



**Facultad de
Ciencias Sociales y Humanísticas**

PROYECTO DE TITULACIÓN

**“THE FLIPPED CLASSROOM MODEL ON A2 EFL STUDENTS’
VOCABULARY ACHIEVEMENT IN AN ECUADORIAN
UNIVERSITY ENVIRONMENT.”**

Previa la obtención del Título de:

MASTER IN TEACHING ENGLISH AS A FOREIGN LANGUAGE

Presentado por:

MARIUXI ILIANA CASTRO FLORES

Guayaquil – Ecuador

2021

ACKNOWLEDGEMENT

My unconditional thankfulness to God because he has helped and guided me all my life. He has sent Angels through people who have always pushed me to go ahead under challenging circumstances even. These Angels are my parents, my kids, my friends, professors from different universities, and of course, my dear tutor, who has had all patience with me.

MARIUXI CASTRO

COMITÉ DE EVALUACIÓN



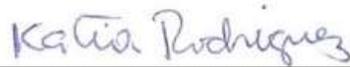
Jaime Roberto Pizarro Velasteguí

Tutor



Graham Ian Stagg

Evaluador



Katia Lorena Rodríguez Morales

Evaluador

DECLARACIÓN EXPRESA

“La responsabilidad del contenido de este Trabajo de Titulación, corresponde exclusivamente al autor, y al patrimonio intelectual de la misma **ESCUELA SUPERIOR POLITÉCNICA DEL LITORAL**”



Firmado electrónicamente por:

**MARIUXI
ILIANA CASTRO
FLORES**

Mariuxi Iliana Castro Flores
(Nombre del Estudiante 1)

GENERAL INDEX

ACKNOWLEDGEMENT.....	ii
DECLARACIÓN EXPRESA.....	iii
MASTERS SUPERVISORY COMMITTEE.....	iv
GENERAL INDEX.....	v
ABSTRACT.....	viii
INDEX FIGURES.....	ix
INDEX OF TABLES.....	x
LIST OF TERMS	xi
CHAPTER I	1
1. INTRODUCTION.....	1
1.1 Rationale	2
1.2 Problem Statement.....	2
1.3 Research Questions.....	3
1.4 Hypothesis	3
1.5 Definition of Terms.....	4
1.6 Objectives.....	4
1.7 Importance of the Study.....	5
1.8 Relevance of the Study.....	5
CHAPTER II:	7
2. LITERATURE REVIEW.....	7
2.1 Learning Styles.....	7
2.2 Instructional Foundations & Learning Theories	8
<i>Rationalism</i>	8
<i>Empiricism</i>	9
2.2.1 Theories of Second Language Acquisition.....	9
Behaviorism.....	9
Cognitivism.....	10
Constructivism.....	11
2.2.2 Krashen’s Acquisition and Learning Theory.....	11
2.2.3 Teaching English as a Foreign Language.....	12
Task-Based Learning.....	12
Communicative Language Teaching.....	13

2.3 Bloom’s Taxonomy	13
2.4 Founders of the Flipped Classroom.....	15
2.5 Conceptual Framework of a Flipped Classroom.....	16
2.6 The Growth of Blended Learning.....	18
2.7 The History of the Term, “Flipped Classroom”.....	19
2.8 The History and Contributions to the Flipped Classroom Model.....	20
2.9 Definitions of the Flipped Classroom.....	22
2.10 Research Involving Flipped Classroom Model.....	22
2.10.1 Research on Flipped Classroom Model and Vocabulary Teaching.....	23
2.10.2 Advantages and disadvantages of flipped classroom.....	24
2.11 Active learning.....	26
Kinesthetic Activities.....	26
Social Collaboration.....	26
Deeper Processing.....	27
Interaction.....	27
Elaboration or Exploration of the Material.....	27
2.11.1 Metacognitive monitoring.....	27
2.11.2 Active Learnings and Flipped Classroom.....	27
2.12 Learner-Centered? Constructivist Education.....	28
2.13 Vygotsky’s Social Constructivism Theory.....	29
2.14 Educational Technology.....	29
CHAPTER III:	32
3. METHODOLOGY.....	32
3.1 Paradigm and Tradition.....	32
Research Questions.....	33
Research Hypothesis.....	33
3.2 Description of Population and Sample.....	33
3.3 Data Collection Instruments and Analysis.....	34
Variable.....	35
Procedures.....	35
Traditional Instruction.....	36
Flipped classroom vocabulary instruction.....	36
3.3.1 Pre and Posttests Vocabulary Section.....	37

3.3.2 Survey.....	37
3.4 Reliability.....	38
3.5 Validity.....	38
3.6 Data Analysis.....	38
3.7 Summary.....	39
CHAPTER IV:	40
4. RESULTS.....	40
4.1 Introduction.....	40
4.2 Research Questions.....	40
4.2.1 Results of the Hypothesis.....	41
4.2.2 Results of Variables	44
4.3 Results for Quantitative Data.....	45
4.3.1 Mini-quizzes Results.....	45
4.3.2 Survey Results.....	46
4.4 Summary of the Quantitative Data.....	52
4.5 Summary.....	53
CHAPTER V:	54
5. SUMMARY AND CONCLUSIONS.....	54
5. 1 Introduction.....	54
5.2 Conclusions and Past Research	54
5.3 Strengths and Limitations	55
5.4 Recommendations for Flipped Teaching	56
5.5 Further Research	56
5.6 Summary.....	56
REFERENCES.....	58
APPENDICES.....	69
Appendix A.....	69
Appendix B	71
Appendix C	83
Appendix D	84
Appendix E	85

ABSTRACT

Flipped classroom model has been applied in the last decades in different teaching fields with positive results providing as teachers as learners a good learning atmosphere for teaching development and learning acquisition. The efficacy of the flipped classroom model moves students from passive to active class participation, improving their vocabulary proficiency (Alnuayt, 2018). Learners feel motivated to learn on their own, promoting autonomous learning and the empowerment of their understandings (Lin & Hwang, 2018; Yang, Liu & Todd, 2019). Research recommends that the twenty-first century students enjoy learning through effective interaction that is why the flipped classroom model could be a powerful teaching tool in this century (Rivera, 2016) which entailed to the researcher to carry out this investigation with students from a public university in the Guayaquil city to enhance the vocabulary proficiency on A2 EFL learners using the flipped classroom model.

Based on Bryman (2012), this quantitative research is based on an objectivist position because a problem exists in the society and is aligned to the ontological position (Cuba and Lincoln, 1994) because of the study groups were not affected by the intervention or vice versa. The existence of a problem regarding vocabulary entails an axiological position which is linked to the deductive methods and the positivist epistemological approach generating hypotheses which could be tested. This study worked with a sample class of 58 participants divided to class A (experimental group) and B (control group) who were tested through a pretest, posttest and a survey to know the students' perceptions. Class A developed flipped activities in different platforms such as Cedia "Zoom," Moodle, and Google Classroom for our classes and learning material and to measure students' progress were used Microsoft and Google Forms, Kahoot, and Quizizz.

The findings showed that class A outperformed class B in vocabulary achievement and they had positive attitudes toward the flipped classroom models. Nevertheless, it suggests for further studies to consider the worldwide conditions, student's knowledge background and student's family background. This study had to change the teaching scenery because of sanitary emergency covid-19 in comparison with previous studies.

Keywords: *Flipped Classroom, Vocabulary Proficiency, Students' Perceptions*

INDEX OF FIGURES

Figure 2.1 Bloom’s Taxonomy 1956.....	14
Figure 2.2 Bloom’s Taxonomy 2001 – Cognitive Domain.....	15
Figure 4.1 Comparison the mini-quizzes results experimental and control group.....	45
Figure 4.2 Question 1.....	46
Figure 4.3 Question 2.....	47
Figure 4.4 Question 3.....	47
Figure 4.5 Question 4.....	48
Figure 4.6 Question 5.....	49
Figure 4.7 Question 6.....	49
Figure 4.8 Question 7.....	50
Figure 4.9 Question 8.....	51
Figure 4.10 Question 9	51
Figure 4.11 Question 10	52

INDEX OF TABLES

Table 3.1 Sample of Population and Gender.....	34
Table 4.1 Descriptive Statistics for the Experimental and Control Groups.....	40
Table 4.2 Variation between the Experimental and Control Groups.....	41
Table 4.3 Pretest and Posttest score in Class A and B.....	41
Table 4.4 Variation between the Upper and Lower Score.....	42
Table 4.5 The Interval between the Pretest and Posttest.....	42
Table 4.6 The Interval Posttest	43
Table 4.7 Correlations between FC Instruction and Vocabulary Achievement.....	44
Table 4.8 Mini quizzes Experimental Group	45
Table 4.9 Mini quizzes Control Group.....	45

LIST OF TERMS

EFL	English as a Foreign Language
A2	English Level according to Common European Framework
FCM	Flipped Classroom Model
TCI	Teacher-Centered Instruction
SCI	Student-Centered Instruction
VARK	Visual-Auditory-Reading/Writing- Kinesthetic
LCI	Learner-Centered Instruction
ZPD	Zone Proximal Development
ET	Educational Technological
AECT	Association for Educational Communications and Technology
ICT	Information and Communication Technology
TEL	Technology-Enhanced Learning
CBI	Computer-Based Learning
CML	Computer-Managed Learning
CBT	Computer-Based Training
CAI	Computer-Aided Training
IBT	Internet-Based Training
WBT	Web-Based Training
VLEs	Virtual Learning Environments
SEM	Standard Error Mean
\bar{X}	Mean

CHAPTER I

INTRODUCTION

Vocabulary understanding is an essential component of any language proficiency (Harley, Cummins, Swain, & Allen, 1990). Without an array of meaningful vocabulary, it is hard to communicate with people and start a dialogue with them (Gardner, 2013; Thornbury, 2006) cited by Al-Buraiki (2018). Broadening a range of vocabulary can help students in mastering foreign or second language acquisition. Furthermore, almost all foreign language students have a common knowledge regarding the importance of learning English vocabulary. Fujiwara (2011) concluded the most significant part of learning as a foreign language is learning vocabulary. Students' lack of vocabulary is one of the main reasons for not communicating using the English language (Al-Buraiki, 2018).

Lately, the education has faced two types of instruction, the first is the teacher-centered instruction or lecture and student-centered instruction, which is known as flipped classroom model, inverted class, or student-center approach. The Flipped Classroom Model's main idea is to promote a meaningful learning setting with engaging resources such as peer-instruction, problem-based learning (Subramaniam & Muniandy, 2016). Although this instruction has been considered a method, model, or education, the aim is to help learners achieve their goals without stopping their regular learning stage since Bergmann and Sams' invention. These authors proposed some principles for using and training flipped classrooms, such as maximizing the interaction between students-teachers, teachers-students; developing students' self-motivation to learn on their own. Likewise, integrating constructivist and the narrative style are essential in this stage; getting students to access the class all the time; encouraging them to participate in active learning.

Nevertheless, in the current days due to the sanitary emergency COVID – 19 which has affected worldwide, new teaching methods have been more popular; flipped classroom goes beyond the normal instruction and promotes interaction using dynamic learning strategies increasing motivation and making a remarkable level of understandings (Yang, Liu & Todd, 2019). The application of the flipped classroom instruction on A2 EFL learners from the higher level of instruction in Guayaquil city in Ecuador is important because it will encourage students more time to practice on their own, feel more confident to participate during the class, and could succeed with the new vocabulary in upper levels even.

Finally, in accordance with (Zhang, Li, Jiao, Ma, & Guan, 2016), vocabulary acquisition is one the main component for learning and developing any language; thus, vocabulary instruction has been a scaffold of listening, speaking, reading, and writing skills. Learning vocabulary demands some challenges for the learners due to memorization (Azima, Husna & Tavriyanti, 2014); therefore, flipped teaching has conveyed its use more frequently than before into the teaching-learning process. According to Liu (2019), Flipped Classroom is a suitable instructional model for teaching English as a Foreign Language. Likewise, the flipped classroom allows the teacher to spend more time with learners on classroom exercises and solve classroom activity issues (Yildirim, 2016).

1.1 Rationale

The reason for this examination is to recognize the viability of the flipped classroom on A2 EFL learners' vocabulary achievement in English language learning using a quantitative approach. The flipped classroom comprises of dealing with practices outside the classroom, and the issues are addressed collaboratively during the class (Anwar, 2017) while authors as Liu (2019) considers this model as an adequate tool for teaching English as a Foreign Language. Therefore, The FCM will be carried out three times a week for a two-hour session. The time assigned for this content will be four weeks, where students will watch video lectures outside the class and comply with different assignments, then during their eye/ online sessions, solve the issues regarding the tasks. The investigation is significant because the flipped classroom model would help learners to boost their vocabulary understanding and self-study in their English language instruction.

1.2 Problem statement

The fitting application of the flipped classroom model has shown significant outcomes in the acquisition of vocabulary in EFL learners because they can be effectively engaged with their own learning process. It gives them the opportunity to pick the words when they learn. It demands no passive receptor of data (Deng, 2019). Current research on the EFL field attests that the twenty-first-century learners urge to apply this model since it is creative, promotes independence, and respect learning styles (Yildirin,2017). Therefore, the researcher was intending to utilize this method in a public college in Guayaquil city to test if there is a significant expansion in the vocabulary repertoire of the FCM on EFL understudies.

Additionally, it is essential to call attention to that this system has been tested in some college courses; that is why the researcher expects to see positive comparative outcomes through this quantitative investigation in the participants.

Learners present a few interests in broad class explanation (teacher-centered) and develop assignments at home. The teaching-learning environment should be spotlighted on a student-center approach due to educators have become more supporters. This inclination has allowed teachers to be aware of students' needs center more on a student-centered environment. A student-centered learning environment provides the learning conditions that empower understudies to lead their own learning needs and interests, which entails autonomous learning, dynamic classroom participation, and deal with the learning activities together with the professor as an assistant (Yildirim, 2017). Flipped classroom model doesn't simply alter what occurs previously, during, and after an instruction; otherwise also provides new opportunities related to grading and feedback.

1.3 Research Questions

In light of an audit of the writing and the significance of this study in an instructive setting the investigator was set two research inquiries to lead this quantitative investigation. These inquiries were centered in flipping the classroom on A2 EFL learners' vocabulary achievement.

Is there any statistically significant variation in the learners' vocabulary performance between the Class A experimental group (taught by using the flipped classroom method) and Class B control group (taught traditionally) in vocabulary classes that could be attributed to the teaching methods?

What are the students' perceptions regarding the application of Flipped Classroom Model in order to achieve vocabulary in comparison with traditional class?

1.4 Hypothesis

The alternative and null hypotheses were raised in this project:

Alternative Hypothesis:

Those learners who had the instruction following the flipped classroom method outperformed their outcomes over who did not have the intervention (the regular instruction).

Null Hypothesis:

Those learners who had the flipped instruction did not accomplish higher outcomes than those who did not get the intervention class.

1.5 Definitions of terms

Flipped Classroom Model

Bergmann and Sams (2012) define the Flipped Classroom as a teaching model where understudies learn at their own speed, promoting customized education opportunities what was done in the classroom now is done at home.

The Flipped Classroom Model (FCM) is a tool where the educator sends in advance through any platform outside the classroom the digital material related to the topic in order to have an active student's participation during the class (Cabi, 2018).

Teacher-Centered Instruction

Minter (2011) explains the Teacher-Centered Instruction (TCI) is a pedagogical instruction where there is not real interaction between the class group and the teacher, it is just evaluated the learners' understandings and the development of the class is under not interactive conditions.

Student-Centered Instruction

It is active participation and interaction between the teacher and students during the class, doing of the environment comfortable to students' action since Student-Centered Instruction (SCI) is based on active interaction, freedom to choose the topic and are being evaluated by themselves constantly, (Minter, 2011).

1.6 Objectives

General Objective:

To explore the effectiveness of the flipped classroom model on A2 EFL learners' and the vocabulary acquisition versus the traditional instruction in a public educational center.

Specific Objectives:

1. To figure out how the flipped classroom instruction helps A2 EFL learners to achieve vocabulary in a university environment.
2. To know how the flipped classroom model promotes vocabulary understanding on A2 EFL university learners in comparison with the traditional instruction.
3. To determine the perception of the flipped teaching in the A2 EFL learners at the end of the intervention.

1.7 Importance of the study

The lack of vocabulary is the common factor among the A2 EFL students who come to university. Previously, the students' active class participation related to the vocabulary performance has been poorly explored. This study helps to know the effectiveness of the flipped classroom model regarding vocabulary achievement. The findings of this research will provide teachers information about the English as a Foreign Language vocabulary instruction by the incorporation of the Flipped Classroom model. The Flipped Classroom Model proposed may be applied by teachers in their regular class, which will enable them to encourage learners to succeed during the English instruction. EFL learners need to increase their vocabulary repertoire and became more autonomous active students to succeed in upper English levels in a public university in the city of Guayaquil.

Another important factor of this study is the vast of researches worldwide about Flipped Classroom Model in different areas, fields, subjects such as the English language, which has focused on grammar, reading, listening, and vocabulary and in different levels as English as a Second Language Students as English as a First Language, that is why the exploration of the flipped classroom instruction and the vocabulary achievement in our country in this level of education could be a great teaching tool.

1.8 Relevance of the study

The worldwide sanitary conditions due to outbreak covid-19 pushed everybody to seek the best way to continue developing the common duties. Previous research such as Alnuhayt (2018) states the flipped classroom model is a useful tool that allows learners “outperformed” in the vocabulary acquisition and increase the teacher-students communication during the class. Anwar (2017) considers the flipped classroom as a

motivational and engagement strategy to help students master their vocabulary understandings which push them to use the correct pronunciation during the speaking interaction. In this regard, Yang, Liu and Todd (2019) set forth the flipped classroom instruction promote learners to gain vocabulary being more feasible among low achievers.

Likewise, Sun (2016) states the flipped classroom model and the vocabulary instruction “overcome the traditional classroom” due to flipping the class is a dynamic tool to build internal mental process forcing learners toward the independent learning that entails a depth vocabulary understanding. Based on these declarations it can say that the application of the flipped classroom model has been effective in the English vocabulary learning process. Therefore, flipped classroom model on A2 EFL university learners would be an important and relevant tool for learners who have always struggled with English learning, which has affected their English vocabulary proficiency. As well the flipped classroom model may promote learners to achieve vocabulary understandings, be more independent, and help them succeed in upper university levels in the English Language acquisition.

CHAPTER II

LITERATURE REVIEW

The aim of this literature review is to clarify the various functions of vocabulary in various theories of language learning. The usage of English as Foreign Language teaching methods and approaches has changed the educational field evolving along the time with the aid of technology in the last centuries.

2.1 Learning Styles

Learning styles have been part of the educational terms inside the foreign language teaching especially. In accordance with Keefe cited by Li (2011), learning styles entail cognitive, affective, and physiological responses; hence learners' perceptions and reactions are based on the learning environment. The learning processes belong to a single individual who adopts and adapts a particular learning style different from any task or misunderstanding presented enclosed in the educational or workplace surroundings (Entwistle & Peterson, 2004).

According to Ababneh (2015), educators play an essential role in the students' learning styles because they are commonly changeable in their emotional or environmental preferences. Teachers should be aware of their learning students' strengths and weaknesses during the teaching-learning process and help them find their proper learning style according to their needs. Even though the learning styles are related to the teaching method and students' learning preferences, learners' habits influence the most in the learning process (Magulod Jr, 2019). Likewise, Boneva & Mihova (2012) claim learning style's main feature are environmental, emotional, sociological, physical, and psychological. Each of these characteristics influences directly in the students' learning achievement and success. In this regard, the environmental feature involves all physical surroundings, such as light, sound, temperature, etc. The emotional features carry on motivation, responsibility, disciplinary skills. The sociological features are related to students and society, which means the students' learning preferences for working on any activity alone or in groups. The physical feature refers to body movements or breaks during the development of the different assignments. The psychological features are related to thoughts, motivation, abilities, and temperament to promote an effective learning atmosphere.

Learning styles involve a sensory modality or channels that help students perceive, process, and hold on to the information through the visual, auditory, read/write, kinesthetic or VARK model (Soundariya, Deepika, Kalaiselvan, 2017). Learning is an unpredictable cycle of accomplishing understanding or abilities, including a student's physical qualities/senses (physiological scope); personality features, for example, consideration, feeling, inspiration (affective scope); cognitive features; and psychological/individual contrasts (psychological scope). The physiological element of learning styles concentrates on using the channel, such as visual channel provided by illustration through pictures, videos, scenarios, and movement; aural channel provided through auditory instructions and different sounds; read/write channel provided by taking notes, drawing, and underlining writings; kinesthetic channel relates to movement, working with hands regularly (Idrizi, Filiposka & Trakjovik, 2018).

2.2 Instructional Foundations & Learning Theories

Instructional foundations for education are series of tools, methods, models, styles, and theories in order to achieve the aims and goals in the teaching-learning process. The flipped classroom model in EFL learners' vocabulary achievement has its foundations in different theories and instructional designs for online courses, such as selecting relevant educational material and learning tasks relating to the topic that aid the learners' knowledge acquisition. These actions allow evaluating themselves, enhancing their understanding, increasing their surfing skills, assessing their workability, and updating their courses as need increases over the semesters (Wa-Mbaleka, 2013). The learning theories have always been the core for discussion of philosophical postures on the roots of awareness and desire for human beings understand themselves, others, and the environment that surrounds them (Schunk, 2012 p. 17).

Likewise, Ertmer & Dewby (1993) state that rationalism and the empiricism are the foundations of the learning theories historically, and Schunk (2012) claims that rationalism and the empiricism are two positions of the basis of knowledge and its connection to the environment and from these emerge the theories of learning.

Rationalism. Rationalism entails the idea that understandings come from reason without appeal to the senses. So, realism is the teaching that information emerges through the brain. Even though there is an outside world from which individuals get sensory data,

thoughts start from the brain's activities. Descartes and Kant accepted that the reason follows upon data obtained from the world; Plato felt that information could be supreme.

Empiricism. Empiricism refers to the concept that experience is the only way people develop knowledge, so it is the opposite of rationalism. Empiricists have held the idea the external world is the basis for people's impressions.

2.2.1 Theories of Second Language Acquisition

Edgar (2012) stated we as human beings have always wanted to understand our environment, coexistence, and thoughts. Therefore, learning has considered as mental development and expertise. Learning theories evoked principles to help people succeed with their awareness, creating good knowledge acquisition and understanding conditions, authors as B.F. Skinner, Albert Bandura, Jerone Bruner, Jean Piaget, Lev Vygotsky, Edward Thorndike, and Robert Gagne sought through their researches a possible explanation about how inputs should occur then they agreed with different approaches such as behaviorism cognitivism, and constructivism, which turned into theories (Woolfolk, 2010) cited by Edgar (2012).

Behaviorism

In this theory, Ivan Pavlov, John B. Watson, and Skinner were founders and researchers of this theory Catania & Laties (1999). Pavlov, researcher of the human being in its reaction, found what he called unconditioned stimulus triggers natural reactions. While John B. Watson, creator of the conditioning theory, studied how certain stimuli rules an organism to produce a response and coined the term 'behaviorism' and B.F. Skinner was the creator of the operant response or operant conditioning learning theory and determined that all actions are determined by the behavior itself (Mukhlis, Yuliaty, Purnama, Akbar, Irviani, 2020).

In this regard, Edward Thorndike' connectivism presented a good relationship between stimulus and response and showed three learning laws such as the "law of effect," so positive and negative reactions are linked to strengthens and weak conditions; "law of exercise" responded to the repetition and possible right answers, and the last one was the "law of readiness" related to the mood, so if you feel confident and practice that feeling, the result is positive, nevertheless, if you force any action it entails frustration and annoys (Edgar, 2012).

Finally, the behaviorism theory, Skinner (1953), human beings respond to stimuli to generate a response (Ertmer & Newby, 2013). Learning is a mechanism that reacts as trigger, especially over the emotional reactions such as fear, love, and anger are innate in humans from its birth (Watson 1926, pp. 454-466). This theory is connected to Flipped Classroom Model since students feel more confident participating during the face-to-face sessions because the class environment is more comfortable (Basal, 2005) cited by (Alnuhayt, 2018).

