: 4 weeks

Beginning: April 9th Ending: May 7th

Person in charge: Gustavo Vaca (the researcher)

### 6.2 Background of the proposal

After identifying the low level of English students have once they enter from second high school to third high school grade. There are some deficiencies detected as the lack of vocabulary knowledge to their own lack of interest for a subject that still seems to be unnecessary for them. The students' low production both in a written and oral way it was due to different causes as the fear for failure, or their uncertainty in the abilities they have acquired. Those are some of the reasons necessary to mention.

All the above become the object of the present study, since it is a necessity to find the best strategies and solutions to the existing problems. There is always a line with the art techniques and strategies available for the curricula. Applying the VARK model will ensure the application of suitable and updated techniques to foster the development of skills by students.

### 6.3 Justification

The problem emphasizes when the teachers didn't know the learning styles of the students so they can't apply the Vark strategies as a new strategy to teach. The students who came from other institutions are inserted in eighth grade, and their expected level is not appropriate. This situation occurs since our institution takes in students from rural or other urban areas where English has never been a priority and consequently their level of English is low. Socioeconomic differences also bring about the impossibility of accessing good education, so when these students enter the "Primero de Abril" School they face difficulties first in adapting to the new, more demanding curriculum and then in increasing their level easily and fast.

More noticeable at the beginning of the school year will these problems show, when students enter the eighth grade of basic education. Apparently, there is not a systematic process of teaching English language in the schools he comes from. This has caused a gap between the students who come from rural and urban areas and those already in the senior high school at "Primero de Abril" School, which directly impacts the teaching and learning process.

## Mission

We are an educational institution that offers an integral formation of youth with diplomas in science, technology, and International Baccalaureate with human and academic excellence, creating creative, critical, and purposeful citizens dedicated to serving the Ecuadorian community. We do this by using a methodology based on cooperation and team-work, and a holistic approach, allowing for the development of healthy relationships within the educational community.
"FORMING LEADERS IN ENTREPRENEURSHIP"

Vision

The international "Primero de Abril" high school promises to be a pioneer educational institution with academic processes that employ technology and are characterized by academic prestige, in addition to administrative changes in the educational process. It also promises to form graduates in a warm and highquality environment into critical, creative, and reflective humans with many values. It allows for an efficient performance in a social environment. We are dedicated to the academic community and its educational formation, making sure that the results of our students exceed the expectations, through cooperation and team-work, in order to maintain the academic prestige in the provincial, national, and international levels.

Values

Each school year, the authorities, teachers, and students in "Primero de Abril" High School focus on one specific value that is important to society. The value chosen for the present school year was "Respect". The positive results of the use of VARK techniques and strategies may have an influence on the values of students in addition to their English level.

### 6.4 Objectives

### 6.4.1 General objective

- To implement a strategies and techniques handbook based on Fleming's VARK model for the development of the four language skills of third year BGU students at "Primero de Abril" school.


### 6.4.2 Specific objectives

- To select easy strategies that encourages the development of the four macro skills, as well as the use of English in students.
- To organize the structure of the strategies and techniques handbook considering the third year BGU students' learning styles based on Fleming's VARK model.
- To socialize the most suitable techniques with teachers based on Fleming's VARK model for their proper execution in senior high school students at "Primero de Abril" school.


### 6.5 Feasibility analysis

The proposal is based on the development of the macro skills, as well as in the use of English that allow the analysis of current life situations with the purpose of encouraging the achievement of the in the teaching-learning process. In relation it is based on the students' different styles considering their abilities in terms of the macro skills, since for this reason they do not have a good performance in this area, which affects their general performance.

Considering the problem studied, the Institution approves the development of this proposal since they are aware that it will positively benefit the students since they will improve their macro skills as well as the use of English.

### 6.6 Proposal fundamentals

VARK instrument, which is based on interaction and response to learning environment of the students to recognize preferred learning styles as a key approach to be used to increase the quality of teaching and learning process. Wehrwein (2007) suggest that teachers must identify learner' needs and interests in order to use the most suitable teaching strategies during the class, taking into account the different students' learning styles.

Active learning strategies are more reasonable as they consider the characteristics of learners. Some of the strategies would be discussions in class, collaborating learning skills, playing roles, simulating, models, struggles and
games are active strategies that can be utilized in large classrooms (Wehrwein, Lujan, \& Di Carlo, 2007).

