



## The effect of Critical Thinking Strategies on oral production of EFL University Students: an action research

*EL EFECTO DE LAS ESTRATEGIAS DE PENSAMIENTO CRÍTICO EN LA PRODUCCIÓN ORAL DE ESTUDIANTES UNIVERSITARIOS QUE APRENDEN INGLÉS COMO LENGUA EXTRANJERA: UNA INVESTIGACIÓN-ACCIÓN*

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**Resumen:** En el campo de la enseñanza de inglés como idioma extranjero, muchas estrategias son utilizadas de las cuales las de pensamiento crítico son las menos empleadas. Por lo tanto, este estudio se enfoca en explorar los efectos que tres de estas estrategias tienen en las habilidades de producción oral de estudiantes universitarios que aprenden inglés como idioma extranjero. Esta investigación-acción fue realizada en la Universidad Nacional de Educación, UNAE en Ecuador. En este estudio se recolectó información cuantitativa y cualitativa. Se aplicó una prueba al inicio y al final para recolectar datos cuantitativos. Un grupo focal también fue realizado al final del tratamiento para recolectar información cualitativa. Los resultados de la prueba aplicada al final del tratamiento revelaron que los estudiantes mejoraron considerablemente en su producción oral. Además, los resultados del grupo focal que se realizó con participantes claves sugirieron que los estudiantes disfrutaron de las estrategias aplicadas en el tratamiento. Entre las estrategias preferidas por los estudiantes estuvo el Debate ya que este es interactivo y motiva a expresar sus argumentos. La menos preferida fue Teacher Questioning y le seguía Think-Pair-Share. También es importante mencionar que el vocabulario y gramática dentro de las habilidades del habla fueron las que alcanzaron el menor puntaje de mejora de acuerdo con la prueba posterior aplicada. Por el contrario, la interacción mostró mayor mejora. Esto se explica debido a que las estrategias aplicadas se enfocaban en fluidez y no en exactitud o precisión en el uso del idioma. Se establecen nuevas áreas de investigación en el ámbito de vocabulario.

**Palabras clave:** Estrategias de pensamiento crítico, producción oral, clase de inglés como lengua extranjera, estudiantes universitarios.

**Abstract:** Although many strategies have been used in the development of oral production in EFL students, critical thinking strategies are less frequently employed. Therefore, this study focused on exploring the effects of three of these strategies on the oral production abilities of Ecuadorian EFL university students. This action research study was carried out at the Universidad Nacional de Educación (UNAE) in Ecuador, where qualitative and quantitative data was collected. A pre-test and post-test were used to collect the quantitative data. Furthermore, a focus group discussion was used to collect the qualitative data. The post-test results revealed that students increased their oral production considerably after finishing the treatment. Moreover, the focus group discussion suggested that students enjoyed the strategies used, because they helped pupils to improve their vocabulary and reasoning prior to speaking. Students' favorite strategy according to the focus group was the Debate. On the other hand, the least favorite was Teacher Questioning followed by Think-Pair-Share. It is also important to mention that according to the quantitative results grammar and vocabulary had the lowest improvement in speech production; meanwhile, interactive communication had the highest improvement in oral production. This has to do with the focus of the strategies on fluency over accuracy. Implications for research regarding vocabulary were stated.