Cognitivism

The cognitivism theory involves prior inputs and mental processes which also react to stimuli and response, therefore the memory, attention, perception formation and information procedure code and structure the learners' knowledge (Yimaz, 2011). The cognitive approach focuses on developing concrete skills allowing learners to organize and connect new information in memory to previous experience. Instruction should base on the current mental constructs or schema of a student to be effective. (Ertmer & Newby, 1993). Cognitive theories emphasize information learning and internal knowledge acquisition. Mental systems concentrate on conceptualizing the undergraduates' learning procedures regarding knowledge acquisition, process information, storage, and recovery of data in students' minds. (Ertmer & Newby, 2013).

Cognitivism is related to the previous knowledge, mental process, reorganization of ideas, and internal knowledge acquisition (Yimaz, 2011; Ertmer & Newby, 2013). Likewise, cognitivism can be seen as a scheme, a graphic mental building organized in the brain and allows learners to seek, manipulate, experiment, question, and search for responses on their knowledge (Gagne, 1984 cited Guney & Al, 2012). Therefore, with this concept in mind, the flipped classroom model is linked with the cognitivism since learners receive pre-class through video's teacher lectures (Graziano, 2017; Overmyer, 2014) with the explanation of the class and with the instructions on the activities they have to work at home; and during the in-class session, they clarify any misunderstanding regarding the tasks or concepts worked. In flipped classroom instruction, students are expected to participate and complete some form of pre-class learning to prepare structurally aligned in-class learning activities with their teachers and peers (Diningrat, Setyosari, Ulfa, Widiati, 2020).

Constructivism

Constructivism arose centuries ago; Piaget and Vygotsky, creators of learning theories in their researches, found the narrow relationship between the stimuli and response. Thus, the humans, their surroundings, and their experience linked to the prior knowledge were the basis to increase the insights (Devries, 2000); therefore, Mary Midgley (1985), cited by Phillips (1995), referred to constructivism as a "powerful folk-tale" regarding the genesis of human knowledge. This theory has not built by itself otherwise has founded on philosophy, psychology, sociology, and education and set the humans as the main character in the construction of knowledge from their experience, turning into the human as a center of learning (Olusegun & Bada, 2015). Learning based on constructivism can enhance learning outcomes by promoting cooperation, communication, interaction, knowledge building, and sharing. (Yacob, Saman & Yusoff, 2012). According to Padirayon, Pagudpud & Cruz (2019) the constructivist paradigm entails the individual active participation to set up their understanding and knowledge of the world through facing things and reflecting on those experiences to generate effective outcomes.

The contribution of constructivism focuses on student-centered learning due to set up awareness and meaning from their experience, creating understanding and learn on their own (Olesegun & Bada, 2015). The previous work of Bruner (1961), Vigotsky (1962), and Piaget (1964) considered the constructivism places the student as the main character in knowledge acquisition. Xu & Shi (2018) mention the flipped classroom model draws on constructivist learning philosophy. The instruction is done under a constructivist learning climate, which corresponds to a flipped classroom scenario.

To sum up, based on theories of different authors mentioned before in this research regarding the three primary roots of knowledge construction, it can be said, behaviorism, cognitivism, and constructivism have an essential contribution to the flipped classroom model due to the active student's participation to become autonomous in their own learning process. Though this teaching model emerged in the 2000s, its impact on the teaching field has always been rewarding.

2.2.2 Krashen's Acquisition and Learning Theory

Most of these theories are related to Krashen's hypotheses which have been the pillar to teach English as a Foreign Language in grammar and vocabulary acquisition. Krashen

(1998) stated the language acquisition requires significant connection in the objective language - regular correspondence - in which speakers are concerned not with the type of their expressions but rather with the messages they are passing on and understanding. In this regard, Krashen (1982) considered the acquisition of learning, the input, the affective filter, and the natural order knowledge acquisition, and the monitor of the students such as hypothesis which have a paramount role in the vocabulary teaching through the flipped classroom model and traditional instruction. In accordance with Krashen (1982), the Acquisition of learning is an ongoing process through the target language. The more comprehensible input learners receive, the more knowledge they generate progressively. This input needs to be monitored by the teacher (Monitor hypothesis), and through the formula “ $i + 1$ ” (Input hypothesis) a new word arises. Krashen mentioned the affective filter hypothesis as the main factor to promote or block the new understanding. The level of anxiety blocks or allows the flow of knowledge, that is, if the level of stress is high, less knowledge is gotten, and if the level of stress is low, the more understanding can be gotten. Finally, the natural order hypothesis does not mean a sequence in grammar; Krashen would relate to learners’ background and conditions to the exposure to the set of words.

2.2.3 Teaching English as a Foreign Language

Harmer (2003, p. 30) mentioned some models into the English Teaching as Foreign Language such as Grammar-translation, Presentation-Practice-Production, Audio-lingualism, Communicative Language Teaching, and Task-Based learning so as to foster students’ understanding. While Wang (2009) stated the second language theories such as Grammar-Translation Method, Direct Method, Audio-Lingual Method, Audio-Visual Method, Communicative Language Teaching, Communicative have gained an important place in EFL teaching. Nevertheless, it is worthy of explaining which of these theories fit better into the flipped classroom vocabulary instruction.

Task-Based Learning

Harmer (1998) presented this teaching model for teaching English in two stances that the learning of any language entails. The first one is the activation of prior knowledge and the consolidation stage comes later. Undoubtedly, the task-based approach pushes learners in the natural context for language usage, which allows them to input the target language. This facilitates communication during the class, and maximizes their preference for the

lesson (Hismanoglu, 2011). This model fits with the flipped classroom model when the teacher sends the videos and different tasks in advance to provide learners tools to work on. Then during the class, the teacher clarifies any students' concerns or doubts.

Communicative Language Teaching

This approach focuses more on communication than grammar (Graham, 2011); its purpose is to achieve communication where the scholar is an independent learner. This model encourages learners to develop their communicative competence in an authentic context through negotiation and cooperation between learners (Wang, 2009). The communicative language approach carries on an array of principles about language teaching goals; these are: how students get language understanding, what sort of teaching activities are going to use to encourage students' learning, and the identification of the teacher's and the learner's role in the classroom (Richards, 2006).

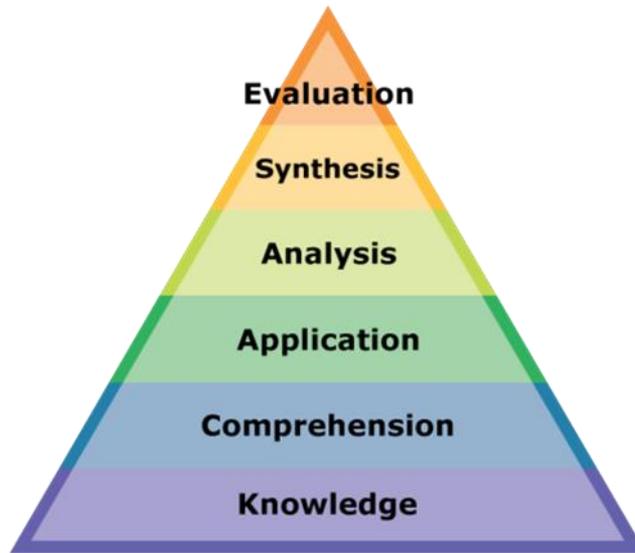
Communicative language activities such as pair work, group work, role-plays, and project work also have been part of the flipped classroom instruction; therefore, teachers can push their students to study through different assignments using the target language, promoting critical thinking development during the learning process (Sritulanon, 2013).

To sum up, task-based instruction and communicative language teaching are the approaches more accurate to vocabulary teaching; the rest of the methods are more useful with other development skills into the EFL instruction.

2.3 Bloom's Taxonomy

Coffey (2016) Bloom's Taxonomy is a grouping framework created in 1956 by training analyst Benjamin Bloom to sort academic abilities and conduct imperative to learning. Bloom distinguished six cognitive levels: knowledge, comprehension, application, analysis, synthesis, and assessment, with developing refinement from essential information reviewing abilities to the most significant level assessment. At the beginning of Bloom's investigation, the taxonomy concentrated on three major domains of learning: cognitive, affective, and psychomotor. The cognitive part entailed recognizing the previous understanding and enhancing the abilities and skill. The affective domain referred to attitudes, values, and adjustment to new appreciations; and the psychomotor domain covered the manipulative and motor-skill area. However, Bloom's taxonomy only works to get insights into the academic field, which implicates cognitive skill development.

Figure 2.1 Bloom's Taxonomy 1956.

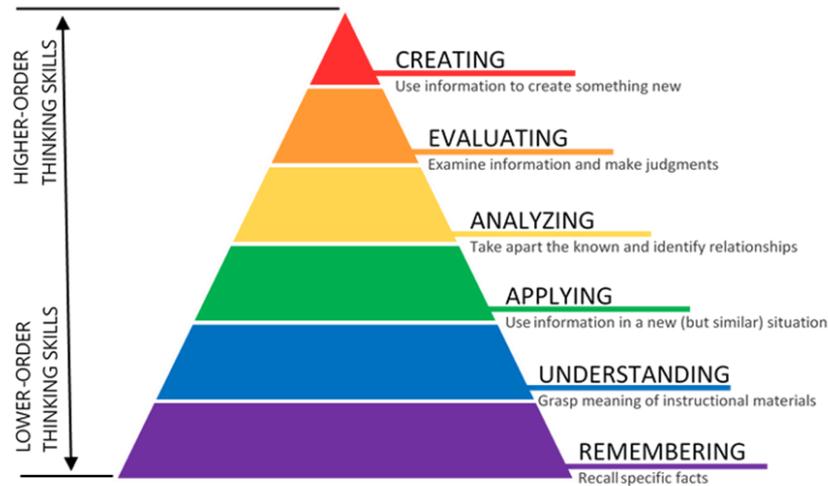


Hyder & Bhamani (2016) claim Bloom's Taxonomy aimed to ensure that learning turns into a higher level of thinking, rather than a mere act or process of recall the facts in a well-defined structure. The pyramid represents the development of the learning prototype. Rupani (2011) states that the design was to help achieve the learning goals and resulted in ~~that are~~ an increasingly changing in learning complexity. In accordance with Riazi & Mosalanejad (2010), the purpose of these levels was to ensure that learning outcomes were structured to allow teachers to progressively bring learners from the acquisition of subject knowledge to their practical implementation in a real sense and, eventually, to establish their own meaning from the same perspective.

Nevertheless, Bloom's Taxonomy pyramid had an adaption and new presentation in 2001 with some changes based on Anderson & Krathwohl (2001). The first one was using verbs instead of nouns to order the linked understandings outcomes (Konsky, Zheng, Parkin, Hudman & Gibson, 2018) and added a new level on the top of the pyramid that somehow allows students to create something new.

Figure 2.2 Bloom's Taxonomy 2001 – Cognitive Domain

BLOOM'S TAXONOMY – COGNITIVE DOMAIN 2001



Paul, Naik, Rane, & Pawar, 2012 cited by Hyder & Bhamani (2016), states that first level focuses on awareness to engage and ensure learners know about the phenomenon; the following stage ties with setting up a comprehension of that wonder. The third stage is to apply the information in the natural setting. Once the stages are accomplished the assessment empowerment phase so that the students are able to differentiate the variety of usages and how it tends to be adjusted to suit their needs. Finally, the phase of creation is the most crucial part of the level of accomplishment. New data or thought arises from the experiences of literature from the past levels.

2.4 Founders of the Flipped Classroom

Even though the practice of invert class did appear before the 20th century, this did not apply due to technological conditions (Lage, Platt & Treglia, 2000; Baker, 2000). However, Maureen Lage, Glenn Platt, and Michael Treglia (2000) used this learning style and gained positive results during the instruction of "Introduction of Economy" in Miami University, under the title "Inverting the Classroom: A Gateway to Creating an Inclusive Learning Environment."

Likewise, in this same period Baker (2000) presented the "Classroom Flip: Using Web course management tools to become the guide by the side" in an International Conference for teaching and learning styles in Florida. Neither Lage et al. nor Baker (2000)

did bring the term Flipped Classroom Model or Flipped Classroom Style into the world at all.

Nevertheless, seven years later, two chemistry teachers at Rocky Mountain Forest Park High School in the State of Colorado, U.S., Aaron Sams and Jonathan Bergmann, saw the need to engage their students in the class. They made videos explaining experiments, tasks, labs which helped learners who could not attend the course on time or missed the class due to the school's long-distance (Hamdan, P. McKnight, K. McKnight, Arfstrom, 2013). These videos were uploaded on the Internet, so the professor invested more time to clarify any misunderstanding or difficulty that students could have had with the assignment at home, doing the face-to-face moment more effective for learning (Liu, 2019).

Later in 2012, Sams and Bergmann officially brought the Flipped Classroom concept worldwide through their book "Flip Your Classroom: Reach every student in every class every day." In their study, Sams and Bergmann spoke out their findings regarding the flip instructions with positive and encouraging attributes such as flexibility, advanced interaction, and almost personalized teaching, especially with students who steps back in their learning development without leaving the rest of the class.

2.5 Conceptual Framework of a Flipped Classroom

Marlowe (2012), states that differentiation is the first concept related to the Flipped Classroom Model since learners do not have a qual learning style. The Flipped Classroom Model and the multiple intelligences Gardner (1993) are linked to each other due to Gardner found human beings learn distinctly from the optical, auditory, naturalistic, logical-mathematical kinesthetic, melodic, and relational, among others ways. Anderson (2007), claims that differentiation allows learners to be responsible for their learning, so they are boosted to make decisions and display their abilities based on their own learning styles.

Differentiation happens when the instructor is attentive to the learner's needs, which means the professor creates the right classroom environment to provide meaningful understandings through a differentiated classroom (Tomlinson & Allan, 2000) and when the perfect matching between the teacher's instructional methods and the students' learning styles (Lage et al., 2000). In accordance with Tomlinson and Allan (2000), the principles of differentiation are respectful tasks, flexible grouping, ongoing assessment, and adjustment,

then it differs among the content, process, and application and finally, those are adjusted based on learners' interests, readiness, and learning profile.

The Flipped Classroom Model in the Constructivism theory (Yacob, et al. 2012; Padirayon, Pagudpud & Castro 2019; Olusegun et al., 2015; Xi & Shi, 2018) potentially involve a wide variety of learning styles in the 20th century classroom (Marlowe, 2012), which connect with the dependent, independent, and collaborative learners' types (Reichmann and Grasha 1974; Keirse and Bates 1984; Kolb 1981 cited by Lange et al., 2000). Flipped Classroom Model allows working with dependent, independent, and collaborative students at the same time. Dependent students demand a lot of direction from the instructor, collaborative students perform better in groups, and the autonomous students learn better working on their own Charkins, O'Toole, & Wetzal (1985) cited by (Lange et al., 2000).

In the flipped classroom, the leading source is the technology to shift lectures to schoolwork. Scholars watch recorded video addresses through media, for example, YouTube preceding class. Learners complete activities that are generally given like assignments, for instance, questions, lab reports, or worksheets, during the course. In the flipped classroom, educators permit pupils to find out the ideas presented during the video, promoting active class learners' participation, promoting and improving their understanding (Lage et al., 2000).

Flipped Classroom Model has been accepted and welcomed positively in different subjects such as math (Wiley, 2015), literacy instruction (Arnold-Garza, 2014), learning readiness (Sirakaya & Özmedir, 2018), foreign language (Hojnacki, 2018), grammar (Engin, 2014) vocabulary acquisition, (Alnuhayt, 2018; Zhang, Li, Jiao, Ma, Chen Guan, 2016; Al-Al-Hamdani & Al Buraik, 2017; Phillips, 2016) and much more studies related to this educational model.

Flipped classroom encourages autonomous learners, independent reasoning, and the practical application of skills, at least in courses focusing on vocabulary. The flipped classroom's adequacy can be useful in other languages (Yang et al., 2019). Likewise, Alnuhayt (2018) states that the inverted classroom application in a vocabulary EFL course is a friendly tool for teaching vocabulary due to its effectiveness and feasibility and promotes learners' enjoyable experience. That is why the FCM might enhance learners' English

language vocabulary proficiency and increase students' self-esteem and make them more trustworthy regarding their English learning.

Flipped classroom contributes a vast potential to improve vocabulary acquisition of students in senior high school education; more than being the core for proficiency in any language abilities due to the benefit in any learning process which aids insights collaboratively for real tasks (Kırmızı & Kömeç, 2019). Tucker (2012) considers the flipped classroom model a gear that boosts learners' engagement, motivation and enhances their academic performance.

Finally, flipped classroom vocabulary learning promotes students to learn more words without anyone else. They can put additional time on language yield, broaden their confidence and build up more word inputs (Minaz, Tabussan & Idrish, 2017) for vocabulary learning and broaden.

2.6 The Growth of Blended Learning

The combination of the face-to-face classroom activities and activities through online technology, then the integration of students and teachers' learning activities (Garrison and Kanuka, 2004 cited by Yu, 2015) so, the operation to integrate technology regularly into lecture instruction is called Blended Learning (Harris, 2017). In this regard, articles and inquiry publications regarding the Blended Learnings in the last two decades and its application from the XX century (Yu, 2015; Lange et al., 2000) at the higher instruction as a paramount component of the academic programs (Picciano, 2006; Kanuka & Rourke, 2013). Blended teaching has grown continuously unstoppably and spread out to middle education in the XXI century with great results according to a vast amount of research in this field.

Implementing frequent technology usage in the classroom benefits learners and educators. Applying flipped resources and methods allows professors to keep a successful eye interaction in the class, and the online resources can help learners accomplish their individual educational growth (Harris, 2017). Likewise, (Yu, 2015) states that some factors that need to deem under blended learning are: computer usage, the effective use of online resources, experience with technology, device self-efficacy, aspirations, machine functionality, the cognitive, affective, and environmental factors correlated with student

satisfaction with blended mode, all of which can help student to succeed in the Blended Learning.

The application of Blended Learning was not too demanding years ago. However, nowadays, Hilliard (2015) states that blended instruction is a complex teaching tool, which entails profits, crew support, policy, management matters, the justification for growth, skillful development, purchasing, sponsorship, assessment, and perspectives for further implication. Therefore Fazal & Bryant (2019) used blended instructions to enhance K-12 learners' math instruction since learners needed a solid foundation on math and algebra. In that study, learners from school outscored regular sessions. They allowed teachers to differentiate math teaching for learners according to their levels hence they personalized students' lessons.

Blended Learnings is currently spreading to different levels of education, from the highest to the lowest one. Therefore, it is worthy of mentioning the study Wilkes, Kazakoff, Prescott, Bundschuh, Hookm Wolf, Hurwits & Macaruso (2020) implemented a Core5 blended learning program at elementary instruction students as a reading tool so as to enhance their reading competence. They found some variables such as ethnicity, race, age, gender, attendance to regular and blended classes since the Core5 application helped learners to better their reading understandings in different social environment and also helped teachers to master their technological skills.

Undoubtedly, blended instructions have had widespread usage to different educational levels, status or conditions, face-to-face instruction, and the correct technological tool (Hockly,2018; Yu, 2015, Harris, 2017) is useful and fruitful for both as teachers as students in the cognitive development. It could say students learn on their own with the teacher's aid, and scholars can polish their technology understandings with some limitations even (Kazakoff et al., 2020).

2.7 The History of the Term, “Flipped Classroom”

The terms alike like Inverted Classroom (Lage et al., 2000) or Classroom Flip Baker (2000) arose among XX and at the beginning of the XXI centuries. Baker's book showed the world up a new teaching model under the title “The classroom flip: using web course management tool to become the guide by the side.” Hence more researchers joined to the Flipped Classroom inquiry. In 2007, chemistry teachers Aaron Sams and Jonathan

Bergmann started their quest to help their learners who skipped end-of-day classes considering the long distance to travel to other institutions for tournaments, sports, and other activities (Hamdan, P&K. McKnight, 2013).

Hamdan et al. (2013) state that Sams and Bergmann used: live video recordings and screen casting software to film lectures, demonstrations, and slide introductions with explanations to help learners achieve their instruction goals. These digital tools were made available on YouTube for students to use them all time.

In 2012, researchers Sams & Bergmann brought the term Flipped Classroom out officially in their book “Flip the Classroom: Reach every Student in Every Class.” They revealed that, after flipping their classroom, learners started associating more in class. Beside the face-to-face time utilized more deftly, understudies who were behind got more individual consideration. In contrast, progressed understudies kept advancing (Sams & Bergmann, 2012).

2.8 The History and Contributions to the Flipped Classroom Model

Even though flipped classrooms' history arose in 2020 (Lage et al. 2000; Baker, 2000). However, it was through Sams & Bergmann (2007) that flipped classroom concept came into that term as a whole. Based on Deng (2019), there were three reasons why the flipped classroom instruction got recognition and popularity: 1 High innovation is the guarantee for the flipped classroom successes since learners can watch the videos outside the classroom how many they want. 2. The economic situation of the continent offers an opportunity for the flipped classroom. 3. Internet videos are exclusively used in educational instruction.

Enfield (2013) pointed out that learners are motivated to move out of the classroom to learn anytime and anywhere by flipped classroom model. The suitable study strategy can be chosen and used by learners while progressing at their own pace through the teaching. Hung (2015) showed up that learners' participation, satisfaction, and performance evoked a positive alter after taking part in this educational approach.

Love, Hodge, Grandgenett & Swift (2014) administered the flipped classroom instruction to an applied algebra class and split it into experimental and control classes. Research resources such as tests were designed by teachers according to learners' understanding and know the algebra course perceptions applied surveys at the end of the

semester. As a result, learners who received class through flipped classroom model had good scores and more interest in the algebra class, which entailed considerable positivism regarding the course in comparison with those who were under the traditional instruction.

Roach (2014) enforced a partially flipped class during one six-month microeconomics instruction and found a positive response to the flipped classroom instruction after the analysis of a survey to know the learners' perception of this flipped instruction.

See & Conry (2014) applied the flipped classroom model as a unique practice tool to the school of medicine. Professors from that college were asked to see an origami video on youtube and a Prezi presentation to build their own material and send a picture of their source to the instructors into the due date. Face to face class exercises consisted of a little evaluation regarding the assignment, and teachers' feedback activities done out the classroom and reflections individually, in small and large groups. This study succeeded in sensitizing the faculty regarding the flipped classroom instruction. In addition to this, the faculty teaching program could be a model for other educational institutions to alter teaching techniques when tutoring pharmacy learners.

McLaughlin and Rhoney (2015) claimed that the knowledge of instructors who used the flipped classroom model increased regarding teaching strategies. Additionally, Kong (2014) stated that scholars enhanced the kind of resources and gained experience, reflective discussions, and shared their instructional practices by using the flipped classroom model.

Gilboy, Heinerichs & Pazzaglia (2015) carried out the flipped classroom technique in two school sustenance courses and uncovered students' insights concerning the model. The format utilized in the exploration permitted the staff to create exercises that can be applied previously, during, and after the class, and furthermore appraisals including Bloom's Taxonomy. It was found out that most of the 142 students slanted the flipped strategy contrasted and the customary course.

McLaughlin and Rhoney (2015) investigated flipped neurologic pharmacotherapy guidance students' exhibition, commitment, and discernment concerning the intuitive online apparatus and differentiating results between the gadget and the regular class. They found that pupils who were utilizing the online device got better grades on the last assessment.

Hung (2015) analyzed the possible impacts of flipping the classroom on English language students' academic performance, educational attitudes, and participation grades. Three different flipped instruction formats clearly showed that the scaffolded and semi-scaffolded flipped instructions turned into more productive than the regular instruction.

2.9 Definitions of the Flipped Classroom

The Flipped classroom Baker's definition placed to the instructor on the student's role without affecting the learning content from learners' setting with teachers' assistance permanently (Baker, 2000).

Lage et al. (2000) defined the inverted classroom as a teaching tool that occurs outside the classroom under the teacher's guidance focusing on student-centered instruction, without losing control over the class and course content modifying the traditional teaching (teaching-centered instruction) which occurred inside the classroom.

Bergmann and Sams (2012) define the Flipped Classroom as a teaching model where pupils learn at their own pace, further personalized education opportunities. Thus, what was done in the classroom before, it is now done at home.