### 6.7 Methodology. Operating model

Table 28
Methodology. Operating model

| Phases | Objectives | Activities | Resources | Responsible | Time |
| :--- | :--- | :--- | :--- | :--- | :--- |
| Planning | To state the objective of the <br> proposal and give the <br> information of the <br> educational institution. | Make the first formal <br> approach to the authorities <br> of the institution. | Letter | Researcher | 2 Hours <br> April 9th |
| Socialization | To present a Teacher' <br> Handbook on Learning <br> Strategies based on the Vark <br> model. | To explain the Teacher’ <br> Handbook on Learning <br> Strategies based on the <br> Vark model to teachers and <br> students. | Teacher's <br> handbook | Researcher | 4 Hours <br> May VII |
| Application | To execute the strategies <br> recommended in the <br> handbook. | To give the teachers <br> strategies to develop the <br> Vark model. | Handbook | Reseacher | 4 <br> from <br> weeks <br> April to 7 <br> May. |


| Evaluation | To evaluate the <br> effectiveness of the Vark <br> model. | To apply the activity 1 of <br> the proposal suggested base <br> on the Vark model. | Activity 1 | Teachers | hours <br> July XX |
| :--- | :--- | :--- | :--- | :--- | :--- |

Source: Gustavo Vaca

### 6.8 Teachers' handbook guide

## Teachers'Handbook: <br> Learning Strategies based on the <br> Vark Model

"Education must provide the opportunities for self- fulfillment; it can at best provide a rich and challenging environment for the individual to explore, in his own way."

Noam Chomsky


## INDEX

|  | Visual learning style <br> Strategy $N^{\circ} 1$ : An amazing trip. <br> Strategy $N^{\circ}$ 2: Fin the differences. |
| :---: | :---: |
|  | Aural learning style <br> Strategy $N^{\circ} 3$ : Interviewing a stranger. <br> Strategy N²4: Sorry I'm late. |
|  | Read and Write learning style <br> Strategy $N^{\circ} 5$ : Moonshine <br> Strategy $N^{\circ} 6$ : Writing an e-mail |
|  | Kinesthetic learning style <br> Strategy N $^{\circ} 7$ : Films. <br> Strategy $N^{\circ} 8$ : Travel agent. |

## Teachers' Handbook: <br> Learning Strategies based on the VARK Model

This handbook has been created as a tool for teachers to help students to learn through the Vark's Model in the four linguistic skills. Teaching through the different learning styles with specific strategies that will enhance the capacities of the students in English. Teachers will find in the hand6ook activities to apply in lessons according to the students' needs.

## Visual learning style



## STRATEGY N ${ }^{\circ} 1$ : AN AMAZING TRIP

Objective: The students should be able to talk in English in front of an audience about a real life situation showed in the pictures, using concrete materials to foster the ability of speaking by visualizing.

Skill: Speaking
Materials: Pictures, teachers'

## First:

The students will work in pairs; they have two pictures on the desk. The teacher will describe two possible situations that might appear in another picture (third picture). The pictures cannot be turned over until they have to talk. At the end one student of both will be selected at random to talk about the last picture while the other student is going to listen.

## Situations:

a- At the end of term, your class is going to spend a day at the seaside.
b- Your first photograph showed different ways of travelling.
c- Student A is going to talk about the second picture, and the student B is going to listen.

## Second:

They are going to have some minutes to talk and see the pictures about a possible situation told by the teacher. Talk together about the things you will do there.

## Third:



## Visual learning style

## STRATEGY ${ }^{\circ}$ 2: FIND THE DIFFERENCES

Objective: Student A should be able to describe a picture in English by looking at it and tell student B some useful information. Student B will try to draw, using concrete materials to improve the ability of describing.

Skill: Speaking
Materials: Picture, student 'voice, colors, a sheet of paper


## First:

Student A will have the information that student B does not have. Then, student A will start to describe taking into account the more detailed way to get closer to the picture.

## Second:

Student B will try to draw the information that Student A was saying by painting a similar picture to the ones who have it in his/ her hands.

## Third:

The partners will share the information and the pictures to relate the information given. Each partner plays an important role because the task cannot be completed if the partners do not provide the information the others need.

## Aural learning style

## STRATEGY N ${ }^{\circ}$ 3: INTERVIEWING A STRANGER

Objective: The students should be able to guess as much information from the visitor by asking questions to him/her.