**Keywords:** Critical thinking strategies, oral production, EFL classroom, university students.





## INTRODUCTION

The term critical thinking has been defined by various scholars and it is considered to be a broad term (Reed, 1998). This term has become very important in current educational programs (Fahim & Teimourtash, 2012). Therefore, according to Harpen (2006), critical thinking (CT) is the term used to describe a kind of thinking that is conscious, and goal directed. Fahim and Rezanejad (2014) defined critical thinking as the ability a person must think about their own thinking. Consequently, the person can recognize their strengths and weakness. A person who thinks critically reflects, infers, calculates, makes decisions, evaluates, and solves problems. Critical thinking is used to examine assumptions and beliefs which are supported by evidence, provided by experience, or any other source to draw conclusions (Glaser, 1941). Richard and Elder (2008) define critical thinking as a self-controlled process which is related to effective communication and problem-solving abilities. Paul (1996) describes CT as the process by which a person takes responsibility of his/her own thinking. Ennis (1985) adds that this thinking should be reflective and logical, specifically while deciding what to believe and what to do. Other authors have similar definitions; for example, according to Chaffee (2014) critical thinking is our active purposeful and organize thought to make sense of our world examining our own and others' thinking in order to clarify and enhance our understanding.

### CRITICAL THINKING STRATEGIES USED IN EFL CLASSROOMS

Teacher Questioning, Think-Pair-Share, and Debates are the critical thinking strategies used in this research. Teacher Questioning is an important strategy used in class because it initiates student participation. This strategy can motivate, focus students' attention on a topic, and help students to think and learn more effectively while the teacher checks comprehension (Dillon, 1988). According to Shen (2012), Teacher Questioning is linked with the development of students' higher order thinking and therefore their language acquisition. It can help learners analyze, evaluate, and construct their thinking (Glaser, 1941). It gives teacher the opportunity to check students' understanding and comprehension of the topic discussed (King, 1990).

Think-Pair-Share is a strategy that was developed by Frank Lyman in 1981. It is a student-centered strategy, based on the three stages students go through to accomplish a task. First, the teacher provokes students' thinking by giving them a few minutes to simply think about a question. Second, students find a partner and talk about the topic proposed. Finally, the pair of students share their ideas with the whole class (Robertson, 2006).

Debates are used in EFL classrooms as tools to encourage students to practice the target language in real-life situations (Alasmari & Salahuddin, 2012). According to Krieger (2005) Debates not only help students develop their linguistic skills but also their cognitive skills. While preparing Debates, students develop their critical thinking which helps them to perform better while learning a language.

### THE UTILITY OF CRITICAL THINKING IN LANGUAGE LEARNING ENVIRONMENTS

The exploration of how critical reflection helps people to be conscious of their own thoughts and actions is extremely important (Ghanizadeh & Jahedizadeh, 2017). Consequently, studies have been carried out at the university level to analyze students' abilities. It is noted that in higher education it is indispensable to push students to develop a deeper understanding of how they learn. Doing so may allow students to abandon negative habits of learning and develop new habits which may help them reflect, evaluate, and analyze topics during their own process of learning (Boyd & Fales, 1983).

Currently, universities all around the world are getting ready to promote their institutions as international centers, in which culture is respected along with the content that universities can offer to national and international students from all over the world. In order to develop this cultural awareness in higher education, the ways in which students think are essential. To promote understanding, a language student should develop their critical and creative thinking abilities to support and gain more insights from their own and other cultures (Zhao & Coombs, 2012). This idea has led many researchers to look for ways to improve students' English abilities along with the skills used in the 21<sup>st</sup> century.



In order to achieve a society of ‘global citizens’, [Zhao and Coombs \(2012\)](#) suggest the following: “International teaching strategies need to focus on enabling learners to critically engage in identifying and dealing with any personal prior cultural constraints and acquire different thinking devices (or schemas) to function in the target language and culture competently” (p.249). Critical thinking skills can contribute to enable students to face the requirements of current global world. The language classroom indeed also must be involved in this challenge. Let us point out the importance of these skills as well as EFL research regarding critical thinking strategies.