Based on previous studies Yildirim & Kiray (2016) defined the Flipped classroom model as a supplier of an environment that includes project-based or real-world practices for learners promoting better understandings and optimizing the teacher-student individual interaction.

After many studies cited by Deng (2019), Deng deems the Flipped Classroom is a pedagogical method in which learners gain new awareness through short videos, podcasts, e-books, and the internet outside class and strengthen what they obtained through classroom exercises with the help of classmates and teachers.

2.10 Research Involving Flipped Classroom Model

Lin & Hwang (2018) claims the effectiveness of FCM has turned up in remarkable and powerful teaching tool so as to push learners to self-study, which promote them to interact with each other and to get a new model of interactive behavior in the online, for example, the increase of awareness in clarifications (Hojnacki, 2018), challenge, retelling, confirmation and suggestion have been found during the speaking session in Flipped Classroom model teaching.

Likewise, Sams & Bergmann (2012) mentioned by (Deng 2019), the flipped classroom is a teaching model which predominantly proposes what is generally done at school now it is done on its own ground, and that learners make the assignment or do some classroom exercises in the class.

According to Hashemifardnia et al. (2018), the flipped classroom is a handy reading comprehension tool for learners. It gives more cognitive understanding involving deeper information processing and higher-request thinking abilities and promotes more cohesive interactional patterns than conventional classrooms. The flipped classroom effectively encourages higher-request thinking forms and thoroughly, logically connected discussion in the content-based second language.

2.10.1 Research on Flipped Classroom Model and Vocabulary Teaching

In all likelihood, all the researchers mentioned in this study agreed with the positive results of flipped classroom instruction with different subjects, fields, theories, and learning styles. It is worthy of exposing some works related to vocabulary teaching, and the constructivist tool "flipped classroom model." Despite there are not many studies related to flipped classrooms and teaching vocabulary, most of them stated that vocabulary instruction is fundamental in any foreign language studies.

Vocabulary teaching is imperative in any language learning (Sun, 2016). However, vocabulary teaching in English language learning is still teaching with traditional methods despite the different science education breakthroughs. Therefore Zhang, Li, Jiao, Ma, & Guan (2016) claim the vocabulary teaching in the flipped classroom instruction encourages English vocabulary knowledge outcomes. In this regard, (Zhang et al., 2016) vocabulary instruction in the flipped classroom model yields learners with a vast of activities to acquire knowledge during the class that stimulates learners' instruction sympathy. Vocabulary teaching in the flipped classroom brings out two stages: pre-instruction of the necessary experience and in-class exercises better both the prior understanding and the real-time talk-active skills (Zhang et al., 2016).

Yang, Liu & Todd (2019) state that the flipped classroom model in vocabulary teaching encourages low-score-learners who become more confident during the class and more independent out classroom, which allows them to succeed in English learning. Likewise, this student-centered instruction's effectiveness and feasibility allow teachers to

apply integrated skills and enable learners to empower their understanding and build up independent thoughts and learning autonomy. Even though the flipped classroom activities are done outside the classroom, the co-building performance is done during the face-to-face sessions together with the teacher and classmates, making a learning environment optimal to facilitate deeper scopes of knowledge (Yang et al.,2019).

Alnuhayt's findings (2018) regarding the flipped classroom model in EFL vocabulary instructions were positive due to students felt highly confident, engaged, and motivated during the intervention. Students increased their vocabulary proficiency, class participation and enjoyed the classes. Likewise, the teachers found this tool useful in vocabulary teaching since the time was employed effectively and efficiently, supported learners all time.

Technology has become more popular among teaching resources, and the flipped classroom model has turned into the common topic in regular and foreign instruction information. Flipped classroom model in vocabulary teaching is more interested in "learning" and insights within the student (Sun, Wu & Lee 2016). In accordance with Sun, et.al (2016), the teacher's guidance is essential in the active generation process or constructivism, that works with the right teaching materials, collaborative exercises, and the internal mental building as a scaffolding for the acquisition and increase of vocabulary understandings in-depth doing learners more independent for studying.

Kırmızı & Kömeç (2018) coincided with others researchers regarding the vocabulary instruction and the flipped classroom model (Zhang et al., 2016; Sun, et. al 2016; Yang et al.,2019) and concluded the flipped classroom instruction is a positive tool to improve vocabulary development of students in the high school sets. Moreover, the flipped classroom is crucial for exemplary performance in every single language skill, taking the technological teens' lives in favor of the learning achievement.

2.10.2 Advantages and disadvantages of flipped classroom

The flipped classroom has been part of EFL teaching in the last century. The pros and cons regarding this teaching model have arisen during the investigation. How much positive or negative has been this approach along these almost 30 years in the educational field? It is still investigated.

However, Hashemifardnia, Namaziandost & Shafiee (2018) realized students felt more independent for self-study, ready for self-evaluation and progress after the flipped

classroom model application. This model fostered a higher-order thinking process and in-depth, cohesive talks in the content-based second language.

Undoubtedly, when it talks about the millennial generation, it talks about a generation that was born in the twentieth century where technology is part of its life (Sharma & Chowdhry, 2018; Phillips & Trainor, 2014). Likewise, today's youth who grew up with a dependence on the web-based on information consumption and communication are more familiar with students that entail learning through the internet and technological devices more natural Goodwin & Miller (2013) cited Rivera (2016). In this regard, Rivera (2016) pointed out the flipped classroom model allows learners to check the learning material on their own and re-play the video lectures how much they want, which was identified as self-paced learning. Through technology as a core for knowledge acquisition, teachers can pursue learners to be more independent, to active the role of self-instructor under teacher guidance (Christense, Hom & Johnson, 2008).

Furthermore, Du, Fu & Wang (2014) discovered some advantages for teachers and learners regarding the flipped classroom application. They identified as students' advantages the students' understanding on their own, the engagement of concepts (Bull, Ferster & Kjellstrom, 2012 cited by Rivera 2016), and the optimization and effectiveness of the time for checking activities during the class in teachers' regard (Bergmann & Sams, 2014). However, Du et al. (2014) found the use of the internet is a limitation (Ramirez, Hinojosa, Rodriguez, 2014; Klabo, 2018) of the flipped classroom instruction because participants did not have access to the videos and other flipped activities.

The technological problems, poor wireless connection, and lack of electronic devices were considered as constraints of the flipped classroom instruction in Ramirez et. al (2014). The flipped classroom model instruction should be applied with caution because some people deem this kind of instruction as homework and promote memorization rather than effective learning (Schmidt, 2016). Some teachers refuse to use technology, and they are skeptics and suspicious to use flipped classroom instruction, the lack of knowledge how to create a video, upload on YouTube, create a virtual classroom were deemed negative aspects in Rivera (2016) and Klabo (2018) regarding flipped classroom instruction disadvantages.

2.11 Active learning

Active learning occurs during a class meeting rather than watching, listening, and taking notes (Felder & Brent, 2009). Besides, active learning is a central component in the learning process; the student must be active in the classroom and fully involved with the content taught (Fayombo, 2012). Based on Hartikainen, Rintala, Pylväs & Nokelainen (2019), active learning is a broad subject, usually relating to student-centered and active curriculum approaches. Thus, it is an instructional process, not a learning process. Past examinations on active learning have demonstrated promising student learning outcomes. Therefore, that research has shown that active learning is more effective than other teaching methods.

Due to a vast range of definitions, active learning can be deemed as an instructional approach in which it can incorporate some turning on activities, such as kinesthetic activity, mutual collaboration, more in-depth processing, interaction, construction or inquiry of the material, and metacognitive observing that entail different ways of schooling and learning processes (Felder, 2006; Menekse, Stump, Krause & Chi, 2013 cited by Hartikainen et. al, 2019).

Kinesthetic Activities

Kinesthetic activities entail students' physical activity and the world as a whole. These activities are an excellent selection for students who have difficulty paying attention for an extended period. They allow learners to engage in lecture activities, turning out in a perfect learning environment (Alraddady, Luong, & Young, 2014).

Social Collaboration

Rojas-Drummond & Mercer (2003), social collaboration or mutual collaboration begins with the teacher's verbal interaction that scaffolds previous understanding and promotes new ones. These activities lead to discussion and dialogues during the lecture. Peer group activities, role-play (Fayombo, 2012), and exploratory talks allow partners to be more critically and constructively with each other.

Deeper Processing

More in-depth processing awareness relates to deeper learning. Hence, learners seek for understanding, link ideas to prior knowledge, then find out the arguments in its logic and come up with a conclusion (Czerkowski, 2014).

Interaction

Sinha, Khreisat & Sharma (2009) the interaction between pupils and the curriculum, between learners and their teachers, between students and their resources, is a pioneering element to active learning.

Elaboration or Exploration of the Material

Construction or inquiry of material refers to students' actions that relate to events in their surroundings. Exploration provokes a unique sensorimotor background that can recover later. Also, exploration involves a specific goal search where the active student makes arrangements regarding where to seek or surf a space (Markant, Ruggeri, Gureckis & Xu, 2016).

2.11.1 Metacognitive monitoring

Metacognitive monitoring entails including outright accuracy, relative accuracy, bias, scatter, and inequity. Schraw (2009) states that the absolute accuracy evaluates the correctness of an assurance judgment in contrast to performance on a task. Relative accuracy measures the relationship between assurance judgments and performance scores based on criteria' tasks. Scatter evaluates the degree of an individual's judgments for right and wrong answers. Discrimination assesses the level an individual distinguishes between confidence judgments for correct and incorrect items. Metacognitive refers to an understanding of cognition and cognitive steps. Metacognition has three distinct components, "declarative knowledge, procedural knowledge, and conditional knowledge" (McCormick 2003 cited by Schraw, 2009).

2.11.2 Active Learnings and Flipped Classroom

Stone (2012) states that the active learning activities entail three of the most fruitful stages of the university classroom environment and flipped classroom model. 1) Development of life-long students refers to the underpinning students have before attending class through technology. 2) An increase of engagement in the material entails the active

learning tasks that show up misunderstandings, implications, applications and controversies related to everyday students' lives. 3) An increased interactions between students and teachers refer to face-to-face instruction dedicated to practicing what they learned at home, completing an individual interaction.

2.12 Learner-Centered? Constructivist Education

The distinct components of the learner-centered instruction are the constructivist epistemological bearing, constructivist education, cognitive-metacognitive, affective, socio-psychological, and growth theories, together with the ongoing theoretical perspective on instruction allow learners to consciously assemble meaning and awareness during every learning process help to achieve the most important aims of social studies education due to the learner-centered instruction bases on a student's individual judgments, interests, needs, skills, learning styles (Yilmaz, 2008).

Fosnot, cited by Yilmaz (2008), defines in her book the development of learning from the view of constructivism as "...a self-regulatory process of struggling with the conflict between existing personal models of the world and discrepant new insights, constructing new representations and models of reality". Therefore, Yilmaz considers the constructivist approach engages students in unforgettable, real experiences by seeking patterns and building up their own criteria, models, concepts, and learning strategies.

Learner-Centered Instruction (LCI) perfect approach to improve teaching and pupil learning outcomes; LCI promotes teachers to work on prior students' knowledge connecting with the new insight during their learning (Kim, Kang, Kuusine, Park, 2017). LCI maximizes positive cognitive experiences to succeed students in their learnings (McCombs, Daniels & Perry, 2008). LCI is linked with constructivism since the awareness arises from interaction among learners and analysis of their own understanding (Vavrus, Thomas & Bartlett, 2011).

According to American Psychological Association (1997), cited by (Kim et al.,2017), there are four dimensions for learner-centered instruction cited by the cognitive and metacognitive (intellectual learners' capacities); motivational and affective (motivation and emotions during the learning process); developmental and social (social interaction); the individual difference (good relationship among groups' multiethnic, social and background).

The implementation of the methods where the student is the center of the instruction is well-known as learner-centered instruction (Altay,2014). In this regard, constructivism and learner-centered instruction have similar learning features (Yilmaz, 2008; Vavrus et al., 2011). Based on Vygotsky's constructivist theory Kaufman (2004) stated that learning is an enriching process that entails switch, building, generation based on prior educational experiences. Children build up their understanding with reading, listening, exploration, and experience. This process interrelates three stages assimilation, accommodation, and balance. New experiences are assimilated and accommodated into pre-existent knowledge, thus accomplishing it through the equilibrium of the new cognitive and coherence insight.

2.13 Vygotsky's Social Constructivism Theory

The impact of cultural and educational background on learning and awareness building is underlined in Vygotsky's constructivist hypothesis (Vygotsky, 1978 cited by Kaufman, 2004). According to Kaufman (2004), Vygotsky had a general sight that the social interactions and the children's surroundings promote their critical thinking and meaning-making where the parents, classmates, teachers, and others close to them play an essential role. Vygotsky's zone of proximal development (ZPD) reifies the students' willingness to learn. In other words, the ZPD is the distance amid the learners' current development level and the level of their hidden robust development. Moreover, the creation of problem-solving tasks focuses on learners' learning abilities allow teachers to apply the level and assortment of scaffolding to help learners accomplish these tasks. For instance, active compromise, the pursuit of multiple steps to develop ideas, concept acquisition, the intrinsic and external frames are also the core of the learning process. Breaking down activities into understandable elements, modeling, coaching, and feedback concise responsibility for students' learning are external scaffolding. Self-monitoring to improve input acquisition is a component of internal scaffolding. The proximal development zone, optimal design, original, meaningful learning courses, and scaffolding propel learners to build up a higher understanding stage.

Extending Piaget's oeuvre Vygotsky (1997) mentioned by Neutzling, Pratt, Parker (2019) remarked that social interactions and cooperative learning are essential in the knowledge building whereas people connect mutually. Vygotsky proposed that individuals' social orientation affects their cognitive functions, so new knowledge and abilities are built as students interact with each other to make sense of gaps between their existing knowledge and new experiences, as a results skills are developed.

2.14 Educational Technology

Since the last decades, the computers' immersion in different fields has increased, and teaching theories and models arose, too. Nowadays, it is common to find new electronic devices, such as smartphones, smartwatches, laptops, and wireless connection updating. With the appearance of the Internet and real-time video advancements, educators can offer powerful instructive assets in multi-media, alongside the capacity to help substitute substance conveyance among teachers and students. A flipped model's devices are turning out to be more pervasive every year, both all through the classroom (Overmyer, 2014).

Brückner (2015) mentioned that productive use of technical resources in learning is educational technology (ET). As a definition, it encompasses various methods, such as media, computers, and hardware for networking and theoretical perspectives (Anderson & Garrido, 2003). Educational technology is not definite to high technology. However, today's electronic educational technology has become an essential part of society. Modern educational technology involves (and is broadly synonymous with) e-learning, instructional technology Education Technology, Information and Communication Technology (ICT), EdTech, Learning Technology, Digital Learning, Technology-Enhanced Learning (TEL), Computer-Based Learning (CBI), Computer-Managed Learning (CML), Education, Computer-Based Training (CBT), Computer-Aided Training (CAI), Internet-Based Training (IBT), Flexible Learning, Web-Based Training (WBT), Online Education, Virtual Education, Personal Learning Environments, Networked Learning, Virtual Learning Environments (VLEs) (also referred to as Learning Platforms), M-Learning, and M-Learning Environments. These labels have been used and interpreted differently and combined with the broad area of educational technology and e-learning. These alternative descriptive words are all more restrictive than "educational technology" in that they emphasized a specific methodology like a part or delivery method of digitization individually. For instance, learning highlights.

Educational technology, defined by (Richey 2008) is "the study and ethical practice of facilitating learning and improve the performance by creating, using and managing appropriate technological processes and resources." As described the Association for Educational Communications and Technology (AECT), instructional technology is "...the theory and practice of design, development, utilization, management, and evaluation of processes and resources for learning" (Anderson & Garrido, 2003; Lawenthl & Wilson,

2010). As such, instructional technology points out all valid and reliable applied education science, such as equipment, processes, and procedures, are derived from scientific research.

The proper use and unification of educational technology (ET) in the classroom are useful and essential as students as teaches (Arkorful & Abaidoo, 2014). ET boosts higher-order thinking beyond self-directed and the interactive knowledge allows students to get awareness further from the textbook. They can explore important real-world matters and polish problem-solving skills making the learning process more fruitful, enjoyable, and active (Arkorful & Abaidoo, 2015). The ET also prepares students for getting involved in the working world. Moreover, Daya & Laher (2019) reported constructive attitudes toward the educational technology and its usefulness in the classroom specifically. They also claimed the ET activities involved communication with anyone outside of school, so educators and students saw at-home access as essential for personal usage.

CHAPTER III

METHODOLOGY

3.1 Paradigm and Tradition

The aim of this study was to explore the efficacy of the flipped classroom model in the vocabulary instruction following a quantitative approach. The investigator considered all concerns regarding the flipped classroom model application in order to reduce its impact. This study was developed by a researcher who works as a professor of the university without experience enough in the application of the flipped classroom model. The flipped classroom instruction and lecture-based instruction were both be taught by the same teacher in order to identify whether the flipped classroom model helped learners to boost their vocabulary understanding and self-study in their English language class.

This quantitative research also aimed to explain the problem from an objectivist stance, recognizing as true the declaration that social phenomena and their connotations have an existence that is independent of social actors (Bryman, 2012). In adjustment with the ontological position, Guba & Lincoln (1994), is the existence of something real to study the object without changing the experiment and without the experiment changing it. The axiological stance in this study is related to an existent problem in a public institution regarding vocabulary achievement; therefore, it tends to be into deductive methods and the positivist epistemological approach, which entails the generation of the hypothesis which can be tested to obtain explanations of laws to be assessed through the adaptation of methods of the natural science to the examination of the social existence (Bryman, 2012).

In agreement with Creswell (2015), an experimental design involves the traditional approach. The group of the population is classified into two parts: trial and a control group. I chose the trial design because it hypothesized that the intervention could directly influence the experimental group's performance. The stances are related to the positivist approach because this study entailed the scientific methods to better understand a social issue and seek a possible solution. This kind of research searches for the cause and effect of the intervention. Creswell (2005) claims that the explorative design sets up the dependent and independent variables' impact in the quantitative inquiry. Therefore, the methodology in this research is an experiment founded on the deductive method. Data are gathered through an investigation, and finally, the researcher proves whether the hypothesis is accurate or not by analyzing the data collected (Bryman,2012). This stance underpinned my selection of an experimental design for this research.

Research Questions

This quantitative examination was led to two research questions, which were concentrated on the flipped classroom model's effectiveness on EFL students' vocabulary achievement in an Ecuadorian university environment.

1. Is there any statistically significant variation in the learners' vocabulary performance between the Class A treatment group (taught using the flipped classroom technique) and Class B control group (taught traditionally) in vocabulary classes attributed to the teaching methods?
2. What are the students' perceptions regarding Flipped Classroom Model's application to achieve vocabulary compared to the traditional class?

Research Hypothesis

The investigator addressed this quantitative research to the next hypothesis.

Alternative Hypothesis: Those learners who had the instruction following the flipped classroom method outperformed their outcomes over who did not have the intervention (the regular instruction).

Null Hypothesis: Those learners who had the flipped instruction did not accomplish higher outcomes than those who did not get the intervention class.

3.2 Description of Population and Sample

This research was carried out in a public higher education center in Guayaquil, Ecuador. The subjects were 58 students, among men and women divided into experimental groups or Class A and control group or Class B. Class A participated 27 students, 23 women and 4 men, whereas Class B participated 23 women and 8 men. The subjects were taking the A2 level of English language. The experimental group met three times a week for a two-hour session each. The time assigned for this content was four weeks, where students watched video lectures outside the class and completed different assignments during their face-to-face/ on-line sessions.

Table 3.1

Sample of population and gender.

Group /Class	Male	Female	Number
Experimental (CA)	4	23	27
Control (CB)	8	23	31
Total	12	46	58

3.3 Data Collection Instruments and Analysis

This segment shows the flipped classroom model's instruments through a quantitative study developed in November and December of 2020. It is worth mentioning that all kinds of instructions were 100% through online sessions due to the sanitary emergency covid-19. Three instruments were applied in this study to collect data; a pretest, posttest, mini-quizzes, and questionnaire. The test was consisted of 50 questions divided into three categories; multiple-choice with three items each, constructing word, and completion items; each item was graded with one mark, and the total was out 50. The bank of vocabulary was selected based on the target language of the student's book Personal Best A2 in units 1 and 2; this book was also aligned to Common European Framework of Reference standards for this level. The mini-quizzes entailed five questions were designed in two parts of multichoice, matching and guessing game with three items each and one point each question, and the total was out five. These eight mini-quizzes covered vocabulary achievement after two flipped classroom instructions.

On the hand, to know the participants' perceptions regarding the flipped classroom model in A2 EFL vocabulary classes, learners in the Class A (experimental group) responded to five-point Likert scale questionnaire designed by the researcher in the last week of the intervention. The questionnaire identified the impact of the flipped classroom model in the vocabulary instruction on A2 EFL university learners.

The intervention with the FCM lasted four weeks, 2-hour-session three times a week. The investigator complied in this research with the following steps: first, the whole group of learners divided into two intact groups, which called Class A that received flipped classroom model instruction treatment whereas Class B received traditional instruction treatment. Then, it applied the pretest to both groups. Consequently, it intervened to the groups; after that, it applied the posttest to both groups. Finally, participants Class A were assigned a survey to know their perceptions regarding the flipped classroom model instruction.

Variables

This quantitative research entailed the dependent and independent variables (Mackey & Gass, 2005). In this regard, it analyzed how the flipped classroom model's impact (independent variable) contributed on the students' A2 EFL vocabulary achievement (dependent variable).

Procedures

At the beginning of the intervention, the investigator evaluated both A and B classes by given them a test, then she asked participants about any misunderstanding in the FCM's intervention, and agreed with the FCM's application's timetable even before starting the investigation. First, in accordance with Cohen, Manion & Morrison (2007), ethical considerations were taken to safeguard the participants' integrity and well-being. The voluntary participation in the study was asked through an Informed Consent Form with the specifications, directions, and procedures at the beginning, during, and the end of the research. Respondents were assigned pseudonyms to keep their confidentiality and anonymity, avoiding any physical, psychological, or verbal harm in the research. The research result was independent and impartial from the regular English classes they attended periodically and virtually at the public university.

Second, A pretest was applied to both the experimental and control group to measure their vocabulary based on Units 1, "You and me" and 2, "Work and play" according to the book used in their university as the teaching resource for both Classes A and B and also allowed to figure out the homogeneity in both groups A and B. Both groups A and B received traditional instruction through the "Cedia" Virtual session due to the sanitary emergency Covid-19 and university's instructions and regulations. Nevertheless, Class A had extra classes using the flipped classroom model. Third, the researcher created a virtual set on Google Classroom where the flipped classroom sessions were separated per topic of the Class; in this virtual classroom, all the learning material such as videos, worksheets, and assignments were uploaded and delivered in this site. Fourth, the researcher looked for the best material according to units 1, and 2 with 15 new words (target vocabulary) gave every session; the videos with the explanation of the class, and instruction to solve the assignments which were uploaded to Youtube, so students could get access to the videos without getting into Google Classroom. All the material was shared with Class A and B; however, Class B did not meet for virtual flipped classroom sessions and the mini-quizzes were done later.

Fifth, at the end of the fourth week of the intervention, the researcher applied a posttest for both groups class A and B to measure the vocabulary teaching effectiveness as in the flipped classroom instruction as in the traditional instruction and to identify the higher and lower score, then to compare the pretest and posttest statistically. Sixth, it applied a survey to class A with ten questions to know the FCM's perceptions using a five-point Likert-scale which was elaborated by the researcher. Seven, the investigator evaluated the

information utilizing t-test SPSS to compute the strength of indicators on test scores and ascertain the variability. This t-test SPSS also allowed testing the hypotheses mentioned in this study. Finally, the investigator applied the flipped classroom model to the control group to protect educational rights and opportunities at the end of the research.