Skill: Listening

Materials: stranger 'voice, and a sheet of paper


## First:

The teacher comments the visitor the student's language level, remembering him that he must take into account the level of English he is going to use with the students but he has to talk in a natural way.

## Second:

The teacher takes the visitor into the classroom without telling the students who the visitor is. In pairs or in groups, they are going to try to guess as much as they can about the visitor. Based on their guesses, students interact with questions what they want to ask the stranger.

## Third:

The visitor is interviewed with the questions the students have written and during the interview; the teacher encourages them and clarifies things, which are said that they do not understand.

## Aural learning style

## STRATEGY N ${ }^{\circ} 4$ : SORRY I AM LATE

Objective: The students should be able to understand the gist of the story by putting the pictures in order in which they heard them.

Skill: Listening

Materials: Tape/CD, a sheet of paper, and the pictures


## First:

The students have to think what is happening in each picture by looking at them. Then, the teacher will confirm or deny their predictions.

## Second:

The teacher tells the students that they are going to listen to a tape/CD and that they should put the pictures in the correct chronological order.

## Third:

The students check their answers with their partners and if it is necessary, they can listen again to ensure that they have the correct sequence. Once the listening has finished, the class can role-play similar scenes to that they have listened.

## This is what is on the tape/CD

Anna: Good morning Stuart. What time do you call this?
Stuart: Oh dear. Yes, sorry I'm late.
Anna: Well? What happened to you?
Stuart: I woke up late, I'm afraid. I didn't hear the alarm.
Anna: Where you out late last night?
Stuart: Yes. I'm afraid I was.
Anna: So what happened?
Stuart: Well, when I saw the time I jumped out of bed, had a quick shower, and ran out of the house. But them, when I got to the car I realised I'd forgotten my keys.

Anna: Oh really!
Stuart: But the door to my house was shut.
Anna: What did you do?
Stuart: I ran round to the garden at the back and climbed in through the window.
Anna: And?

Stuart: Well someone saw me and called the police.
Anna: What happen then?
Stuart: Well, I told them it was my house and at the first they wouldn't believe me.
It took a long time!
Anna: Ican imagine.
Stuart: And you see thet's why I'm late!

## Read/ Write learning style

## STRATEGY N${ }^{\circ}$ : MOONSHINE

Objective: The students should be able to understand the text by marking the correct letter A, B, C or D using the information from the text.

Skill: Reading

Materials: a sheet of paper

## First:

The students have some minutes to read the text and predict what the text will be about. Then, the teacher will confirm or deny their predictions.

## Second:

The teacher tells the students that they are going to mark the correct letter from the text.

## Third:

The students check their answers with their partners and if it is necessary, they can read the text again to ensure that they have the correct answers.

| (Hashemi \& Thomas, 2010) Moonshine |
| :--- |
| https://www.academia.edu/35528560/Obj_PET_TEST_Full_Test |
| The band Moonshine released their third CD last week. 'Here again' is a |
| follow-up to 'The Waves'. There have been a few changes since the last CD, |
| with Tom Wilcott on bass guitar replacing Simon McVee, who left the band |
| last year, and the arrival of Tom Simpson on drums. |
| It is clear from the first song on the CD, which is a dance tune, that the band is |
| no longer going to concentrate on slow songs. The second tune is also a dance |
| tune and is even louder and heavier. Most later tracks are in the band's more |
| usual slow style. These two tracks will certainly come as a surprise to many |
| fans. Either of them could easily become a hit single though, because they are |
| excellent. |
| Singer Rob Letchford gets a chance to really show how good he is, reaching |
| each note perfectly. Fans should be grateful he recorded the songs for the |
| album before he had trouble with his throat. This has resulted in the band |
| having to cancel their next tour. (Anyone who has bought tickets need not |
| worry as all the concerts will be rearranged as soon as Rob has recovered.) |
| On this CD, Moonshine show they can produce perfect music in a variety of |
| styles, from the slow ones we are familiar with to the ones that will keep your |
| feet tapping. I did feel, though, that they put their best songs at the beginning |
| and the last few tracks were not of quite the same quality. Despite this, 'Here |
| again' is certain to be a big hit and bring more success to this band. |
| (Hashemi \& Thomas, 2010) |
| https://www.academia.edu/35528560/Obj_PET_TEST_Full_Test |

What is the writer trying to do?