According to [Fahim and Rezanejad \(2014\)](#), critical thinking strategies have not been used enough in EFL classrooms. Recently, these skills are emphasized in the field of education. It is assumed that learners will be successful if they develop these skills. Furthermore, the term ‘critical thinking’ has been used for many years, and it has many definitions. For instance, [Beyer \(1985\)](#) defines critical thinking as the ability to collect, analyze, and use information effectively. [Fluquen and Jiménez \(2013\)](#) note that the education system currently demands students who can reflect, analyze, self-assess, be autonomous, and evaluate their own learning process to succeed in their academic and professional life. Therefore, EFL classes can provide students with these tools as well. English teachers have also started to use critical thinking strategies to achieve better results in their students’ language learning. [Lewis and Smith \(1993\)](#) mentioned that critical thinking promotes meta-cognitive process which are useful in EFL classrooms to develop language skills. In order to help students to develop their English proficiency, and in this case their oral production, it is also essential to develop their thinking skills which will provide them with an ability to communicate more effectively. Critical thinking strategies have been used in EFL classrooms to develop oral skills in students. However, in our context it seems they have not been employed.

As a result of a limited system of education in which critically thinking is not valued, our students are generally not taught to think for themselves. There are few activities included in an EFL class in which students find a chance to develop their higher order thinking skills while learning a language ([William, 2003](#)). [Sousa \(2001\)](#) points out that teachers lack the ability to teach the brain to think. To increase students’ achievement, critical thinking skills can be taught at all levels,

and can be taught alone or integrated with other subjects. Teaching critical thinking skills in second language settings should be taught along with the language skills. However, language teaching remains focused on the lower cognitive level in which memorizing and remembering information are important. This disregards application, synthesis, and evaluation, which are considered higher order skills ([Chaffe as cited in Marin, 2017](#)). [Wanger \(as cited in Nosratinia & Zaker, 2013\)](#) suggests that students should be able to go beyond repetition and memorization of information; students should strengthen their skills of analysis, evaluation and comprehension of information to be involved in a true thinking process. For that reason, teachers should implement strategies in their English classrooms to develop these higher order thinking skills that will allow students to develop academically, and to gain proficiency in their language skills. These abilities are not only necessary in their educational life, but also in their personal and professional future.

At this point it is important to see what research tells us about the use of critical thinking strategies. A study conducted by [Ramezani, Larsari, and Kiasi \(2016\)](#) showed a significant relationship between critical thinking and speaking ability. According to [Malmir and Shoorchech \(2012\)](#), speakers who have developed their critical thinking take a more dynamic role in speaking and trying to understand and make decisions in challenging circumstances. Moreover, [Swain \(2000\)](#) hypothesized that language is not just a tool for communication, but is also a cognitive tool, because it gives students the opportunity to control their target language. Thus, it allows them to express their ideas in an independent way, which in turn helps them to improve their thinking. As a result, students who manage their thoughts are able to initiate conversations and control topics which, according to [Ellis \(1990\)](#), is a classroom condition that improves students’ thinking skills by increasing their chances to speak.

In a qualitative study conducted in Colombia with EFL teachers in which critical thinking conceptions in an EFL classroom were discussed, it was concluded that the teachers’ understanding and knowledge related to the topic was not enough. The authors agreed on the fact that CT is related to cognitive development, reflection and analysis; however, the study concluded that teachers needed more training in strategies, activities, methodologies, resources, and all that involves the teaching – learning process itself. The study suggested that critical thinking is an important element in



EFL classroom because it provides students with communicative competence, creativity, argumentation, problem-solving, decision making, autonomous learning metacognition and emotions ([Marin & Pava, 2017](#)).

Currently, critical thinking skills have become important in Latin America. Another study done in Colombia was a qualitative study in which teachers wanted to know to what extent critical thinking activities helped students develop their second language. The teachers recorded the lessons and collected data through observation. After the analysis, the results showed that critical thinking tasks enhanced second language learning, as it gives students a way to improve the language together with their critical thinking skills ([Pineda, 2004](#)).