Traditional Instruction

The traditional instruction for this time was given through 100% online session due to the worldwide pandemic and regulations taken by the Ecuadorian Government regarding the higher education level. In this regard, the educational center assigned two kinds of sessions called synchronic and asynchronous for the teaching process. The synchronic session was given through the “Cedia” or Zoom platform, whereas Moodle platform was used for uploading the books and material regarding the English class. Under these circumstances, the researcher had to follow the regulations. Therefore, the researcher gave the traditional online class through Zoom media that entailed the class topic introduction, the vocabulary, and grammar presentation according to the unit displayed through Genially presentation. However, the lack of students’ class participation and the lack of teacher-student interaction were constraints with the traditional class treatment. Students worked by themselves on Moodle platform where the investigator uploaded worksheets, books, and all English material and also the class video for students could check later what the professor had explained during the class; in this platform, learners had to work on their tasks without professor’s guide.

Flipped classroom vocabulary instruction

The flipped classroom instruction occurred in two settings: Google Classroom and Zoom; however, the difference was how the professor presented the class. A learning space was created in Google Classroom which was divided into four weeks with three sessions with each one named according to the topic; in this virtual place, the researcher uploaded videos made by herself, class presentation, assignments, reading exercises, vocabulary worksheets that students checked and complied with before the virtual meeting in Zoom. Mondays, Wednesdays, and Fridays from 15H00 to 17H00, 2-hour-session per day the teacher and student interacted with each other without frustration or limitations; any doubt regarding the tasks and assignments was solved to avoid misunderstanding. Likewise, it worked with extra online resources such as, Genially.com for class presentations; Quizizz.com and Kahoot.com, self-evaluation; and Google Forms, especially for little multiple-choice quizzes with five questions and three items each after some flipped

instructions, which allowed the researcher to know students' new vocabulary understanding. The two-hour flipped classroom instruction through Zoom was divided in the following way 10 minutes for a general review regarding the topic given in the vodcast, 30 minutes to check with the students the tasks giving feedback, 20 minutes for peer activities and students' interaction, 20 minutes for oral interaction questions and answers exercises, 25 minutes for more practice on Quizizz.com and 15 for the little quiz about the topic session on Google Form about five short multiple-choice, fill in the blank and correct sentence exercises. The Zoom sessions were recorded and shared in Google Classroom for both Class A and B.

3.3.1 Pre and Posttests Vocabulary Section.

In accordance with Creswell (2015), pretests allow identifying some research features before the intervention, which may influence the experimental treatment. Posttests compare a scope on some characteristics which evaluate the participants after the intervention. Both Class A and B were assigned a virtual classroom in zoom and Moodle platform according to the regular teacher-instruction, however, class A had full flipped teaching, while class B only got the lecture-based instruction through the face-to-face online sessions.

To collect the data used three instruments; pretest which was used like posttest to both groups at the end of the intervention, and the questionnaire to the experimental group. The test was created by the teacher and some tools used for some FCM researchers in previous studies (Alnuhayt, 2018; Kirmizi & Kömec, 2019) and which consisted on 50 different multiple-choice questions with four items for each question and each correct answer was graded with one mark. The test time was 60 minutes, which allowed learners to finish all the items. The pretest was applied at the end of November and the posttest at the end of December. Two of them were calculated in one sample t-test SSSP with 0.01 confidence level to observe any accomplishment obtained among the Class A (N=27) flipped group intervention and the Class B (N=31) regular instruction.

3.3.2 Survey

According to Cohen (2010), surveys gather information about a specific point in time to represent ideas, conditions, or recognition of norms according to current conditions. Surveys may change their scale of complexity from the basic regular counts and present relational analysis. A survey has some features, and many asserted attractions are used to scan a wide area of problems, populations, programs, and so on to capture the size and describe any broad characteristics. Therefore, to know the students' perceptions regarding

the flipped classroom on A2 EFL learners' vocabulary achievement, participants in the experimental group took to five-point Likert-scale survey elaborated by the investigator after the ending of the intervention. The survey sought two scopes; the A2 EFL vocabulary learners' perceptions or challenges through the flipped classroom instruction.

3.4 Reliability

This research's internal validity, a colleague in English Language teaching, verified the flipped classroom model's instruments. The instruments' reliability was through the Cronbach's Alpha reliability coefficient presented a test's liability of (0.73) under the Cronbach's Alpha stability coefficient of (0.7) these results indicated acceptable reliability and stability.

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum v_i}{v_t} \right)$$

K = item number Vi = item varianza Vt = total varianza

3.5 Validity

To ensure the face validity in this research the tests (pre-test and post-test) and survey were checked by other English Teachers who gave their advice and recommendations regarding the teaching instruments for this research. The teacher A feedback was related to test especially, she suggested the test should be less than 70 multiple-choice and the vocabulary should be according to the units of the students' book in order to master their ongoing class and improve their vocabulary proficiency.

The teacher B feedback was related to survey, he suggested to not used opened-question in the questionnaire because of the limitation of time and reduce the questions in number and in length, due to the length in the questions could be generated misunderstanding about the questions.

3.6 Data Analysis

The research questions were analyzed using a one-sample t-test SPSS pack like the statistical software to analyze the results from the intervention as the survey's results. The students' results were shown in means, standard deviations, and percentages to measure their vocabulary achievement toward the role of the flipped classroom model in A2 EFL, and it was also measured through the survey the students' perceptions using the flipped classroom model in A2 EFL vocabulary classes.

The t-test was conducted to determine whether there was a variation between learners' results in both the flipped classroom and the traditional lecture-based instructions. A t-test was also

conducted to identify any meaningful difference in the achievement between the high and low learners' vocabulary achievement in Class A or flipped classroom instruction. Finally, the survey information was useful to explore the learners' perceptions, which is the main component of the inverted class.

3.7 Summary

This chapter explained the methodologies used in this research and its different epistemological and ontological stances. Likewise, it showed the group intervention characteristics, such as the sample and the population, the research questions, hypothesis, and variables solved during the research, and the procedures entailed in this research. The reliability and validity were in charge by the investigator of the intervention, the tutor of this work, and some colleagues in the English teaching as a second language. As the traditional instruction as the flipped classroom instruction and all activities developed in this research were taught 100% online through “Cedia” Zoom due to pandemic worldwide, the results were analyzed through t-test SPSS presented in different sizes such as means and standard deviations.

CHAPTER IV

RESULTS

4.1 Introduction

This chapter presents all results obtained during the flipped classroom model intervention toward the A2 EFL students' vocabulary achievement calculated in one-sample t-test SPSS. The high and low score results of the vocabulary pretest and posttest in both groups, the flipped classroom, and the traditional class. The answer to the research questions and analysis of the hypothesis will be presented as well. The survey results will be also presented so as to know the learners' perceptions during the flipped classroom model application. Likewise, the presentation of the charts and graphics for better understandings. During this research participated 27 students in the flipped classroom intervention and 31 students in the traditional class.

4.2 Research Questions

1. In this part of this chapter, it answers the research questions formulated at the beginning of this investigation.

2. Is there any statistically significant variation in the learners' vocabulary performance

between the Class A treatment group (taught using the flipped classroom technique) and Class B control group (taught traditionally) in vocabulary classes attributed to the teaching methods?

Table 4.1

Descriptive Statistics for the Experimental and Control Groups.

		<i>N</i>	<i>M.</i>	<i>SD</i>
Vocabulary Pretest	A	27	22.11	4.77
	B	31	22.06	7.12
Vocabulary Posttest	A	27	29.33	5.68
	B	31	22.51	7.08

In table 4.1 points up the intervention of the flipped classroom model on the A2 EFL learners regarding the vocabulary achievement to 58 participants total divided among 27 undergraduates for the study group, and 31 learners for the control class did have a variation in comparison with the traditional instruction according to the results obtained from the pretest and posttest in both groups Class A, and Class B. Group A had a mean

(\bar{X})=22.11 and the standard deviation SD=4.77 while the control group had a $\bar{X} = 22.06$ and SD=7.12 during the pretest. On the other hand, the Class obtained a \bar{X} =29.33 and SD=7.08 during the posttest.

Table 4.2

Variation between the Experimental and Control Groups

One-Sample Statistics				
	N	Mean	Std. Deviation	Std. Error Mean
Vocabulary Pretest	58	22.0862	6.09079	.79976
Vocabulary Posttest	58	25.6897	7.29144	.95741

The next table, 4.2, presents the results obtained from the total number of participants, 58 regarding the vocabulary pretest and vocabulary posttest application. The vocabulary pretest $\bar{X} = 22.0862$ SD=6.09079 and standard error mean (SEM) = .79976 and the vocabulary posttest $\bar{X} = 25.6897$, SD=7.29144, and SEM=.95741, which indicated that there was a difference between both experimental and control group.

4.2.1 Results of the Hypothesis

Alternative Hypothesis:

Those learners who had the instruction following the flipped classroom method outperformed their outcomes over who did not have the intervention (the regular instruction).

Based on the results students who did attend to the four-weeks intervention with the flipped classroom model did have better score than who did not received the treatment.

Table 4.3

Pretest and Posttest score in Class A and B.

Score range/50	Class A Population		Class B Population	
	Pretest	Posttest	Pretest	Posttest
0-10	0	0	1	1
11-20	9	2	11	11
21-30	18	15	15	14
31-40	0	10	4	5
41-50	0	0	0	0
Total Population	27	27	31	31

The table 4.3 presents the score range over 50 points of the pretest and posttest for Class A and B which entailed the validation of the hypothesis in relation to attendance and accomplishment of the tasks in and out the flipped classroom instruction. Class A got better score outcomes than class B in relation to the number of students in the score range 21-30 and 31-40 during pretest and posttest.

Null Hypothesis:

Those learners who had the flipped instruction did not accomplish higher outcomes than those who did not get the intervention class.

Based on table 4.3 it understood learners who were in the score 0-10 and 11-20 in both pre and posttest during the flipped classroom instruction did not achieve better results rather than who did not received the intervention class B even though these students had been in the flipped classroom face-virtual-face session did not get a right score due to they did not comply with the flipped classroom activities, therefore, the results were similar in comparison with the pre and post-tests and class A and B.

Table 4.4

Variation between the Upper and Lower Score in the Experimental and Control Groups

Test Value = 0						
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
Pretest	27.616	57	.000	22.08621	20.4847	23.6877
Posttest	26.832	57	.000	25.68966	23.7725	27.6068

Table 4.5

The Interval between the Pretest and Posttest

One-Sample Effect Sizes

Standardizer ^a	Point Estimate	95% Confidence Interval	
		Lower	Upper

Pretest	Cohen's d	6.09079	3.626	2.912	4.336
	Hedges' correction	6.17242	3.578	2.873	4.278
Posttest	Cohen's d	7.29144	3.523	2.826	4.215
	Hedges' correction	7.38917	3.477	2.789	4.159

This research in the tables 4.4 and 4.5 also presents the variation and interval between the higher and lower level of the whole group 58 participants in relation with the results of pretest and posttest. The lower score in the pretest was 20.4847 while the higher score was 23.6877. On the other hand, the lower score in the posttest was 23.7725 while the higher score was 27.6068

Table 4.6

The Interval Posttest between Flipped Classroom Instruction, Traditional Instruction, and the Vocabulary Achievement

One-Sample Test

Test Value = 0

	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference Lower
Flipped Classroom Instruction	26.626	26	.000	29.33333	27.0688
Traditional Instruction	17.684	30	.000	22.51613	19.9158
Vocabulary Achievement	1.253	30	.220	3.03226	-1.9085

One-Sample Test

Test Value = 0

95% Confidence Interval of the Difference
Upper

Flipped Classroom Instruction	31.5978
Traditional Instruction	25.1165

Vocabulary Achievement	7.9730
------------------------	--------

Based on table 4.6 there was a significant difference in the posttest between the flipped classroom and traditional instruction regarding the vocabulary achievement which are in line of the researcher' expectations.

4.2.2 Results of Variables

This quantitative research analyzed the work or contribution of the independent variable (flipped classroom model's impact) over the dependent variable (students' A2 EFL vocabulary achievement). The next table, 4.7, presents how the flipped classroom model intervention entailed the A2 EFL learners' vocabulary achievement; according to the significance of the Pearson at .691 concerning the vocabulary achievement.

Table 4.7

Correlations and Flipped Classroom Instruction and Vocabulary Achievement

		Flipped Classroom Instruction	Vocabulary Achievement
Flipped Classroom Instruction	Pearson Correlation	1	.691**
	Sig. (2-tailed)		.000
	N	27	27
Vocabulary Achievement	Pearson Correlation	.691**	1
	Sig. (2-tailed)	.000	
	N	27	31

***. Correlation is significant at the 0.01 level (2-tailed).*

3. What are the students' perceptions regarding Flipped Classroom Model's application to achieve vocabulary compared to the traditional class?

A self-perception survey was applied to the experimental group or Class A about the flipped classroom and the traditional instruction toward the vocabulary achievement; the results were positive according to the questionnaire. Most of the students responded in the scale "Strongly agree" with the flipped classroom intervention in the vocabulary achievement. Other learners chose "Agree," and a small group chose "Disagree" with this instruction model. These perceptions match what Alnuhayt (2018) mentioned about personal involvement in such independent tasks. The effectiveness of command language

development merely depends on the conditions and purpose of vocabulary teaching effectiveness. It leads me to know that teachers and EFL instructors might deem the flipped classroom model on A2 EFL university learners for regular instruction.

4.3 Results for Quantitative Data

During the four-week flipped classroom model application, 8 mini quizzes over 5 points were applied to each certain lesson so as to measure the learners' progress and knowledge vocabulary consolidation based on Alnuhayt (2018). These quizzes were taken by the control group like homework.

4.3.1 Mini-quizzes Results

Table 4.8 Mini quizzes during the Flipped Classroom Model Application – Experimental Group

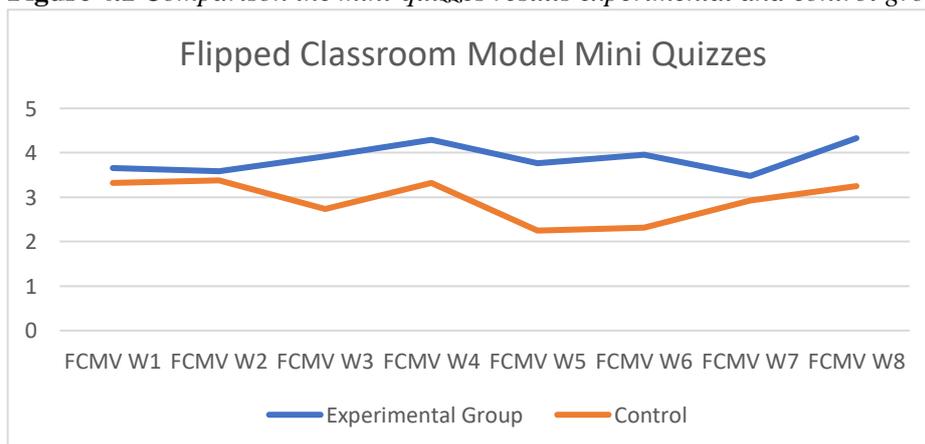
N	W1	W2	W3	W4	W5	W6	W7	W8
27	3.66	3.59	3.92	4.29	3.77	3.96	3.48	4.33

Table 4.9 Mini quizzes taking by the Control Group

N	W1	W2	W3	W4	W5	W6	W7	W8
31	3.32	3.38	2.74	3.32	2.25	2.32	2.93	3.25

On tables 4.8 and 4.9 present the results obtained of the mini-quizzes during the intervention, it could measure students' progress according to their daily understanding, however, the control group took the mini quizzes outside the flipped classroom session. While on the figure 4.1 presents the variation in average of the groups, so the control and the experimental group during the working weeks.

Figure 4.1 Comparison the mini-quizzes results experimental and control group.

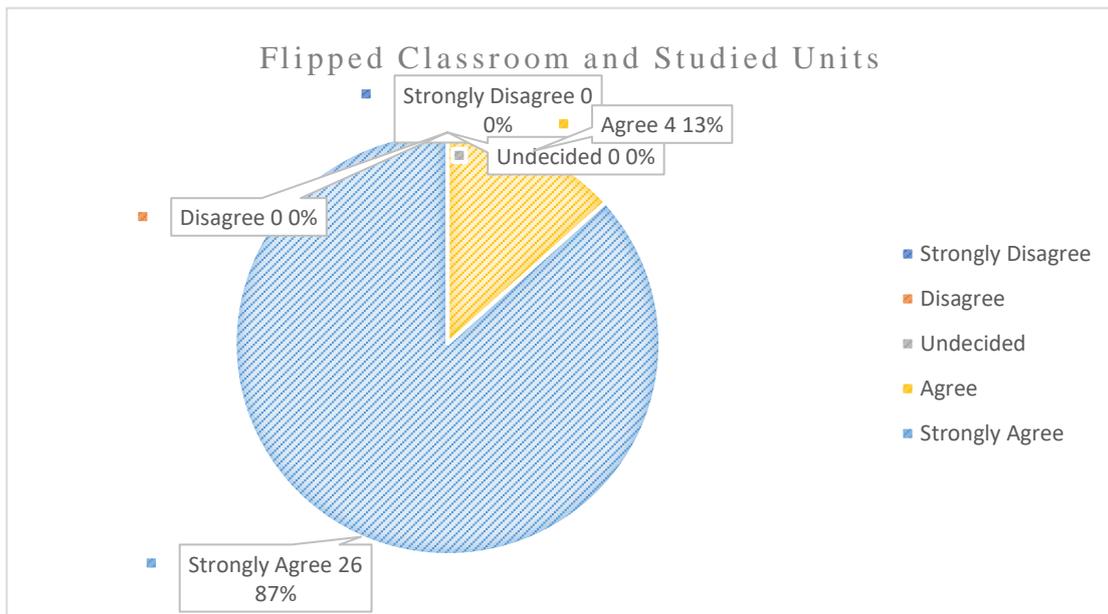


4.3.2 Survey Results

To identify the students' self-perceptions in Class A regarding the flipped classroom model and vocabulary instruction was applied a survey using a five-point Likert-scale elaborated by the researcher. The answer options Linkert scale were “strongly disagree,” “disagree,” undecided,” “agree,” “strongly agree.”

Figure 4.2

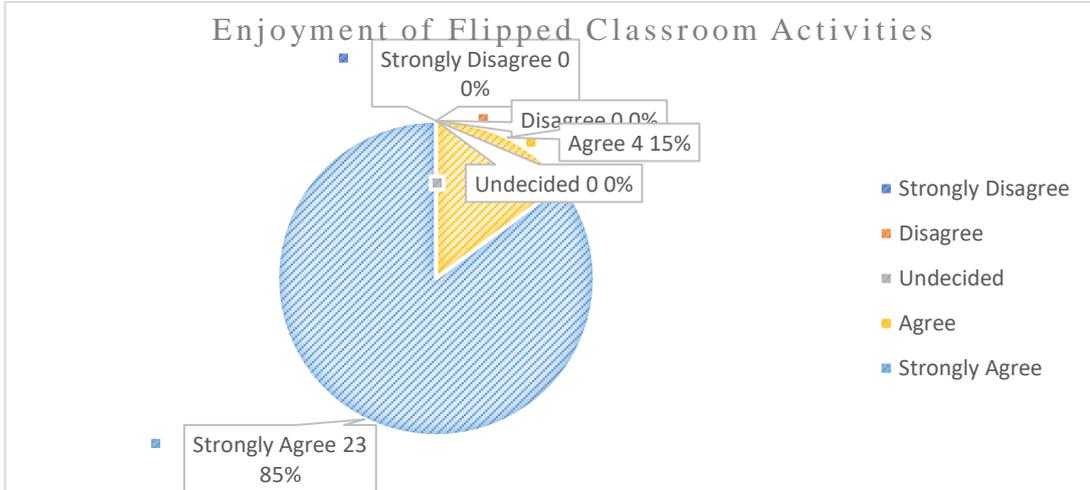
Question 1. I find the flipped classroom instruction useful in vocabulary acquisition rather than the traditional teaching regarding the units studied this semester.



In the first question, ‘I find the flipped classroom instruction useful in vocabulary acquisition rather than the traditional teaching regarding the units studied this semester’ presented in figure 4.2 shows the 87% “strongly agree” and 13% “agree” of the participants considered the learning of vocabulary using the flipped classroom instruction is useful rather than the traditional teaching during this semester, however, the 0% of the participants were “undecided”, and none 0% chose “disagree” or “strongly disagree.”

Figure 4.3

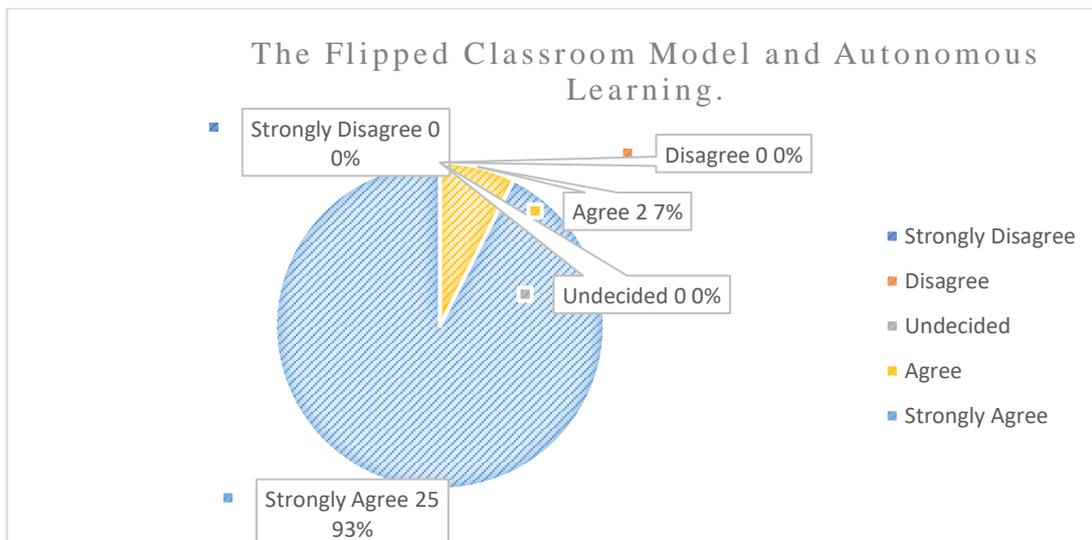
Question 2. I enjoy more doing flipped classroom activities than doing traditional class activities.



In the second question, ‘I enjoy more doing flipped classroom activities than doing traditional class activities. Figure 4.3 presents the 85% “strongly agree”, and 15% “agree” of the participants considered they have felt more motivated doing flipped classroom activities than with the traditional instruction. However, 0% of the participants were “undecided” and none chose “disagree” or “strongly disagree.”

Figure 4.4

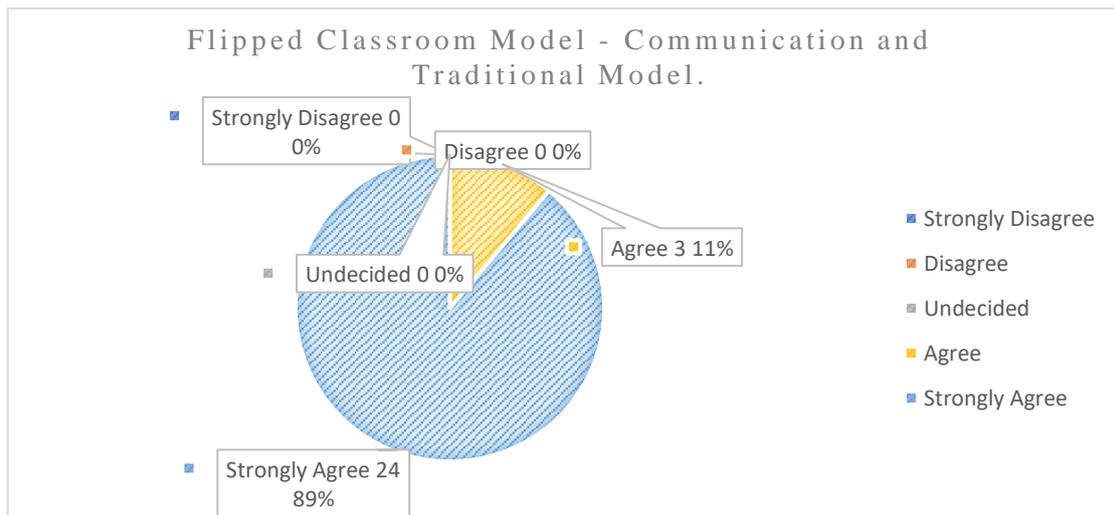
Question 3. The flipped classroom method encourages me to autonomous learning.