A make suggestions about how a band could improve
B offer his opinion of a band's new CD
C give information about the members of a band

D explain why a CD has been so successful

What does the writer say about the two songs at the beginning of the CD?

A They are unlike the songs the band normally performs.
B They are similar to other songs on the CD.
C They may not be enjoyed as much as other songs on the CD.
D They are too loud and heavy.
What does the writer tell us about Rob Letchford?

A He was not at his best when he recorded the CD.
$\mathbf{B} \mathrm{He}$ is unable to do any more performances.
$\mathbf{C}$ He has become unwell since making the CD.

D He will not appear at some performances with the band.

What conclusion does the writer come to about the CD?

A He enjoyed the slow songs in particular.
B He prefers some of their earlier CDs.
C He thinks some of the songs may become annoying.

D He feels the songs at the end are less good.

## Read/ Write learning style

## STRATEGY N ${ }^{\mathbf{6}} \mathbf{6 :}$ : WRITING AN E-MAIL

Objective: The students should be able to write an e-mail with a given situation and using around 35-45 words.

Skill: Writing

Materials: a sheet of paper

## First:

The students have some minutes to collect the ideas related to the topic in a sheet of paper. Then, the teacher will give some hints to write the e-mail.

## Situation:

You went away for the weekend with your English friend Alex and his family.

## Second:

The teacher tells the students the situation; they should keep the part of the email.

Third:

The students should organize the ideas related to the situation, and following the steps to write an e-mail.

- thank him
- say what you enjoyed most
- invite Alex to do something


## Kinesthetic learning style

## STRATEGY N ${ }^{\circ} 7$ : FILMS

Objective: The students should be able to interact with other students and getting a lot of information and vocabulary related to films that are currently on show.

Skill: Interacting with others

Materials: questionnaire

## First:

Previously, the class has been working with the uses of present perfect and past simple tenses. The teacher talks to the students about some of the most popular films that are currently on show.

## Second:

The students are going to find out which film is the most popular in the class. Then, the teacher distributes the following questionnaire to the students and they have to fill in. In the left-hand column, they have to write the names of the films.

## Third:

When they have finished to fill in the questionnaire, the class can discuss the kind of questions they can use; for example, Have you seen X?, What did you think of it?. Then, in pairs, students interview each other asking if they have seen the films and what they thought of them. They complete the charts with the partner's answers.

Later, the results of the questionnaire are put on the blackboard. The teacher asks the students "How many people have seen X?" and "how many people thought that X was very good?" and they hand up their hand and express their opinions.

## Kinesthetic learning style

## STRATEGY N ${ }^{\circ}$ 8: TRAVEL AGENT

Objective: The students should be able to process information from a chart with other students and getting lot of vocabulary related to the area of tourism.

Skill: Information processing
Materials: charts

## First:

In pairs, the students are going to act out a scene in a travel agency, where one student will be the customer and the other, will be the travel agent.

## Second:

The teacher gives the student A an specific information from a chart.

## A Customer

## You want:

- a double room
- to go to a hotel in Miami for 7 nights (You can spend up to $\$ 1400$ on a hotel.)
- to be as near as possible to the city centre
- to go to a hotel with a good discotheque
- a children's swimming pool for your small son
- someone to be available to look after your son at the hotel
- the hotel to serve good food
- a comfortable room (with a good view)


## Third:

Student B is given the following hotel information and he/she has to explain it to the student A . While students are acting out the scene in pairs, the teacher goes round listening or prompting if it is necessary.


## BIBLIOGRAPHY

Alqunayeer, H. S., \& Zamir, S. (2015). Identifying Learning Styles in EFL Classroom. International Journal of Learning and Teaching, 82-87.

Amir, A. (2010). Pembelajaran matematika dengan menggunakan kecerdasan majemuk (multiple intelligences). . Logaritma: Jurnal Ilmu-ilmu Pendidikan dan Sains, 6.

Armstrong, A. M. (2004). Instructional Design in the Real World: A View from the Trenches. Science Publishing, 5.

Bakri, R. A., Rahman, M. A., \& Jassruddin, J. (2019). Exploring the Impact of VAK Learning Style on Teenager Level Language Learners in Indonesia. Journal of Language Teaching and Research, 807-814.