All languages are represented in the way native speakers think, and therefore learning a language should reflect the needs of students. The importance of developing critical thinking skills is a necessity in all the ways discussed above. Questioning in a classroom is necessary to develop the ability to think critically. This is what Freire calls “Pedagogy of questions” ([Freire as cited in Nosratinia & Zaker, 2013](#)). Nosratinia and Zaker (2013) studied critical thinking (CT) and Autonomy (AU) in university students whose majors were Translation and English literature. Their results indicated that CT and AU were positively interrelated. Moreover, the study showed the importance of the development of critical thinking while learning a language. Therefore, the authors suggest creating a curriculum based on the students where books should be designed with different activities to develop students’ higher order thinking skills. Today’s world requires students to develop these two skills in order to succeed in their language learning.

The relationship between the use of critical thinking and speaking in an EFL setting was researched by [Sanavi and Tarighat \(2014\)](#) who examined how teaching critical thinking explicitly affects students’ speaking proficiency in English. A mixed-method study was employed to collect and analyze the data. The results showed that the experimental group of students who were taught critical thinking explicitly had a positive result in their speaking performance.

In the same line, [Ramezani, Larsari, and Kiasi \(2016\)](#) carried out a study on speaking and critical thinking where they concluded that those students who were better critical

thinkers performed higher in their speaking tests. This was a quantitative study in which the IELTS test was used to measure the students’ speaking ability, while the Lauren Starkey critical thinking test was used to test students’ critical thinking skills. With the obtained results the researchers concluded that students who increased their critical level thinking, improved their speaking performance, too. ([Ramezani, Larsari, & Kiasi, 2016](#)).

According to a study done by [Iman \(2017\)](#) at the University of Indo Global, students aimed to improve their English skills because of the importance English has in their country. The researcher wanted to measure how Debates would help develop speaking and critical thinking skills, specifically relating to how a globalized world requires students to develop their low and higher order thinking abilities in the expression of their thoughts in their second language. This was a quasi-experimental study in which a non-equivalent pretest- posttest control group design was used. The results showed how this academic activity helped students improve their speaking skills. According to the previous analysis, students’ improvement was seen mainly in fluency. Moreover, critical thinking skills were developed along with speaking skills, as students were asked to reflect, evaluate, and research the topics that were discussed.

The aforementioned studies illustrate how critical thinking skills are key to the development of second language skills in today’s globalized world. However, in our country, Ecuador, there are few studies related to critical thinking in the EFL classroom. At the University of San Francisco in Quito, [Martínez \(2011\)](#) implemented critical thinking activities in an EFL classroom. This was an action research study in which quantitative and qualitative data was collected. The results showed that there was no significant difference between the two groups, but students who received the treatment showed more motivation and were able to better voice their opinions. [Rodas \(2014\)](#) centered her thesis on the application of critical thinking strategies to develop writing and reading in a high school in Cuenca. This study used an experimental-qualitative-statistical method. The author analyzed the data through pre-test, mid-test, and post-test results. The results showed how the activities helped students to improve their reading and writing skills in second language learning. As can be seen, and as far as we know, there is no research done on oral production in the context of Ecuador. For that reason, more research needs to be conducted using these strategies in



our country. That is why the present study aims to analyze how critical thinking strategies affect oral production development in Ecuadorian university-level students and contribute to fill the gap in the literature.

#### THE ECUADORIAN EDUCATIONAL SYSTEM

Learning English in the Ecuadorian school system is a must for today's university students. In many universities, students are required to complete a level of English to graduate. According to the [Ley Orgánica de Educación Superior \(LOES\)](#)<sup>1</sup> universities need to create an intercultural environment in which learning foreign and national languages will promote research and national development. Therefore, public and private universities in Ecuador need their students to achieve a B1 English level according to the Common European Framework of Reference. Consequently, the incorporation of different teaching alternatives plays a main role in today's higher education in Ecuador. We want our students to learn a global language; as a result, providing them with the necessary skills that help them to accomplish that goal is essential for today's global educators.

This study was completed in *Universidad Nacional de Educación* (UNAE), which is a new public university in Ecuador with an educational focus. This university has its own pedagogical model, which includes different methodologies, such as flipped classroom, project-based learning, cooperative learning, etc. Its main purpose is to improve the Ecuadorian educational system.