In the third question, ‘The flipped classroom method encourages me to autonomous learning,’ figure 4.4 presents the 93% “strongly agree”, and 7% “agree” of the participants considered the flipped classroom method do encourage them to the self-learning. The 0% of the participants were “undecided” regarding the question, and 0% of the population were not on agreement with this question, and none chose “disagree” or “strongly disagree.”

Figure 4.5

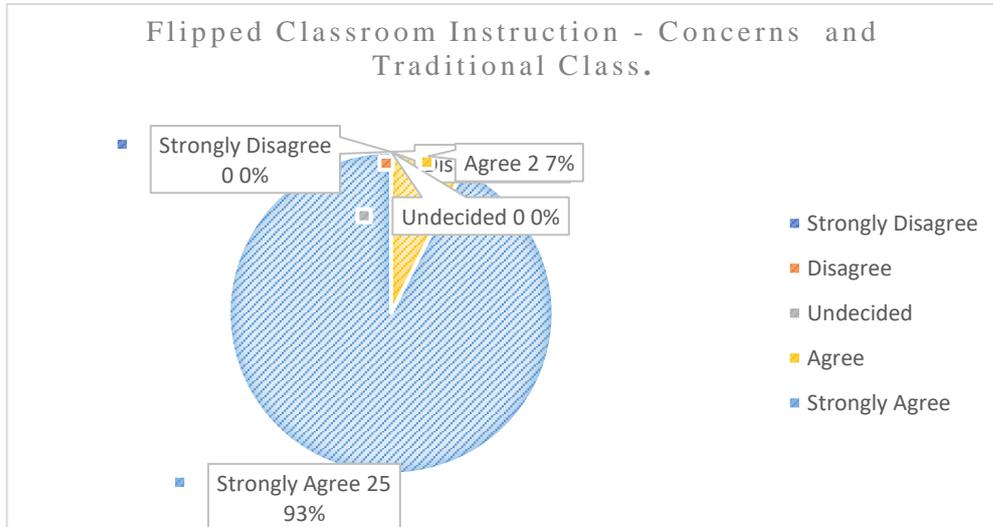
Question 4. I consider the flipped classroom model has improved communication with my classmates rather than the traditional model.



In the fourth question, ‘. I consider the flipped classroom model has improved communication with my classmates rather than the traditional model,’ figure 4.5 presents the 89% “strongly agree”, and 11% “agree” of the participants have improved their communication among teachers and classmates. While the 0% of the participants were “undecided” regarding this question, and 0% of the participant chose “disagree” o “strongly disagree.”

Figure 4.6

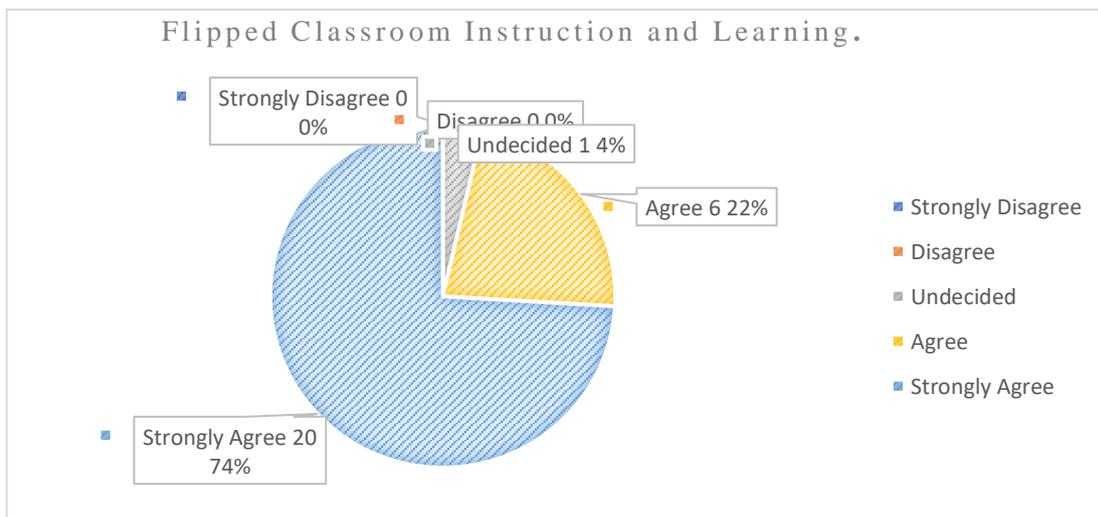
Question 5. It is easier to speak out my concerns and opinions during the flipped classroom instruction than in the traditional class.



In the fifth question, ‘It is easier to speak out my concerns and opinions during the flipped classroom instruction than in the traditional class,’ figure 4.6 presents the 93% “strongly agree”, and 7% “agree” of the population have improved their communication among teachers and classmates. While the 0% of the participants were undecided regarding this question, and 0% participant chose “disagree” or “strongly disagree.”

Figure 4.7

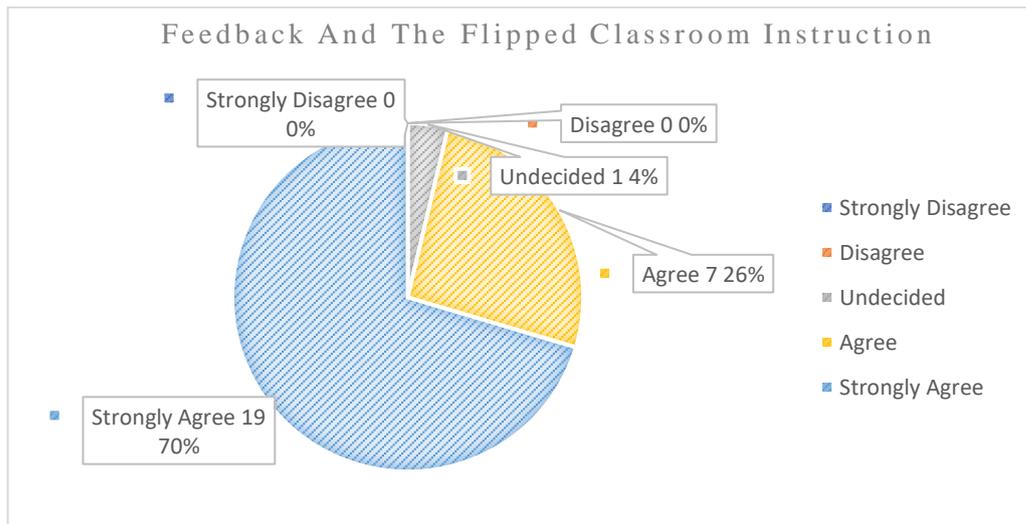
Question 6 I can say the flipped classroom instruction makes the learning easier in comparison with the traditional class.



In the sixth question, ‘I can say the flipped classroom instruction makes the learning easier in comparison with the traditional class,’ figure 4.7 presents the 74% “strongly agree”, and 22% “agree” of the population have improved their communication among teachers and classmates. While the 4% of the participants were undecided and the 0% were “disagree” regarding this question, and none chose “strongly disagree.”

Figure 4.8

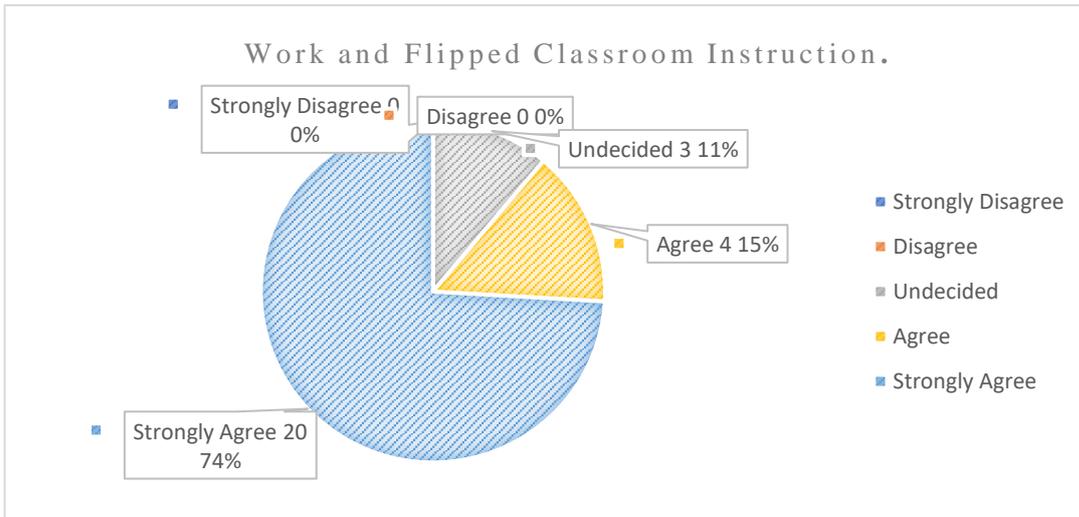
Question 7. I consider the assignments’ feedback during the flipped classroom model helps to boost my understanding.



In the seventh question, ‘I consider the assignments’ feedback during the flipped classroom model helps to boost my understanding,’ figure 4.8 presents the 70% “strongly agree”, and 26% “agree” of the population have improved their communication among teachers and classmates. While the 4% of the participants were undecided regarding this question, none chose “disagree” or “disagree.”

Figure 4.9

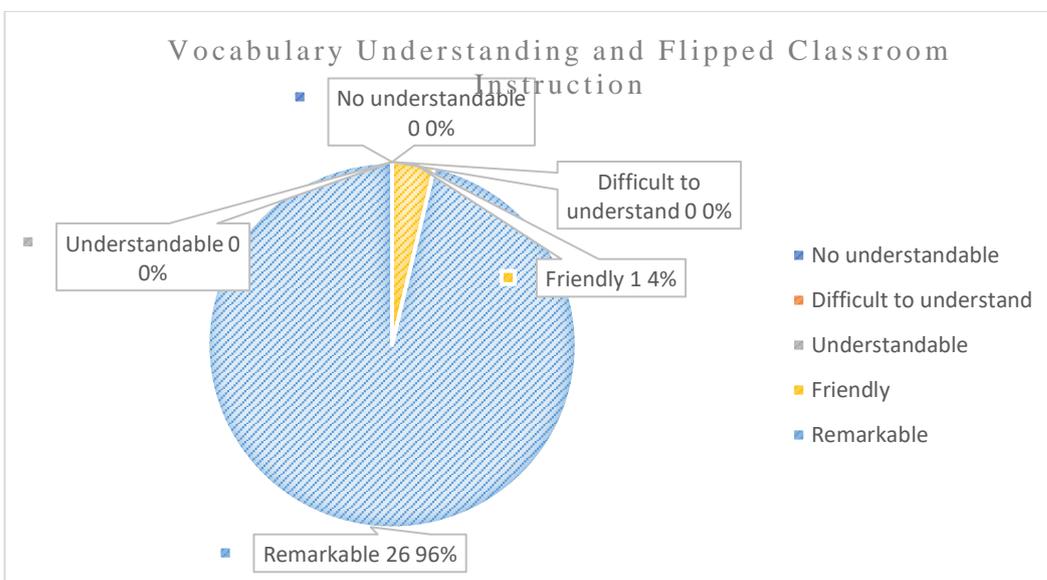
Question 8. I liked to work during the flipped classroom model instruction



In the eighth question, 'I liked to work during the flipped classroom model instruction.,' figure 4.9 presents the 74% "strongly agree", and 15% "agree" of the population indicated that they liked to work with during the flipped classroom instruction. While the 11% of the participants were undecided regarding this question, and none chose "disagree" or "disagree."

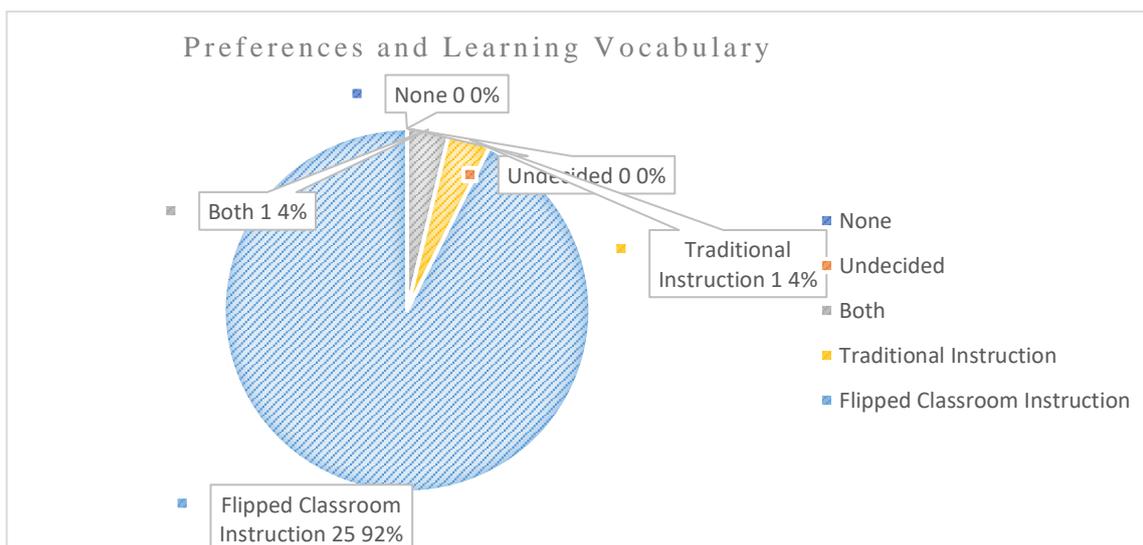
Figure 4.10

Question 9. How has been your vocabulary understanding learned through the flipped classroom instruction?



In the ninth question, ‘How has been your vocabulary understanding learned through the flipped classroom instruction?’, figure 4.9 presents the 96% of population chose the flipped classroom instruction besides the vocabulary like remarkable, 4% determined the vocabulary learning was friendly, the 0 % of students identified the vocabulary like understandable, finally 0% of the population determined the vocabulary learning was difficult to understand, and the other 4% chose no understandable.

Figure 4.11 Question 10. Which Instruction do you prefer for vocabulary learning?



In the tenth question, ‘Which instruction do you prefer for vocabulary learning?’, figure 4.11 presents the 0% chose “none” 0% of the students were “undecided”, 4% chose “both” instruction, that is, flipped classroom and traditional instruction, 1% chose the “traditional instructional” like learning method, however, the 92% of participants preferred the “flipped classroom instruction” model as educational model for vocabulary learning.

4.4 Summary of the Quantitative Data

The data obtained during this research through the pretest, posttest, mini-quizzes randomly, and the survey's application to know the learners' perceptions regarding the flipped classroom model application and the traditional instruction. The pretest taken by the control and experimental group showed a vocabulary pretest $\bar{X} = 22.0862$ $SD = 6.09079$ and standard error mean (SEM) = .79976 and the vocabulary posttest $\bar{X} = 25.6897$, $SD = 7.29144$, and $SEM = .95741$ presents at the end of the intervention a positive difference in $\bar{X} = 3.6035$, (3 points up), $SD = -1.20065$, and $SEM = -0.15765$. This quantitative research did contribute to the independent variable (flipped classroom model instruction) over the dependent variable (students' A2 EFL vocabulary achievement. The students' perceptions

were positive in the flipped classroom model regard. Nevertheless, in one of the last questions, learners described as remarkable, friendly, and understandable the vocabulary learning properly through the flipped classroom instruction. In the last one, learners confirmed one more time the usage of the flipped classroom in the vocabulary teaching.

4.5 Summary

This chapter presented the results concerning the application of the flipped classroom model instruction on A2 EFL learners' vocabulary achievement at the third level of the educational center. It was useful, effective, enjoyable, remarkable, and a positive model for teaching and learning vocabulary in a foreign language in agreement with the 52% of participants in favor of this teaching model. The participants in most of the questions presented Strongly agree regarding the flipped classroom model on behalf of the autonomous encouragement learning, improvement of teacher-student communication, the feasibility of speaking out opinions any concerns about any misunderstanding, and the feedback effectiveness so as to improve their awareness. These results were alike (Uzunboylu & Karagözü, 2015; Al-Buraiki, 2018; Adnan, 2017; Ahmed, 2016; Lee & Wallace, 2018) findings.

CHAPTER V

SUMMARY AND CONCLUSIONS

5.1 Introduction

This chapter presents the flipped classroom instruction conclusions on A2 EFL learners' vocabulary achievement in a public university and how these results entailed a better understanding of some words over the units studied during the first part of the semester. Undoubtedly, the comparison of tests and the survey applied during this intervention allowed seeing clear evidence of the flipped classroom model's effectiveness over the vocabulary proficiency in this group of students. The findings in this research demonstrated the flipped classroom had a preference in comparison with the traditional instruction. Some limitations found in this research can be handled for future researchers in further studies. Likewise, it mentions the environment in which these classes were developed and similar research results from previous studies in flipped classroom instruction.

5.2 Conclusions and Past Research

The conclusions of this study regarding the flipped classroom model application to 27 participants like the experimental group carried on some factors such as the use of the explicative videos regarding the topic class and how to solve the worksheets given by the teacher-research, the students responsibility for accomplishing the tasks, the attendance to the flipped classroom instruction regularly, the continuo progress during the little quizzes, the active students' class participation, interactive activities and good virtual classroom environment led the effectiveness of the flipped classroom instruction on A2 EFL learners' vocabulary achievement.

The results got between the experimental and control groups had a significant variation of 7.22 points in Class A, between pretest 22.11 and posttest 29.33. In comparison, the traditional class or Class B got 0.45 points in difference between the mean pretest 22.06 and the mean posttest 22.51. This result answered the research question positively after comparing both groups A and B between the pretests and posttests statistically. The first hypothesis solved due to flipped classroom learners increased their scores compared to students who received traditional classes. However, some students from the flipped classroom group did not achieve good results because they did not comply with all the flipped classroom activities. The students' perspective was positive because they felt confident working on the flipped classroom activities, improved their classmates and teacher

communication, found easier to achieve new words during the class more than during the regular classes, promoted them autonomous learning, and arose vocabulary understanding.

Therefore, the flipped classroom model in vocabulary learning on A2 EFL learners had the expected results, which coincided with similar past research results. For instance, Al-Buraiki (2018) presented a positive attitude toward FCM during vocabulary learning. According to Yang et al. (2019), the flipped classroom instruction led to the student-centered approach's effectiveness during the vocabulary instruction, promoting learner learning autonomy. Zhang et al. (2016) found that learning vocabulary through the flipped classroom model increased their capacity to identify the words according to the context. Kirmizi & Kömec (2019) found the flipped classroom model was a great potential to improve vocabulary development, therefore, learners reacted to the vocabulary learning process positively doing them more collaborative and autonomous with the tasks. Anwar (2017), considered the flipped classroom model like an approach that allowed the enrichment of the vocabulary in EFL young learners. Marlowe (2012) presented positive and meaningful results in favor of the flipped classroom model instruction on vocabulary learning, especially with students who had lower vocabulary knowledge and achievement.

5.3 Strengths and Limitations

This study's strengths were all possible material and human resources, which allowed the progress of this research, for example, the use of different platforms for teaching such as YouTube for uploading the teacher's videos explanation with the future class and the instruction for assignment. Google Classroom was used for the flipped classroom instruction and Moodle's official virtual classroom for the traditional teaching under university's regulations. While Kahoot, Quizizz, Liveworksheet, Google Forms, and Microsoft Form were used for evaluation and continuous practice. Finally, the strongest condition for learning was the teacher and students' predisposition to teach and learn, and also the effective use of the time during the face-to-face (virtual interaction) due to the feedback was direct and immediate.

It found something significant during this process due to the especially condition as for learning as for teaching, which was considered a limitation. The scenario put on flipped classroom application in the past research was not the same due to the pandemic's sanitary condition worldwide covid-19. The pandemic arose the reality in our country into the educational field in a university environment, it can say that we did not prepare very well for facing this problem. It was noticed students in the traditional class (virtual sessions) did not

work correctly, and they found it so difficult to comply with learning activities. Some students connected to the class, some of them did not do because of different situations, such as 1) The lack of students' responsibility for accomplishing their commitment. 2) The lack of self-motivation for working at home by themselves. 3) A thousand excuses were presented for uploading tasks on time. 4) Learners did not take the virtual class as usual learning way under the pandemic conditions; therefore, even though I received 81 Inform Consent Forms from participants, less than 50 took part in this research.

Nevertheless, another reality was the lack of a proper internet connection and the lack of some technology devices because some students did not have the economic sources to afford those materials.

The research time was also a limitation because I do not consider four weeks enough to do this kind of research.

5.4 Recommendations for Flipped Teaching

Recommendations for flipping class in Ecuador: The researchers should be willing to do videos in the previous lesson with the class explanation; these videos should be four minutes long maximum depending on the topic and then upload these ones to YouTube, or any other platform to students get access somehow. Regarding vocabulary teaching, using the flipped classroom model needs to amply the period for this application, increase the interactive activities, and integrate an output skill to measure the accurate vocabulary acquisition in some context. For instance, it could be the flipped classroom model on A2 EFL students' vocabulary achievement integrated into the speaking or writing development. On the other hand, it should also consider the environmental conditions, the background students' knowledge, and the social students' background, which will help accomplish the flipped classroom objectives.

5.5 Further Research

Based on the experience in this research, I suggest more time for flipped classroom model application and measuring real progress in experimental and control groups under the sanitary emergency due to the traditional classroom was considered through Cedia "Zoom" digital platform. And the level of stress the affective filter, according to Krashen, influences learning and meaningful learning. Based on my experience as a university teacher, most students spent more than eight hours daily continuously in front of the computer, which caused some frustration because the traditional instruction scenery has changed.

Additionally, I recommend adding more variables to this research, such as sex and age, even speed in answering the vocabulary.

5.6 Summary

This chapter showed the conclusions, recommendations, suggestions, and limitations for further researches in flipped classroom model and vocabulary acquisition and vocabulary achievement. After the application of pretests, posttest, and the survey, I found the answers to the research question, hypotheses, and variables; however, unexpected findings arose and made necessary the explanation of the scenario and conditions which this research was developed what entailed learners being stressed out and the fear during this period of the intervention which handled partially.

REFERENCE

- Ababneh, S. (2015). Learning Styles and Preferences of Jordanian EFL Graduate Students. *Journal of Education and Practice*. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1079971.pdf>
- Al-Buraiki, M. S. (2018). The Effect of Flipped Vocabulary Learning on Achievements and Attitudes of Ninth Grader in Oma. *IMPACT: International Journal of Research in Applied, Natural and Social Sciences (IMPACT: IJRANSS)*, (Vol. 6),10 (pp. 33-44) Available from: <https://www.researchgate.net/publication/329800497> [accessed Apr 03 2021].
- Alnuhayt, S. S. (2018). Investigating the Use of the Flipped Classroom Method in a EFL Vocabulay Course. *Journal of Language Teaching and Research*, (Vol. 9), (pp. 236-242). Retrieved from doi: <http://dx.doi.org/10.17507/jltr.0902.03>
- Alraddady, S., Luong, D., & Young, G. (2014). A Study of Kinesthetic Learning Activities Effectiveness in Teaching Computer Algorithms. *Frontiers in Education*. Retrieved from <http://worldcomp-proceedings.com/proc/p2015/FEC2400.pdf>
- Anderson, K. M. (2007). Differentiating Instruction to Include All Students. Retrieved from <http://gaining.educ.msu.edu/resources/files/Anderson.pdf>
- Anwar, C. (2017). Flipped Classroom in Teaching Vocabulary. The Second Teylin International Conference. Retrieved from <https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.1089.4560&rep=rep1&type=pdf>
- Arkorful, V., & Abaidoo, N. (2014). The role of e-learning, the advantages and disadvantages of its adoption in Higher Education. *International Journal of Education and Research*, (Vol. 2). Retrieved from <https://www.ijern.com/journal/2014/December-2014/34.pdf>
- Arnold-Garza, S. (2014). The Flipped Classroom Teaching Model and its Use for Information Literacy Instruction. *Communications in Information Literacy*, (Vol. 8) (1). Retrieved from <https://files.eric.ed.gov/fulltext/EJ1089137.pdf>
- Azima, F., Husna, L., & Tavriyanti, L. (2014). Teaching Vocabulary Verbal Techniques. *Jurnal Fakultas Keguruan Dan Ilmu Pendidikan*, (Vol. 3). Retrieved from <https://ejurnal.bunghatta.ac.id/index.php/JFKIP/article/view/2565>
- B.Markant, D., Ruggeri, A., Gureckis, T., & Xu3, F. (2016). Enhanced Memory as a Common Effect of Active Learning. *International Mind, Brain, and Education Society and Wiley Periodicals, Inc.* doi.org/10.1111/mbe.12117
- Baker, J. W. (2000). The "Classroom Flip": Using Web course management tools to become the guide by the side. In J. A. Chambers (Ed.), *Selected papers from the 11th International Conference on College Teaching and Learning* (pp. 9-17). Jacksonville, FL: Florida Community College at Jacksonville. Retrieved from http://www.classroomflip.com/files/classroom_flip_baker_2000.pdf

Bergmann, J., & Sams, A. (2012). *Flip your classroom: Reach Every Student in Every Class Every Day*. Alexandria, VA: *International Society for Technology in Education*.