Blair, R. (2002). Innovative approaches language teaching. Iran: Procedia Social and Behavioral Sciences.

Chastain, K. (1998). Developing Second Language Skills. Harcourt Brace Publishers, 330-358.

Correa, L. (2008). El coaching como estrategia para la formación de competencias profesionales. Revista Escuela de Administración de negocios, 127-144.

Fatimah, A. D. (2018). A descriptive study of Fleming's theory based on VARK (visual, aural, read/write, kinesthetic) of learning style in learning English used by the eleventh grade students of Man Salatiga in the academic year of 2017/2018. Indonesia: Man Salatiga Secondary School.

Fleming, N. (2001). Learning Styles Again: VARKing up the right tree. Estilos de Aprendizaje, 3.

Fleming, N. (2006). Different Perspectives of Learning Styles from VARK Model. Procedia Social Behavioral Sciences, 10.

Gledhill, C., \& Kübler, N. (2016). What can linguistic approaches bring to English for Specific Purposes? ASp. la revue du GERA, 65-95.

Goodman, K. (1988). Interactive Approaches to L2 Reading Cambridge. España: Cambridge University Press.

Harmer, J. (2007). How to teach English(new edition). Spain: PearsonLongman.

Harrison, C. (2013). A five Day Lesson for High School Psychology Teachers. Hong Kong: American Psychological Association.

Hashemi, L., \& Thomas, B. (2010). Objective Pet. Cambridge, England: University Press. Retrieved 10 18, 2019, from Objective PET: https://www.academia.edu/35528560/Obj_PET_TEST_Full_Test

Hernández, F., \& Juárez, B. (2014). Learning Styles. BOLETÍN CIENTÍFICO, 1.

Honey, P., \& Mumford, A. (1992). The manual of learning styles. England: Peter honey.

Jeremy, H. (2007). The Practice of English Language Teaching. Longman Publishers, Print.

Jordan, R. (1999). Accademic Writing Course. London: Pearson Education Limited.

Klein, M. (2010). Facing the future: Memory as an. London: Delton.

Kruger, S. (2008). Relationship Patterns. London.

Lindsay, C. a. (2006). Learning and Teachin Englih. España: Oxford University Press.

Madrid \& Mc Laren, D. (1995). Didactic preocedures for TEFL. Valladolic: La Calesa.

Moayyeri, H. (2015). The impact of undergraduate students' learning preferences (VARK model) on their language achievement. Journal of Language Teaching and Research, 132-139.

Naranjo, G. (2010). Introducción a la Investigación Científica. Ambato: Graficas Corona.

Nyo, M., Khaing, M., \& Maung, C. (2014). Developing the Four Skills of Language Teaching Staff through Lesson Preparations. Birmania: Mandalay: Lashio University.

Othman, N. (2010). Different perspectives of learning styles from VARK model. Procedia-Social and Behavioral Sciences, 652-660.

Presidencia de la República. (2011, 03 31). Ley Orgánica de Educación Intercultural. Quito, Pichincha, Ecuador.

Rayib, B. (2008). Evaluation in Foreign Language Education in the Middle East and North Africa. Estados Unidos: University Of Jeddah.

Richards, R. (1983). Language and Communication. Londres: Longman.

Routman, R. (2003). The Specifics You Need To Teach Reading Well. Portsmouth: Reading Essentials.

Serrano, M. E., Vizcaíno, C. G., Cazco, D., \& Kuhlman, N. A. (2015). Transformation: A Model for Restructuring the Preparation of English Teachers in Ecuador (Un Modelo para Reestructurar la Formación de

Profesores de Inglés en Ecuador). Gist Education and Learning Research Journa, 103-117.

Wehrwein, E., Lujan, H., \& Di Carlo, S. (2007). Gender differences in learning style preferences among undergraduate students. Adv Physiol Educ.

Widdowson, H. G. (1988). Teaching Language as Communication. Oxford : University Press.

Wong, L. L. (2011). The learning styles and strategies of effective language learners. System , 144-163.

Zapalska, A., \& Brozik, D. (2006). Learning Styles and online Education. Campus-Wide Information Systems, 325-365.


[^0]:    Source: Students' school register
    Elaborated by: Vaca, G. (2019)

[^1]:    Source: Students' pretest and posttest results
    Elaborated by: Vaca, G. (2019)