Boneva, D., & Mihova, E. (2012). Learning Styles and Learning Preferences. Retrieved from http://dyscovery.research.southwales.ac.uk/media/files/documents/2014-01-16/Module_8.pdf

Bryman, A. (2012). *Social research methods* (4th ed.). Oxford: Oxford University Press

Brückner, M. (2015). Educational Technology. doi: 10.13140/2.1.2180.9449

Bruner, J. S. (1961). Cognitive risk and environmental change. *The Journal of Abnormal and Social Psychology*, (Vol. 62), (2), (pp. 231-241). doi.org/10.1037/h0046236

Buraiki, M. S., & Al-Hamdani, D. (2017). Examining the Effectiveness of Using Online Activities in Learning English Vocabulary. doi:10.1109/ICTA.2017.8336062

Cabi, E. (2018). The Impact of the Flipped Classroom Model on Students' Academic Achievement. *International Review of Research in Open and Distributed Learning*,. doi.org/10.19173/irrodl.v19i3.3482

Catania, A. C., & Laties, V. G. (1999). Pavlov And Skinner: Two Lives in Science (An Introduction To B. F. Skinner's "Some Responses to The Stimulus 'Pavlov'"). *Journal of the Experimental Analysis of Behavior*, (Vol. 72), (pp. 455-461). Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC1284757/pdf/jeabehav007200300455.pdf>

Christensen, C. M., Horn, M. B., & Johnson, a. C. (2008). How disruptive innovation will change the way the world learns. *Education Tech Research Dev*. doi:10.1007/s11423-009-9113-1

Coffey, H. (2016). Bloom's Taxonomy. *ResearchGate*. Retrieved from <https://www.researchgate.net/publication/242546164>

Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education* (6th ed). London, England: Routledge Falmer.

Czerkawski, B. C. (2014). Designing Deeper Learning Experiences for Online Instruction. *Journal of Interactive Online Learning*, 13. doi:16803110

Daya, A., & Laher, S. (2019). Reflections on the 2008 AECT Definitions of the Field Exploring the Influence of Educators' Access to and Attitudes towards Educational technology on the Use of Educational Technology in Johannesburg Schools. *Africa Education Review*. doi:10.1080/18146627.2018.1490154

Deng, F. (2019). Literature Review of the Flipped Classroom. Theory and Practice in Language Studies, (pp. 1350-1356). dio: <http://dx.doi.org/10.17507/tpls.0910.14>

DeVries, R. (2000). Vygotsky, Piaget, and education: a reciprocal assimilation of theories and educational practices. *New Ideas in Psychology*, (Vol. 18), (2-3), (pp. 187-213). doi.org/10.1016/S0732-118X(00)00008-8

Diningrat, S. W., Setyosari, P., Ulfa, S., & Widiati, U. (2020). Integrating PBI in the flipped classroom: A framework for effective instruction. *World Journal on Educational Technology: Current Issues*, (Vol. 12)(2), 117-127. doi.org/10.18844/wjet.v12i2.4662.

Edgar, D. W. (2012). Learning Theories and Historical Events Affecting Instructional Design in Education: *Recitation Literacy Toward Extraction Literacy Practices*. SAGE doi:10.1177/2158244012462707

Enfield, J. (2013). Looking at the Impact of the Flipped Classroom Model of Instruction on Undergraduate multimedia Students at CSUN. *TechTrends*, 57. doi:https://doi.org/10.1007/s11528-013-0698-1

Engin, M. (2014). Extending the flipped classroom model: Developing second language writing skills through student-created digital videos. *Journal of the Scholarship of Teaching and Learning*, (Vol. 14), (pp. 12 – 26). doi:10.14434/josotlv14i5.12829

Entwistle, N., & Peterson, E. R. (2004). Learning Styles and Approaches to Studying. ResearchGate. doi: 10.1016/B0-12-657410-3/00487-6

Ertmer, P. A., & Newby, T. J. (1993). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features From an Instructional Design Perspective. *Instructional Design Perspective*, (pp. 50–72). doi:10.1111/j.19378327.1993.tb00605.x

Ertmer, P. A., & Newby, T. J. (2013). Behaviorism, Cognitivism, Constructivism: Comparing Critical Features From an Instructional Design Perspective. *Performance Improvement Quarterly*, (Vol. 26), (pp. 43 – 71). doi:10.1002/piq.21143

Fayombo, G. A. (2012). Active learning strategies and student learning outcomes among some university students in Barbados. *Journal of Educational and Social Research*, (Vol. 2) doi:10.5901/jesr.2012.v2n9p79

Fazal, M., & Bryant, M. (2019). Blended Learning in Middle School Math: The Question of Effectiveness. *Journal of Online Learning Research*, (Vol. 5), (pp. 49-64). Retrieved from <https://files.eric.ed.gov/fulltext/EJ1208816.pdf>

Felder, R. M., & Brent, R. (2009). Active learning: An introduction. ASQ Higher Education Brief, (Vol. 2). Retrieved from https://www.researchgate.net/publication/242102584_Active_learning_An_introduction

Fujiwara, T. (2011). Language Learning Beliefs of Thai EFL University Students: Dimensional Structure and Cultural Variations. *Electronic Journal of Foreign Language Teaching*, (Vol. 8), 1, (pp. 87–107). Retrieved from <https://e-flt.nus.edu.sg/wp-content/uploads/2020/09/v8n12011/fujiwara.pdf>

Gardner, H. (1993). *Frames of mind: The theory of multiple intelligences* (10 anniversary ed.).

New York, NY: Basic Books.

Garrison, D., & Anderson, T. (2003). *E-Learning in the 21st Century*. Taylor & Francis Group. doi: <https://doi.org/10.4324/9780203166093>.

Gilboy, M. B., Heinerichs, S., & Pazzaglia, G. (2015). Enhancing Student Engagement Using the Flipped Classroom. *Journal of Nutrition Education and Behavior*.

doi:<http://dx.doi.org/10.1016/j.jneb.2014.08.008>

Graham, M. G. (2011). Teachers' and students' beliefs about the role of grammar and grammar instruction in the foreign language classroom (Order No. 3489698). Available from ProQuest Dissertations & Theses A&I: Literature & Language. (915644179).

Retrieved from <http://search.proquest.com/docview/915644179?accountid=35177>

Graziano, K. J. (2017). Peer Teaching in a Flipped Teacher Education Classroom. *TechTrends*, (pp. 121–129). Doi:10.1007/s11528-016-0077-9

Guney, A., & Alb, S. (2012). Effective learning environments in relation to different learning theories. *Procedia - Social and Behavioral Sciences*, (Vol. 46), (pp. 2334 – 2338).

Guney, A., & Alb, S. (2012). Effective learning environments in relation to different learning theories. *Procedia - Social and Behavioral Sciences*, (Vol.46), (pp. 2334 – 2338).

Hamdan, N., McKnight, P., & McKnight, k. (2013). Review of Flipped Learning.

Retrieved from

https://www.researchgate.net/publication/338804273_Review_of_Flipped_Learning

Harley, B., Allen, P., Cummins, J., & Swain, M. (1990). *Interlanguage Studies Bulletin*.

Cambridge University Press. Retrieved from <https://doi.org/10.1177/026765839100700304>

Harmer, J. (2003). *How to Teach English*. Pearson Education Limited.

Harris, L. (2017). Blended Learning Benefits Academic Growth. *WRIT Journal of First-Year Writing*, (Vol. 1), (2). Retrieved from

<https://scholarworks.bgsu.edu/cgi/viewcontent.cgi?article=1031&context= writ>

Hartikainen, S., Rintala, H., Pylväs, L., & Nokelainen, a. P. (2019). The Concept of Active Learning and the Measurement of Learning Outcomes: A Review of Research in

Engineering Harvey, S. (2014) The "Flipped" Latin Classroom: A Case Study. *The Classical World* (Vol. 108) (pp. 117-127). Retrieved from

<https://www.proquest.com/docview/1636362214/fulltextPDF/6D7092C5DE2D46ADPQ/11?accountid=171402>. *Higher Education. Education Science*, (Vol. 9).

doi:10.3390/educsci9040276

Hashemifardnia, A., Namaziandost, E., & Shafiee, S. (2018). The Effect of Implementing Flipped Classrooms on Iranian Junior High School Students' Reading Comprehension.

Theory and Practice in Language Studies, (Vol. 8), (pp. 665-673).

doi:<http://dx.doi.org/10.17507/tpls.0806.17>

Hilliard, A. T. (2015). Global Blended Learning Practices For Teaching And Learning, Leadership And Professional Development. *Journal of International Education Research*, (Vol. 11), (pp. 179-188). Retrieved from <https://eric.ed.gov/?id=EJ1070786>

Hismanoglu, M. H. (2011). Task-based language teaching: What every EFL teacher should do (Vol. 15). *Procedia - Social and Behavioral Sciences*.
doi.org/10.1016/j.sbspro.2011.03.049

Hockly, N. (2018). Blended Learning. *ELT Journal*, (Vol. 72). doi:10.1093/elt/ccx058

Hongwei Zhang, J., Li, L. J., & Weilian Ma, C. G. (2016). The Adjustment and Effects of Vocabulary Teaching Strategies in Flipped Classroom. *Creative Education*.
doi:http://dx.doi.org/10.4236/ce.2016.714199

Hojnacki, S. (2018) The flipped classroom in introductory foreign language learning. ProQuest Dissertations. Retrieved from
<https://www.proquest.com/docview/2061061454/previewPDF/6D7092C5DE2D46ADPQ/6?accountid=171402>

Hung, H.-T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning*, (Vol. 28), (pp. 81-96). doi: 10.1080/09588221.2014.967701

Hyder, S. I., & Bhamani, S. (2016). Bloom's Taxonomy (Cognitive Domain) in Higher Education. *Journal of Education and Educational Development*.
doi:10.13140/RG.2.2.14634.62406

Hockly, N. (2018). Blended Learning. *ELT Journal*, (Vol. 72). doi:10.1093/elt/ccx058

Hung, H.-T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning*, (Vol. 28), (pp. 81-96).
doi:https://doi.org/10.1080/09588221.2014.967701

Hyder, S. I., & Bhamani, S. (2016). Bloom's Taxonomy (Cognitive Domain) in Higher Education. *Journal of Education and Educational Development*.
doi:10.13140/RG.2.2.14634.62406

Idrizi, E., Filiposka, S., & Trajkovik, V. (2018). VARK Learning Styles and Online Education: Case Study. *ResearchGate*. Retrieved from
https://www.researchgate.net/publication/327869001_VARK_Learning_Styles_and_Online_Education_Case_Study

Kanuka, H., & Rourke, L. (2013). Using blended learning strategies to address teaching development needs: How does Canada compare? *Canadian Journal of Higher Education Revue canadienne d'enseignement supérieur CJHE / RCES*, (Vol. 43), (Special), (pp.19-35). Retrieved from <https://journals.sfu.ca/cjhe/index.php/cjhe/article/view/184741>

Kim, J.-H., Kang, H. S., Kuusinen, C. M., & Park, K. (2017). Exploring the relationship between teacher collaboration and learner-centered instruction. *Korean Educational Development Institute*, (Vol. 14), (pp. 3-24). Retrieved from <http://eng.kedi.re.kr>

- Kırmızı, Ö., & Kömeç, F. (2019). The impact of the flipped classroom on receptive and productive vocabulary learning. *Journal of Language and Linguistic Studies*, (Vol. 15), (2), (pp. 437-449).
- Klabo, M. (2018). Secondary Teachers' Perception of a Flipped Classroom: Are You Even a "Real" Teacher? Retrieved from ProQuest:
<https://www.proquest.com/docview/2161218584/1B3BC3E63FC94697PQ/1?accountid=171402>
- Kong, S. C. (2014). Developing Information Literacy and Critical Thinking Skills through Domain Knowledge Learning in Digital Classrooms: An Experience of Practicing Flipped Classroom Strategy. *Computers & Education*, (pp. 160-173). doi: 10.1016/j.compedu.2014.05.009.
- Konsky, B. v., Gibson, D. C., Parkin, E., & Huband, S. (2018). Parts of speech in Bloom's Taxonomy Classification. Retrieved from www.researchgate.net/publication/329574134
- Krashen, S. D. (1982). Principles and Practice in Second Language Acquisition. Pergamon Press Inc. Retrieved from
https://www.researchgate.net/publication/242431410_Principles_and_Practice_in_Second_Language_Acquisition
- Krathwohl, L. W. (2001). A Taxonomy for Learning, Teaching, and Assessing. Retrieved from <http://www.ablongman.com>
- Lage, M. J., Platt, G. J., & Treglia, M. (2000). Inverting the Classroom: A Gateway to Creating an Inclusive Learning Environment. *The Journal of Economic Education*, (Vol. 31), (pp. 30-43). Retrieved from www.jstor.org/stable/1183338
- Li, J. (2011). The Literature Review about the Research on Learning Style Both Abroad and at Home. *Theory and Practice in Language Studies*, (Vol. 1), (pp. 1780-1785). doi:10.4304/tpls.1.12.1780-1785
- Lin, C.-J., & Hwang, G.-J. (2018). A Learning Analytics Approach to Investigating Factors Affecting EFL Students' Oral Performance in a Flipped Classroom. *Educational Technology and Society*, (Vol. 21) (2), (pp. 205-219).
- Liu, J. (August, 2019) The Implementation of Flipped Classroom Teaching Mode in Basic English Teaching for Tibetan College Students. (Vol. 9), No. 8, (pp. 1009-1014). *Theory and Practice in Language Studies*. Retrieved from: doi:10.17507/tpls.0908.18
- Love, B., Hodge, A., Grandgenett, N., & Swift, A. W. (n.d.). Student learning and perceptions in a flipped linear algebra course. *International Journal of Mathematical Education in Science and Technology*, (Vol. 45), doi:10.1080/0020739X.2013.822582
- Lowenthal, P., & Wilson, B. G. (2010). Labels DO Matter! *A Critique of AECT's Redefinition of the Field*. doi.org/10.1007/s11528-009-0362-y

Magulod, G. C. (2019). Learning Styles, Study Habits and Academic Performance Of Filipino University Students in Applied Science Courses: Implications For Instruction. *Journal of Technology and Science Education JOTSE*. doi.org/10.3926/jotse.504

Marlowe, C. A. (2012, July). The Effect of the Flipped Classroom on Student Achievement and Stress. Retrieved from <https://scholarworks.montana.edu/xmlui/bitstream/handle/1/1790/MarloweC0812.pdf?sequence=1&isAllowed=y>

McCombs, B. L., Daniels, D. H., & Perry, K. E. (2008). Children's and Teachers' Perceptions of Learner-Centered Practices, and Student Motivation: Implications for Early Schooling. *The Elementary School Journal*, (Vol.109). doi:128.252.067.066

McLaughlin, J. E., & Rhoney, D. H. (2015). Comparison of an interactive e-learning preparatory tool and a conventional downloadable handout used within a flipped neurologic pharmacotherapy lecture. *Currents in Pharmacy Teaching and Learning*, (Vol. 7), (pp. 12-19). doi: 10.1016/j.cptl.2014.09.016

Minter, M. K. (2011). Learner-Centered (LCI) Vs. Teacher-Centered (TCI) Instruction: A Classroom Management Perspective. *American Journal of Business Education*, (Vol. 4) doi.org/10.19030/ajbe.v4i5.4225

Minaz, M., Tabassum, R., Idris, M., (2017) An Experimental Study of the Performance of Prospective Teachers of Flipped Classroom and Non-Flipped Classroom. *Pakistan Journal of Education* (Vol. 34), No. 2, 2017, (pp. 167-182). Retrieved from <https://www.proquest.com/docview/2364383027/fulltextPDF/19E563569FCC4516PQ/2?accountid=171402>

Mukhlis, H., Yuliaty, F., Purnama, Y., Akbar, F. M., & Irviani, R. (n.d.). Behavioristic Psychology of the Modern Constitution. *Journal of Critical Reviews*. ResearchGate, (Vol. 7), (08). doi:10.31838/jcr.07.08.377

Neutzling, M., Pratt, E., & Parker, M. (2019). Perceptions of Learning to Teach in a Constructivist Environment (Vol. 76). doi.org/10.18666/TPE-2019-V76-I3-8757

Olusegun, S., & Bada, D. (2015). Constructivism Learning Theory: A Paradigm for Teaching and Learning Learning. *IOSR Journal of Research & Method in Education*, (Vol.5), (6), (pp. 66-70. Retrieved from www.iosrjournals.org

Overmyer, G. R. (2014). Flipped Classroom. Retrieved from *MountainScholar*: https://mountainscholar.org/bitstream/handle/10217/83800/Overmyer_colostate_0053A_12525.pdf?sequence=1&isAllowed=y

Padirayon, L. M., Pagudpud, M. V., & Cruz, a. J. (2019). Exploring constructivism learning theory using mobile game. *Materials Science and Engineering*. doi:10.1088/1757-899X/482/1/012004

Phillips, C., & Trainor, J. (2014). Millennial Students and the Flipped Classroom. ASBBS Annual Conference: Las Vegas, Vol. 21. Retrieved from http://asbbs.org/files/ASBBS2014/PDF/P/Phillips_Trainor%28P519-530%29.pdf

Phillips, D. C. (1995). The Good, the Bad, and the Ugly: The Many Faces of Constructivism. *Educational Researcher*, (Vol. 24), (pp. 5-12). Published. Retrieved from <http://www.jstor.org/stable/1177059>.

Phillips, M. (2016). The Effects of Visual Vocabulary Strategies on Vocabulary Knowledge. Retrieved from Marshall Digital Scholar: Retrieved: August, 19, 2020 from: <https://mds.marshall.edu/etd/987>

Piaget, J. (1964). Cognitive Development in Children: Piaget. *Journal of Research in Science Teaching*, (Vol. 2), (pp. 176-186).

Picciano, A. G. (2016.). Blended learning: Implications for growth and access. doi:10.24059/olj.v10i3.1758

Ramírez, D., Hinojosa, C., & Rodríguez, F. (n.d.). Advantages and Disadvantages of Flipped Classroom: Stem Students' Perceptions. doi:10.13140/RG.2.1.2430.8965

Riazi, A. M., & Mosalanejad, N. (2010). Evaluation of Learning Objectives in Iranian High-School and Pre-University. *The Electronic Journal for English as a Second Language*, (Vol. 13). Retrieved from https://www.researchgate.net/profile/Mehdi-Riazi-2/publication/235982527_Evaluation_of_learning_objectives_in_Iranian_high-school_and_pre-university_English_textbooks_using_Bloom%27s_Taxonomy/links/00b7d5152e1fc02d7e00000/Evaluation-of-learning-objective

Richards, J. (2006). Communicative. Cambridge University Press.

Richey, R. C. (2008). Reflections on the 2008 AECT Definitions of the Field. (Vol. 52). *TechTrends*. doi.org/10.1007/s11528-008-0108-2

Rivera, V. M. (2016). Flipped Classrooms: Advantages and Disadvantages from The Perspective of a Practicing Art Teacher. Retrieved from https://dspace.sunyconnect.suny.edu/bitstream/handle/1951/68691/Rivera_Thesis.pdf?sequence=1&isAllowed=y

Roach, T. (2014). Student perceptions toward flipped learning: New methods to increase interaction and active. *International Review of Economics Education*, (pp. 74-84). doi.org/10.1016/j.iree.2014.08.003

Rojas-Drummond, S., & Mercer, N. (2003). Scaffolding the development of effective collaboration and learning. *International Journal of Educational Research*, (Vol. 39), (1-2), (pp. 99-111). doi.org/10.1016/S0883-0355(03)00075-2

Rupani, C. M. (2011). Evaluation Of Existing Teaching Learning Process On Bloom's Taxonomy. *International Journal of Academic Research in Business and Social Sciences*, (Vol. 1) (Special). Retrieved from www.hrmar.com/Journals

Schraw, G. (2009). A conceptual analysis of five measures of metacognitive monitoring. *Metacognition Learning*, (Vol. 4), (pp. 33-45). Doi:10.1007/s11409-008-9031-3

Schunk, H. D. (2011). *Learning Theories. An Educational Perspective* (6th ed.). Pearson Education Inc. Retrieved from <https://www.pearson.com/us/higher-education/product/Schunk-Learning-Theories-An-Educational-Perspective-6th-Edition/9780137071951.html>

See, S., & Conry, J. M. (2014). Flip My Class! A faculty development demonstration of a flipped-classroom. *ScienceDirect*, (Vol. 6), (pp. 585–588). Retrieved from https://www.researchgate.net/publication/262921664_Flip_My_Class_A_faculty_development_demonstration_of_a_flipped-classroom

Sharma, H. L., & Chowdhry, M. (2018). Empowering Millennial Learners through Flipped Classroom Learning Pedagogy. *International Journal of Research in Engineering, IT and Social Sciences*, (Vol. 08), (05), (pp. 250-253). Retrieved from https://www.researchgate.net/publication/325545291_Empowering_Millennial_Learners_through_Flipped_Classroom_Learning_Pedagogy

Shih-Ching, Y., Yeu-Ting, L., & Graeme, T. A. (2019). Effects of Flipped Classroom on High-and Low-achievers' English Vocabulary Learning. *The Journal of Asia TEFL*, (Vol. 16). doi:<http://dx.doi.org/10.18823/asiatefl.2019.16.4.12.125>.

Sinha, N., Khreisat, L., & Sharma, K. (2009). Learner-Interface Interaction for Technology-Enhanced Active Learning. Retrieved from <http://www.innovateonline.info/index.php?view=article&id=622>

Sirakaya, D.A., Özdemir, S. (2018). The Effect of a Flipped Classroom Model on Academic Achievement, Self-Directed Learning Readiness, Motivation And Retention. *Malaysian Online Journal of Educational Technology MOJET*, (Vol. 6), (1). Retrieved from <https://files.eric.ed.gov/fulltext/EJ1165484.pdf>

Skinner, B. F. (1953). Some contributions of an experimental analysis of behavior to psychology as a whole. *American Psychologist*, (pp. 69-78). doi.org/10.1037/h0054118

Soundariya, K., Deepika, V., & Kalaiselvan, G. (2017). A study on the learning styles and learning approaches among medical students. *National Journal of Physiology, Pharmacy and Pharmacology*. doi:10.5455/njppp.2017.7.0413011052017

Sritulanon, A. (2013). The 21st Learning Framework, CLT and Flipped Classroom Model. *Thammasat Review*.

Stone, B. B. (2012). Flip Your Classroom to Increase Active Learning and Student Engagement. Retrieved February, 14, 2021 from https://cn.polyvision.com/24/_moodle_ruhr-uni-bochum_de/m/pluginfile.php/278895/mod_resource/content/3/ICM_Effects%20of%20Active%20learning%20strategies%20and%20student%20feedback.pdf

Subramaniam, R., & Muniandy, B. (2016). International Journal of Emerging Trends in Science and Technology *IJETST*, (Vol. 03), (10), (Pages 4668-4670). doi:<https://dx.doi.org/10.18535/ijetst/v3i10.01>

Sun, X. (2016). Construction of Flipped Classroom Model for Vocabulary Teaching and its effectiveness. 2nd Annual Conference on Social Science and Contemporary Humanity Development (SSCHD). <https://doi.org/10.2991/sschd-16.2016.59>

Sun, J. C.-Y., Wu, Y.-T., & Lee, W.-I. (2016). The effect of the flipped classroom approach to OpenCourseWare instruction on students' self-regulation. (Vol. 48), (pp. 713-729). doi:10.1111/bjet.12444

Tomlinson, C. A., & Allan, S. D. (2000). Leadership for Differentiating Schools and Classrooms. Library of Catalogin-in Publication Data. Retrieved from <http://www.ascd.org/publications/books/100216.aspx>

Tucker, B. (2012). The flipped classroom. *Education. Next*, (Vol. 12), (1), (pp. 82-83)

Uzunboylu, H., & Karagözü, D. (2015). Flipped classroom: A review of recent literature. *World Journal on Educational Technology*, (Vol. 7), (2). <http://dx.doi.org/10.18844/wjet.v7i2.46>

Vavrus, F., Thomas, M., & Bartlett, L. (2011). Ensuring quality by attending to inquiry: Learner-centered pedagogy in sub-Saharan Africa. Retrieved from <http://www.iicba.unesco.org/sites/default/files/Fundamentals%204%20Eng.pdf>

Vygotsky, L. (1962). *Thought and Language*. Cambridge, MA: MIT Press., (pp.119–153). doi:10.1037/11193-007

Wa-Mbaleka, S. (2013). Instructional Design Foundations of Online Education., (Vol. 16), (pp. 49-61). Retrieved from https://www.researchgate.net/publication/263280011_Instructional_Design_Foundations_of_Online_Education

Wang, X. (2009). Second Language Theories and Their influences on EFL in China (Vol. 2). doi:10.5539/elt.v2n4p149

Watson, J. B. (1926). Behaviourism a Psychology Based on Reflex-Action. *Journal of Philosophical Studies*, (Vol. 1), (pp. 454-466). Retrieved from <http://www.jstor.org/stable/3745576>

Wiley, B. M. (2015). The Impact of the Flipped Classroom Model of Instruction on Fifth Grade Mathematics. Retrieved April, 03, 2021 from https://conservancy.umn.edu/bitstream/handle/11299/174907/Wiley_umn_0130E_15935.pdf?sequence=1&isAllowed=y

Wilkes, S., Kazakoff, E. R., Prescott, J. E., Bundschuh, K., Hook, P. E., Wolf, R., . . . Macaruso, P. (2020). Measuring the impact of a blended learning model on early literacy growth. *Journal of Computer Assisted Learning WYLE*. doi:10.1111/jcal.12429

Xu, Z., & Shi, Y. (2018). Application of Constructivist Theory in Flipped Classroom — Take College English Teaching as a Case Study. *Theory and Practice in Language Studies*, (Vol. 8), (pp. 880-887). <http://dx.doi.org/10.17507/tpls.0807.21>

Yacob, A. B., Saman, M. Y., & Yusoff, M. H. (2012). Constructivism learning theory for programming through an e-learning. *ResearchGate*. Retrieved from <https://www.researchgate.net/publication/261074011>

Yang, S.-C., Liu, Y.-T., & Todd, A. G. (2019). Effects of Flipped Classroom on High- and Low-achievers' English Vocabulary Learning. *The Journal of Asia TEFL*, (Vol. 16), (pp.1251-1267). doi:<http://dx.doi.org/10.18823>

Yildirim, F. S., & Kiray, S. A. (2016). Flipped Classroom Model in Education. Retrieved from https://www.researchgate.net/publication/335756684_FLIPPED_CLASSROOM_MODEL_IN_EDUCATION.

Yilmaz, K. (2008). Social studies teachers' views of learner-centered instruction. *European Journal of Teacher Education*, (Vol. 31). doi:10.1080/02619760701845008

Yilmaz, K. (2011). The Cognitive Perspective on Learning: Its Theoretical Underpinnings and Implications for Classroom Practices. *ResearchGate*, (Vol. 84), (pp. 204–212). doi:10.1080/00098655.2011.568989

Yu, Z. (2015). Blended Learning Over Two Decades. *International Journal of Information and Communication Technology Education*, (Vol. 11), (pp.1-19). doi:10.4018/IJICTE.2015070101

APPENDICES

APPENDIX A

Carta de Consentimiento Informado

TÍTULO DE TESIS:

Modelo del aula invertida en el logro de vocabulario en estudiantes universitarios de Inglés como Lengua Extranjera.

INFORMACIÓN DEL PARTICIPANTE:

Por favor, indique su posición

- Estudiante/ Participante
 - Profesor/ Catedrático
 - Otros, (explique)
-

Yo _____, con cédula de identidad # _____. He sido invitado a participar en este programa de investigación, el cual me ha sido explicado por la Lcda. Mariuxi Castro Flores, Maestranda de la Escuela Superior Politécnica del Litoral.

PROPÓSITO DE ESTE ESTUDIO DE INVESTIGACIÓN

El propósito de esta investigación es para conocer el logro de vocabulario de los estudiantes de Inglés como Lengua Extranjera utilizando el Modelo de Aula Invertida en una institución pública de tercer nivel de educación in Guayaquil- Ecuador.

DESCRIPTION DE LOS MÉTODOS DE INVESTIGACIÓN

Los métodos y técnicas de investigación usados en este estudio cuantitativo serán, test y encuesta.

Todos los participantes se les dará un pre y post test y al final de la misma serán encuestados.

REQUISITOS DE LOS PARTICIPANTE

Los participantes en este estudio tendrán que completar y cumplir con los requisitos los cuales son:

Ser estudiante en el nivel pregrado de educación.

Ser mayor de edad.

BENEFICIO DE LOS PARTICIPANTS

Los participantes serán beneficiados de su contribución en este estudio.

RIESGOS E INQUIETUDES

En caso de la única incomodidad o riesgo predecible para el participante es el momento de completar las encuestas y / o cuestionarios. Por favor contactar a la investigadora Lcda. Mariuxi Castro Flores, número de contacto 0985792437, mariuxi.castrof@ug.edu.ec.

CONFIDENCIALIDAD

Yo entiendo que la cualquier información obtenida del resultado de mi participación en esta investigación será mantenida tan confidencial como legalmente posible. Cualquier publicación que resulte de esta investigación ni mi nombre o cualquier información de la cual podría ser identificado será incluida.

PARTICIPACIÓN VOLUNTARIA

La participación en este estudio es voluntaria. Entiendo y soy libre de retirar mi consentimiento para participar en este estudio o en cualquier actividad específica en cualquier momento. Entiendo que ni mi situación laboral ni mi situación académica se verán afectados si decido no participar en este estudio. Se me ha dado la oportunidad de hacer preguntas sobre la investigación y he recibido respuestas sobre áreas que no entendía. Los datos que proporcione en este estudio permanecerán anónimos. Al firmar este formulario de consentimiento adjunto, expreso que comprendo los términos asociados con el estudio. Doy mi consentimiento para participar en este estudio.

Participant's signature

Date

Investigator's signature

Date

Appendix B

Pre/Post Test

4/4/2021

Vocabulary Test - Research Project Flipped Classroom Model (Espol 2020)

Vocabulary Test - Research Project Flipped Classroom Model (Espol 2020)

Flipped Classroom Model - English as Foreign Language Students' vocabulary achievement

* Required

1. Email address *

2. Write your name (e.g. CARDENAS MURILLO CARLA) *

3. Write your I.D number (e.g. 1204560123) *

4. Write your email address *

5. What is your major or career? (e.g. Elemental Education, Biology, Business Administration) *

6. What is your classroom? (e.g. EBA-S-CO-1-20, EBA-S-CO-3-12) *

<https://docs.google.com/forms/d/1zG7cdxUUH1dEay8PFF89zT1DxGf60CQ06iv-dZTOR0/edit>

1/13

**General questions
about vocabulary**

Before answering the questions it is recommended to read carefully once you get the answer you cannot go back to the test.

7. Choose the right nationality for people from Poland * 1 point

Mark only one oval.

- Polandness
 Polish
 Pollishe

8. People from the UK their nationality is..... * 1 point

Mark only one oval.

- English
 Ukness
 British

9. Which countries do we find in Asia? * 1 point

Mark only one oval.

- New Zealand, China, India, Japan, Pakistan
 Egypt, Morocco, Tunisia, Pakistan
 China, India, Japan, Pakistan, Thailand

10. According to nationalities some of them ending in -ish, choose the right option about the countries? * 1 point

Mark only one oval.

- UK, Portugal, Spain, England, Tunis
 UK, England, Finland, Ireland, Scotland, Poland
 UK, Turkey, Finland, Ireland, Scotland, Egypt

11. Choose the correct option for a description of 4568 * 1 point

Mark only one oval.

- Four thousand five hundred sixty eight
 Four five hundred sixty eight
 Forty five sixty eight

12. Read and match. * 3 points

Mark only one oval per row.

	twenty-four hour	February	three hundred sixty- five
A normal year has _____ days	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
The shortest month of the year is _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
A day has _____	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

13. The object used to save money, ID, and something more is called..... * 1 point

Mark only one oval.

- pocket
 bag
 wallet

14. Choose the correct words to complete the sentences. * 4 points

Mark only one oval per row.

	chewing gum	umbrella	a tablet	car	calcium	card
Is that rain? Where is my ____	<input type="radio"/>					
Do you have ____? I want to send a letter.	<input type="radio"/>					
Where is my ____ key?	<input type="radio"/>					
____ is bad for your teeth.	<input type="radio"/>					

15. The verb relates to clothes is..... * 1 point

Mark only one oval.

- to use
 to wear
 to take on

16. A little bag used for saving coins is... * 1 point

Mark only one oval.

- wallet pocket
- change purse
- chauchera

17. An object on the wall to see the time is... * 1 point

Mark only one oval.

- a watch
- a clock
- a little clock

18. Normally, people use a _____ to brush the hair. * 1 point

Mark only one oval.

- brush
- comb
- hairbrush

19. What words do not belong to the plural nouns' group... * 1 point

Check all that apply.

- trousers, jeans, shorts, tights
- glasses, sunglasses, pyjamas
- rings, belts, gloves, shoes

20. Choose the right sentence * 1 point
- Mark only one oval.*
- She uses clothes but you carry things.
 - Naomi is wearing a long blue coat.
 - Naomi is wearing a blue long coat.
21. Identify the possessive pattern. * 1 point
- Mark only one oval.*
- Mary's dirty glasses.
 - Mary's glass dirty
 - Mary's glasses are dirty
22. A medium-sized bag with handles is called..... * 1 point
- Mark only one oval.*
- handbag
 - rucksack
 - change purse
23. The synonym for pen is..... * 1 point
- Mark only one oval.*
- pencil
 - biro
 - graphite

24. The synonym for flashlight is..... * 1 point

Mark only one oval.

- beacon
 torch
 gaslight

25. Something to protect your hands..... * 1 point

Check all that apply.

- hand cream
 gloves
 handwear

26. According to the plural nouns, -es is added when * 1 point

Mark only one oval.

- the words en -ch, -sh, -s, -x, -z
 the words en -ch, -sh, -s, -x, -z, -o
 the words en -ch, -sh, -s, -x, -z, -o, -e

27. Put in order the letters and write the right answer. p t m a s s * 1 point

28. Put in order the letters and choose the words. s s s t i u e * 1 point

29. A person that helps to build houses using bricks. * 2 points

Mark only one oval.

- bricklayer
 engineer
 carpenter

30. A person that makes new reports in writing or through television. * 1 point

Mark only one oval.

- reportero
 journalist
 reporter

31. A person that works with meat. They cut the meat and sell it in their shop. * 0 points

Mark only one oval.

- butcher
 budcher
 butcherd

32. A person that checks your eyes and try and correct any problems with your sight. * 1 point

Mark only one oval.

- opticians
 eye doctor
 optician

33. Someone who serves customers in a shop. * 1 point

Mark only one oval.

- costumer
 salesclerk
 client

34. The traffic _____ is checking all the parked cars. * 1 point

Mark only one oval.

- officer
 warden
 light

35. A person who works in a beauty salon is called... * 1 point

Mark only one oval.

- peluquera
 hairdresser
 barber

36. Sara _____ work at 9 a.m. and she _____ at 5 p.m. * 1 point

Mark only one oval.

- starts to/finishes
 goes to/ left
 helps to/ends

37. What is the right question? * 1 point

Mark only one oval.

- What does he do in the weekend?
- What do he do on the weekend?
- What does he do on the weekend?

38. Do we use prepositions with....? * 1 point

Mark only one oval.

- places, days, times
- places, weekend, months
- on, at, in

39. The verb to describe a reunion is... * 1 point

Mark only one oval.

- meet
- hang out
- have fun

40. A person who you share a room with for a period of time. * 1 point

Check all that apply.

- classmate
- workmate
- roommate

41. And, but, and or are considered * 1 point

Mark only one oval.

- prepositions
- connectors
- conjunctions

42. Complete we go out for....* 1 point

Mark only one oval.

- dinner, coffee, a walk
- soccer, relax, movie
- running, reading, playing

43. Meeting to find a roommate is... * 1 point

Mark only one oval.

- speed-roommating
- speed-dating
- short-dating

44. Activities done whenever are considered..... * 1 point

Mark only one oval.

- working-day activities
- free-time activities
- mandatory activities

Complete the sentence with the right word or phrase.

45. My cousin's a _____ with American Airlines. * 1 point

46. A _____ serves food in a restaurant. * 1 point

47. If I have problems with my teeth, see a _____. * 1 point

48. A _____ works in a garage and fixes cars. * 1 point

49. Terry works at night. He _____ a taxi in different places in Ecuador. * 1 point

50. My sister _____ in a band. She's really good. * 1 point

51. She's an _____. She builds roads and bridges. * 1 point

52. A police _____ told me the way to the station. * 1 point

Appendix C

ENCUESTA ESCALA DE AUTOPERCEPCION DEL PARTICIPANTE

NOMBRE: _____ FECHA: _____

CURSO: _____ GENERO: Femenino ____ Masculino ____ EDAD: _____

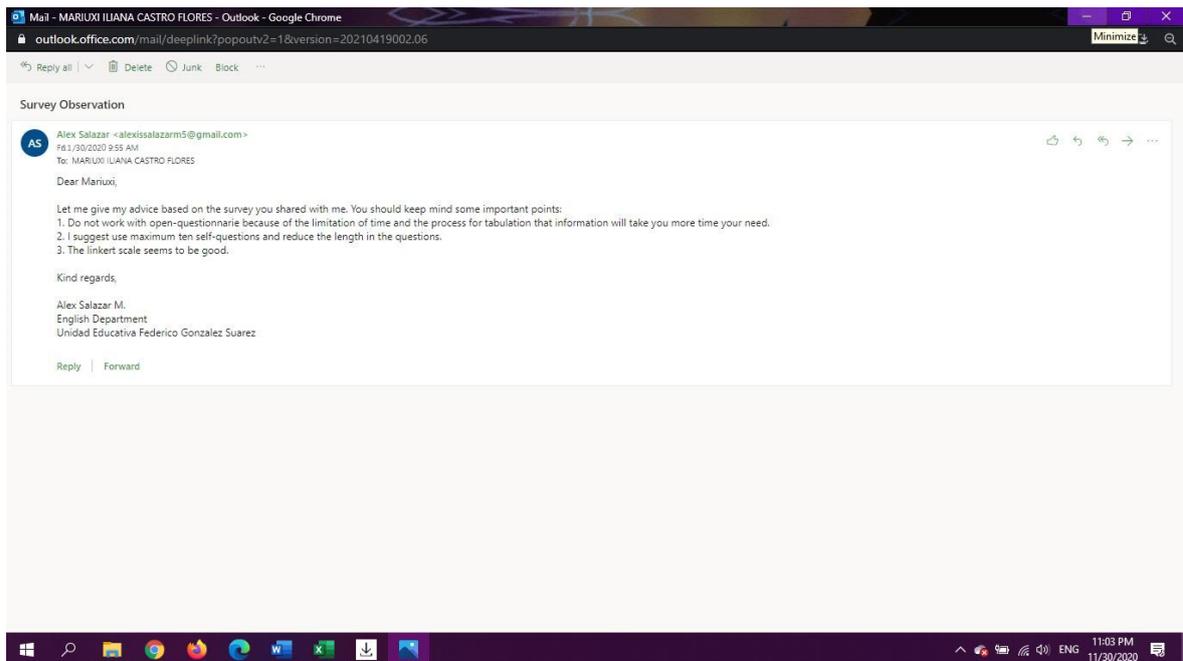
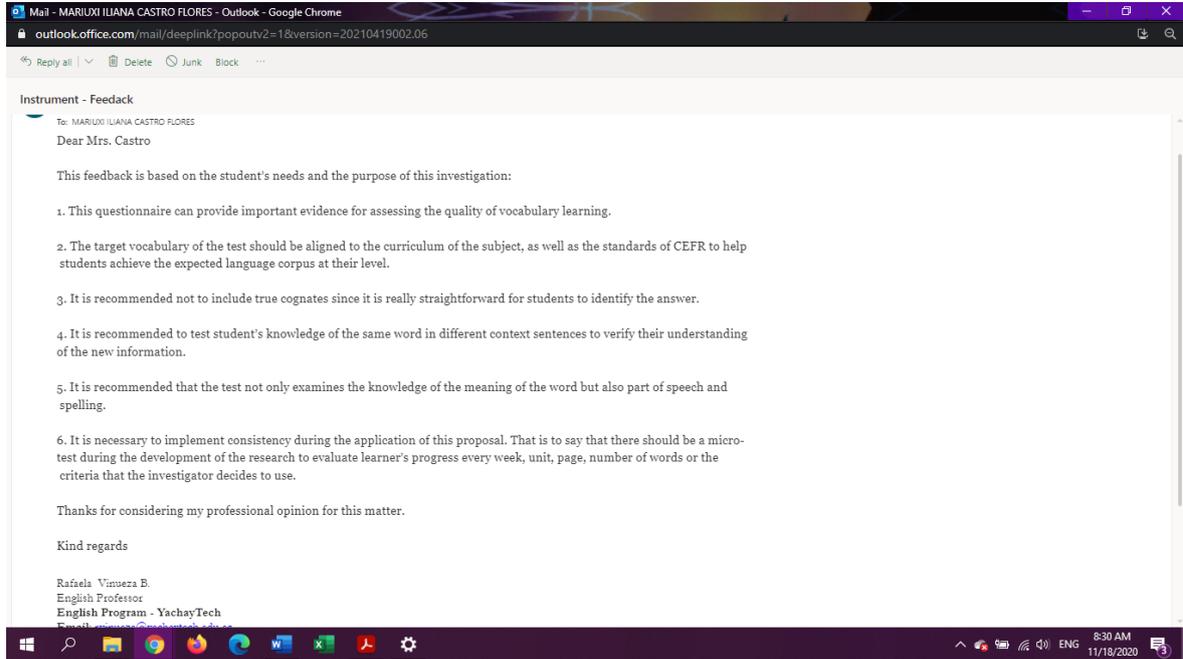
Una vez finalizado el programa de Modelo de Aprendizaje Invertido para la obtención de vocabulario con estudiantes de Inglés como lengua extranjera; por favor llenar la siguiente encuesta seleccionando y marcando con una X la opción que mejor describa su experiencia durante el programa para el desarrollo de adquisición de vocabulario donde:

- (1) Totalmente en desacuerdo
- (2) En desacuerdo
- (3) Ni de acuerdo ni en desacuerdo
- (4) De acuerdo
- (5) Totalmente de acuerdo

#	Enunciado	(1) Totalmente en desacuerdo	(2) En desacuerdo	(3) Ni de acuerdo ni en desacuerdo	(4) De acuerdo	(5) Totalmente de acuerdo
1	Encuentro el modelo de aprendizaje invertido útil en la adquisición de vocabulario más que el modelo tradicional referente a las unidades de estudio en este semestre.					
2	Disfruto más haciendo las actividades del curso en el modelo de aprendizaje invertido que en el modelo tradicional.					
3	El modelo de clase invertida me incentiva al aprendizaje autónomo.					
4	Considero que el modelo de aprendizaje invertido me favorece a la comunicación con mis compañeros más que el modelo tradicional.					
5	Con el modelo de aprendizaje invertido me es más fácil externar mis dudas y opiniones que en modelo tradicional.					
6	Puede decir que el modelo de aprendizaje invertido hace que el contenido del curso sea más fácil de entender en comparación con una clase "tradicional".					
7	Considero que la revisión de tareas asignadas durante la clase de aprendizaje invertido me ayuda a consolidar mis propios conocimientos.					
8	Me gustó trabajar durante el modelo de clase invertido.					
		No entendible	Difícil de entender	Entendible	Fácil	Excepcional
9	¿Cómo ha sido la adquisición de vocabulario aprendido durante la aplicación del modelo de clase invertida?					
		Ninguno	No idea	Ambos	Instrucción Tradicional	Modelo de Clase invertida
10	¿Cuál modelo para aprender vocabulario usted prefiere, modelo de clase invertida o modelo de clase tradicional?					

Appendix D

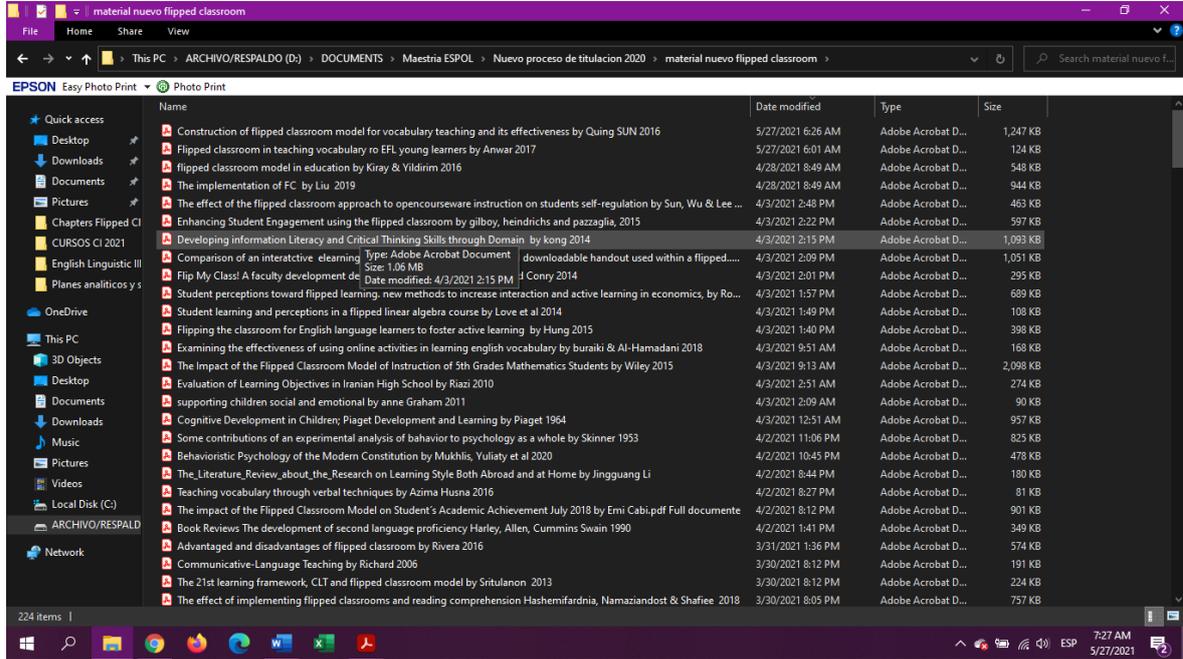
Teacher's Feedback



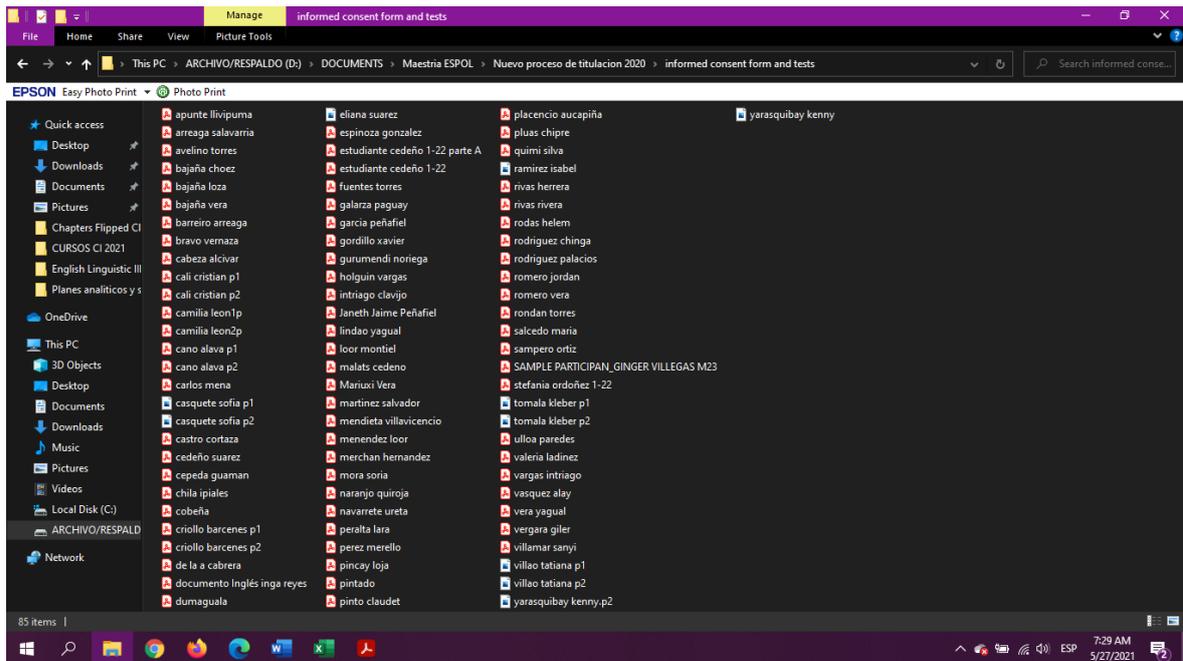
Appendix E

Research statistical material

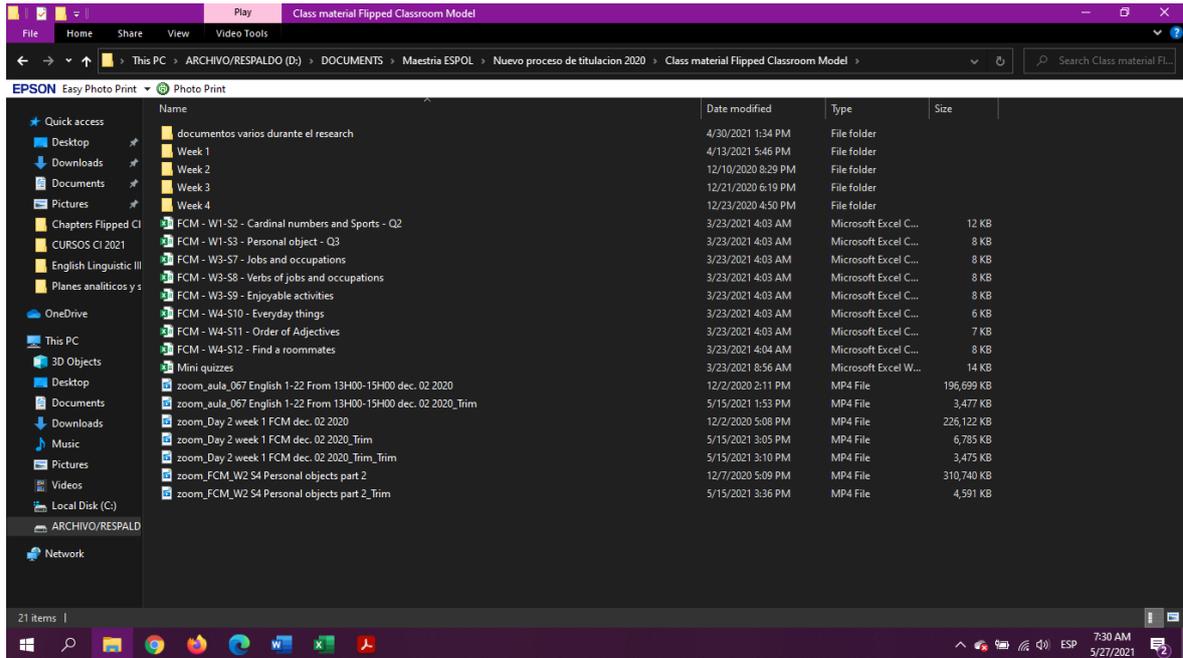
Literature Review



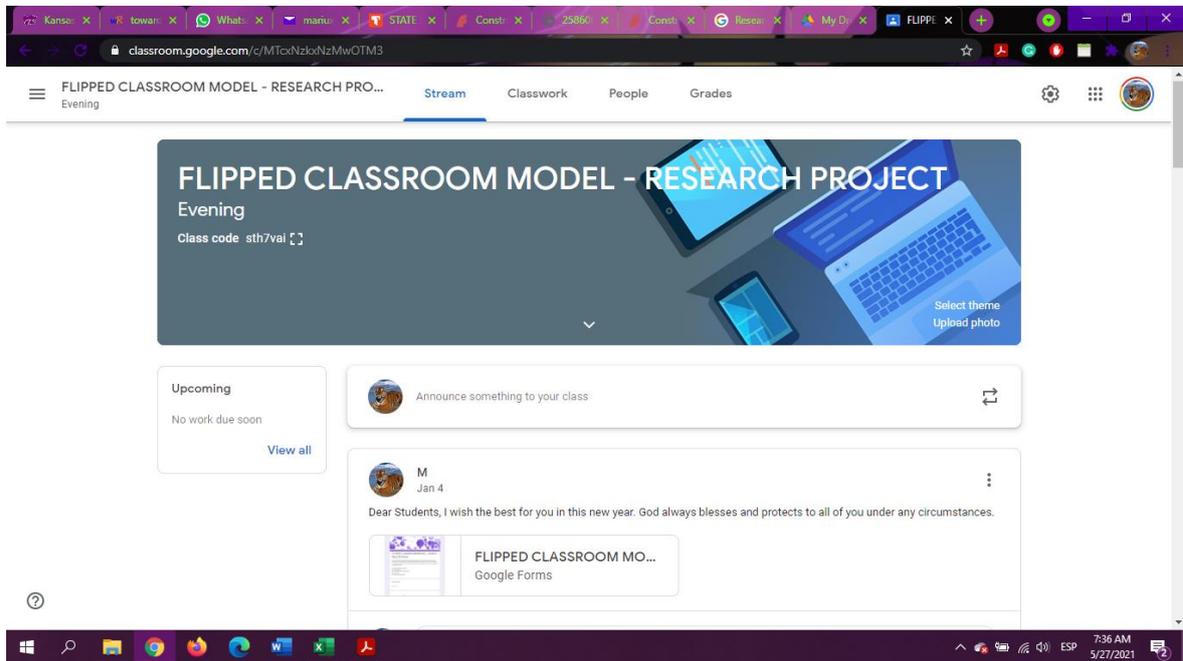
Informed Consent Forms



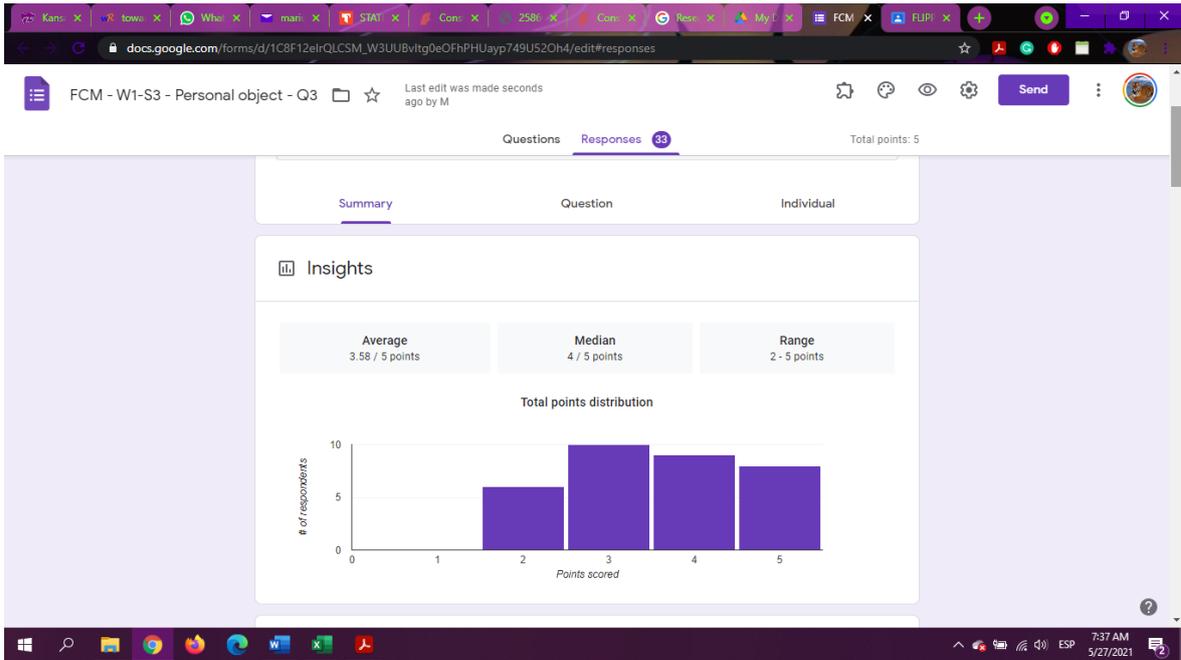
Flipped Classroom Material



Classroom in Google Meet



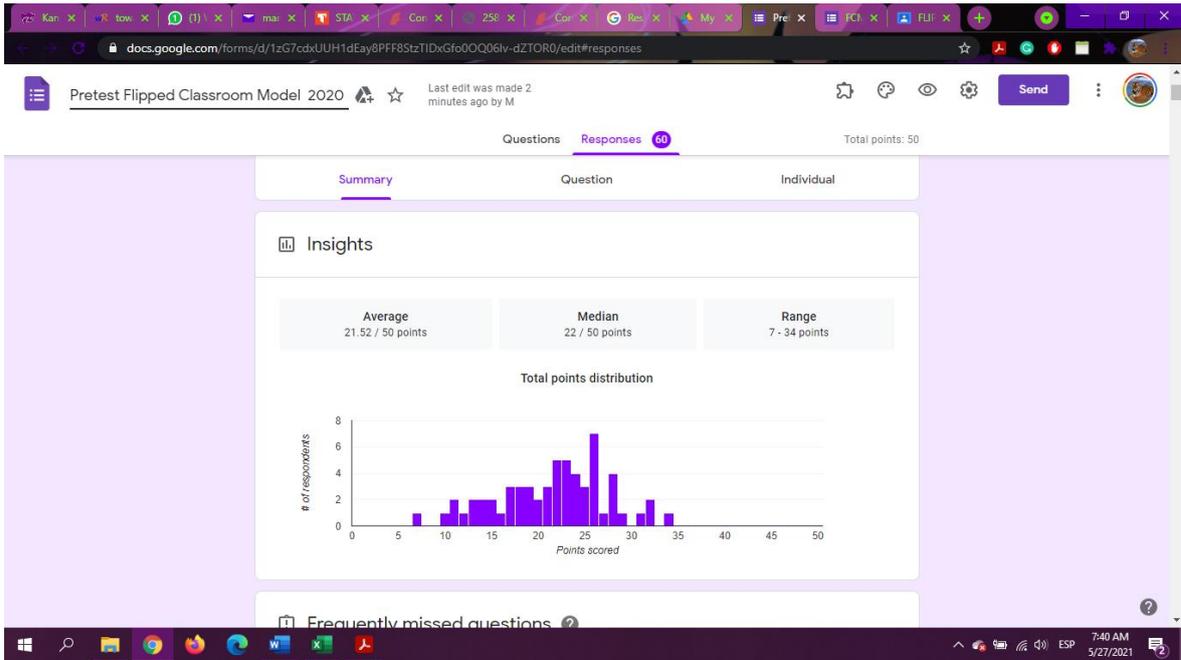
Mini Quizzes Results



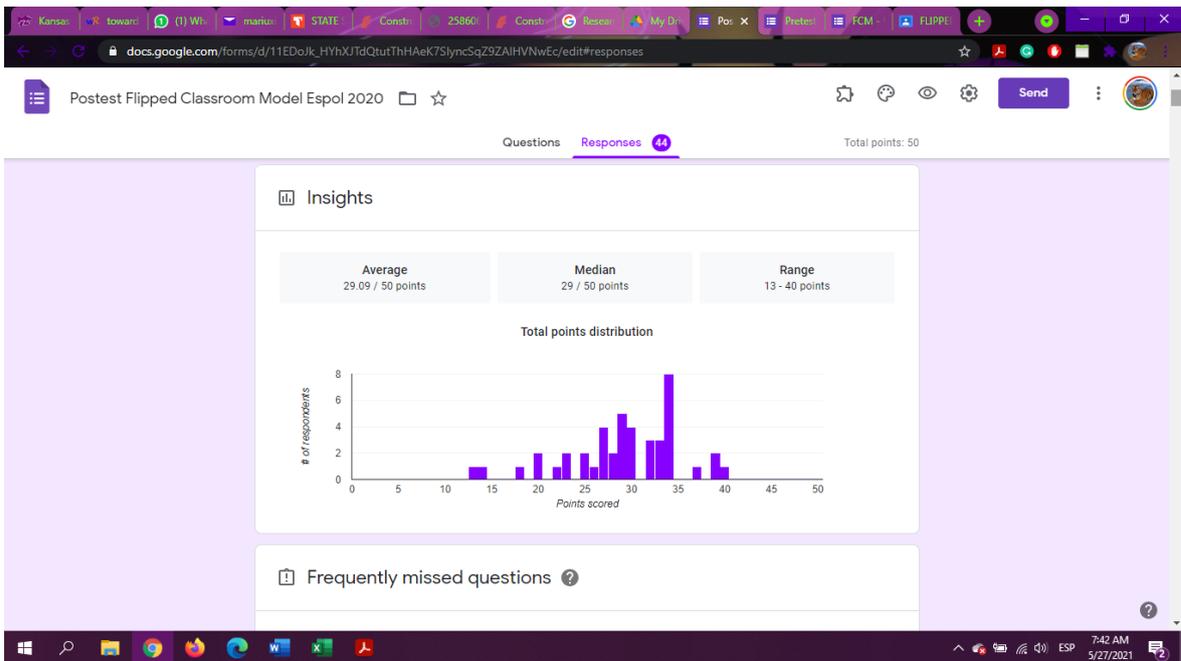
Mini quizzes - Excel

No.	w1	w2	w3	w4	w5	w6	w7	w8
1	2	3	5	5	3	4	5	5
2	5	4	5	4	2	4	5	5
3	5	4	4	5	4	3	5	4
4	3	5	4	5	4	4	2	4
5	4	4	5	5	4	4	5	4
6	3	3	5	5	2	5	2	4
7	5	4	4	5	5	4	4	5
8	3	3	5	5	4	3	4	4
9	5	4	3	4	3	4	4	5
10	3	5	5	4	4	4	4	5
11	5	4	3	4	2	5	3	5
12	3	3	2	3	4	4	3	4
13	5	5	3	5	3	4	3	4
14	4	3	4	5	4	4	2	5
15	3	3	4	4	4	5	3	3
16	3	4	5	5	4	3	2	4
17	4	5	3	4	4	4	4	4
18	5	4	4	5	5	4	5	5
19	4	2	5	4	4	4	3	5
20	4	5	5	5	4	3	4	4
21	3	3	5	4	4	5	4	4
22	4	3	3	5	4	5	3	4
23	3	5	3	5	5	4	1	4
24	3	2	5	3	5	5	4	3
25	4	2	5	3	4	4	2	4
26	2	3	1	4	3	3	4	4
27	4	3	1	5	4	3	4	5
28	3	3	3	4	3	4	4	5

Pretest



Postest results



Survey Results

The screenshot shows an Excel spreadsheet with the following data structure:

Timestamp	Username	1	2	3	4	5	6	7	8	9	10
2021/01/04 8:56:44	A hrodas3c@gmail.com										
2021/01/04 9:00:49	A kmiceden@outlook.com										
2021/01/04 9:03:26	A sanyivillar SANYI LISÉ	21-Jan	Totalmen!	Totalmen!	De acuerdo	De acuerdo	De acuerdo	De acuerdo	Totalmen!	Totalmen!	Totalmen!
2021/01/04 9:03:32	A stefany.nicolevg64@gmail.com										
2021/01/04 9:04:07	A carlos.menas@ug.edu.ec										
2021/01/04 9:04:43	A cindychila cindy Ceci	23-Jan	Totalmen!	De acuerdo	Ni de acur	Totalmen!	De acuerdo	Totalmen!	Totalmen!	Totalmen!	De acuerdo
2021/01/04 9:08:15	A keshia_an Sampedrc	22-Jan	Totalmen!	De acuerdo	Totalmen!	Totalmen!	Totalmen!	Totalmen!	Totalmen!	Totalmen!	Totalmente de acuerdo
2021/01/04 9:08:30	A ssam_pint Claudet Si	20-Jan	Totalmen!	Totalmente de acuerdo							
2021/01/04 9:25:26	A luciarodrj Lucia Lisé	20-Jan	De acuerdo	Totalmen!	Totalmen!	De acuerdo	Totalmen!	De acuerdo	De acuerdo	Totalmen!	Totalmente de acuerdo
2021/01/04 9:44:05	A paola.17.1 Paolalliar	120	Totalmen!	De acuerdo	Totalmen!	Totalmen!	De acuerdo	Totalmen!	De acuerdo	De acuerdo	Totalmente en desacuerdo
2021/01/04 9:53:39	A paola.17.1 Paolalliar 120	120	Totalmen!	De acuerdo	Totalmen!	En desacu	De acuerdo	Totalmen!	Totalmen!	Totalmen!	De acuerdo
2021/01/04 10:23:57	A jaimejane Janeth Lui EBA-S-CO	Totalmen!	Totalmen!	En desacu	Totalmen!	En desacu	Totalmen!	Totalmen!	En desacu	Totalmen!	Totalmente en desacuerdo
2021/01/04 10:24:13	A jaimejane Janeth Lui EBA-S-CO	Totalmen!	Totalmen!	En desacu	Totalmen!	En desacu	Totalmen!	Totalmen!	En desacu	Totalmen!	Totalmente en desacuerdo
2021/01/04 11:14:11	A bgurumer Carmen Bi	23-Jan	Totalmen!	De acuerdo	Totalmen!	De acuerdo	De acuerdo	Totalmen!	Totalmen!	Totalmen!	Totalmente de acuerdo
2021/01/04 11:29:27	A victorprint Victor Igni	23-Jan	De acuerdo	De acuerdo	Totalmen!	De acuerdo	De acuerdo	Totalmen!	De acuerdo	Totalmen!	De acuerdo
2021/01/04 11:43:49	A salvimarti Salvador Eba 1-3	Totalmen!	De acuerdo	De acuerdo	Totalmen!	Totalmen!	Totalmen!	Totalmen!	Totalmen!	Totalmen!	Totalmente de acuerdo
2021/01/04 11:45:31	A mafervarg Mayerly F EBA 1-3	De acuerdo	De acuerdo	De acuerdo	Ni de acur	De acuerdo	Ni de acur	De acuerdo	Ni de acur	De acuerdo	Totalmente de acuerdo
2021/01/04 11:56:13	A dayana_se Dayana Se	22-Jan	Totalmen!	De acuerdo	De acuerdo	Totalmen!	De acuerdo	De acuerdo	Totalmen!	De acuerdo	Totalmente de acuerdo
2021/01/04 11:56:56	A scarlet.na Navarrete	22-Jan	Totalmen!	Totalmente de acuerdo							
2021/01/04 12:00:04	A alisonmar Alison Ma EBA-S-CO	De acuerdo	De acuerdo	Ni de acur	De acuerdo	De acuerdo	De acuerdo	De acuerdo	Totalmen!	Ni de acur	Totalmente de acuerdo
2021/01/04 12:01:04	A carlos.me Carlos Ma	22-Jan	Totalmen!	Totalmente de acuerdo							

Data Analysis Survey

The screenshot shows an Excel spreadsheet with the following data structure:

Participant	items 1	items 2	items 3	items 4	items 5	items 6	items 7	items 8	items 9	items 10	total	a (alfa)=	k (Item numbers)=	Vi (varianza each item)=	Vt (Varianza total)=
FCM1	5	5	5	5	5	5	5	5	5	5	50	0.732855	10	3.816187	11.20988
FCM2	5	5	5	5	5	5	5	5	5	5	50				
FCM3	5	5	5	5	5	5	5	5	5	5	50				
FCM4	5	5	5	5	5	5	5	5	5	5	50				
FCM5	5	5	5	5	5	5	5	5	5	5	50				
FCM6	5	5	5	5	5	5	5	5	5	5	50				
FCM7	5	5	5	5	5	5	5	5	5	5	50				
FCM8	5	5	5	5	5	5	5	5	5	5	50				
FCM9	5	5	5	5	5	5	5	5	5	5	50				
FCM10	5	5	5	5	5	5	4	5	5	5	49				
FCM11	5	5	5	5	5	5	4	5	5	5	49				
FCM12	5	5	5	5	5	5	4	5	5	5	49				
FCM13	5	5	5	5	4	5	5	5	5	5	48				
FCM14	5	5	4	4	5	5	5	5	5	5	48				
FCM15	4	4	5	5	5	5	4	5	5	5	45				
FCM16	5	5	5	5	5	5	5	4	5	5	49				
FCM17	5	4	4	5	5	5	3	5	5	5	46				
FCM18	4	5	5	5	5	5	4	5	5	5	48				
FCM19	4	4	4	5	4	5	5	5	5	5	44				

Videos of the class topico on youtube

The screenshot shows the YouTube Studio interface for a channel named 'M'. The 'Channel content' section is active, displaying a list of uploads. The table below summarizes the visible video uploads:

Video	Visibility	Restrictions	Date	Views	Comments	Likes (vs. dislikes)
zoom FCM W3 S8 Verbs of jobs and occupations	Unlisted	None	Dec 14, 2020	5	0	100.0% 1 like
zoom FCM W2 S5 Possesives previous class	Unlisted	None	Dec 8, 2020	8	0	100.0% 2 likes
zoom FCM week 1 session 1 phonetic, countries and nat...	Unlisted	None	Dec 6, 2020	0	0	-
zoom FCM w1 s3	Unlisted	None	Dec 3, 2020	14	0	-
FCM - W1 S2 -Cardinal numbers	Unlisted	None	Dec 2, 2020	39	0	100.0% 3 likes
[Thumbnail]	Unlisted	None	Nov 15, 2020	3	0	-

Folder on One Drive

The screenshot shows a OneDrive folder named 'RESEARCH PROJECT FCM 2020'. The folder contains several files and subfolders. The table below summarizes the visible items:

Nombre	Modificado	Modificado por	Tamaño de arch...	Compartir
Class material Flipped Classro...	28 de abril	MARIUXI ILIANA CAST...	14 elementos	Compartido
Videos previous sessions	29/11/2020	MARIUXI ILIANA CAST...	5 elementos	Privado
Zoom session FCM 2020	30/11/2020	MARIUXI ILIANA CAST...	12 elementos	Privado
20201110_0003.pdf	21/11/2020	MARIUXI ILIANA CAST...	122 KB	Compartido
Petición aceptada.pdf	21/11/2020	MARIUXI ILIANA CAST...	250 KB	Compartido
SAMPLE PARTICIPANT CONSENT FORM Spa...	21/11/2020	MARIUXI ILIANA CAST...	98,8 KB	Compartido