Despite all these methodologies, the university needs to undergo many more changes and improvements. When the first author started to work with university students at UNAE, the first author thought they would ask hundreds of questions, discuss different topics, and give their opinions frequently since the first author believed their English level was higher. This is because according to the Ecuadorian Curriculum of English as a foreign language, students who have finished high school are supposed to have a B1 English level (2016). However, the first author noticed that university students struggled with using English. Most of them entered the university with little to no English knowledge. Education First ([as cited in El Comercio 2017](#)), indicated that the

English level in Ecuador is 49,42/100. This shows clearly that English level is quite low in our country. An Ecuadorian study conducted by [Calle et al. \(2012\)](#) determined that “the use of traditional teaching strategies, the teacher-centered approach, the lack of interaction with and among students in the target language, and the confusion of teachers when applying different communicative strategies” (p.1) are determining factors that impede students from learning English effectively at public schools in the city of Cuenca. This shows the problem our educational system has had from many years, and the lack of opportunities we provide to our students to learn this language in a more meaningful way.

Considering one of my classes<sup>2</sup>, the majority of my students are not able to express their ideas freely in English. Very few students are interested in learning more than what is presented in class, and therefore most of them do not frequently think deeply or ask questions about the material; therefore, they are not used to think deeply and ask questions. This seems to correspond with our educational model of memorization, which has been practiced in schools for years. According to [Espinoza \(2017\)](#) most Latin American countries have societies in which a mere transmission of content and theories is the basis of the education system, which is not always interrelated with practice. In this context [Freire \(1976\)](#) idealized education which would transform society through critical and reflexive thought.

Currently, university students need to develop higher order thinking skills to be part of a globalized world in which opportunities are given to those individuals who can make fast decisions and provide ideas based on arguments. [Williams \(2003\)](#) remarks that 21<sup>st</sup> century students need more than just to recall ideas; they need to be prepared to think creatively and critically to face the changing world. For instance, a true education is one which liberates and teaches students to reflect and take action to transform society ([Freire as cited in Espinoza, 2017](#)).

At UNAE, students are expected to develop a high level of English in a very short period of time and are also required to develop critical thinking skills in order to become teachers in the future. According to the Reglamento de Régimen

<sup>1</sup> It is a law that regulates higher education in Ecuador.

<sup>2</sup> This refers to the first author's class



Académico<sup>3</sup> article 80, it is stated that university students must obtain a B1 level of English to complete their studies. To improve the education system in Ecuador, future teachers should possess the ability to speak aloud and express their opinions in English in the classroom – abilities which will help them in their future professions. [Stirling and McGloin \(2015\)](#) point out that the role of a university is to form students with high critical awareness, which allows them to solve social problems.

However, developing speaking ability can become a distinct challenge we face in our context. In specific reference to Ecuador's colonial education history, students are not taught to reflect analyze, or evaluate the content, but to simply repeat content provided by teachers ([Freire, 2005](#)). [Mota \(2010\)](#) agrees with the fact that teachers in Latin American countries are not implementing critical thinking strategies in the classroom, and that education is based more on a transmission model. [Pineda \(2003\)](#), in her study done in Colombia, emphasized that our communities have limited knowledge on how to incorporate critical thinking into our EFL classrooms. That is why [Freire's \(2005\)](#) pedagogy looks to emancipate individuals, allowing them to bring support to the critical thinking model's incorporation into every classroom, and to help learners have their own voices.

Taking into consideration this need in the EFL university level and the gap in the literature, the purpose of this action research is twofold: the first goal is to analyze the use of critical thinking strategies in oral production in an EFL university classroom. The second is to understand how students perceive these strategies. The following questions guided this study.

1. What are the effects of critical thinking strategies on oral production in EFL students?
2. How do students perceive these critical thinking strategies applied in their classroom?

## METHODOLOGY

### CONTEXT AND PARTICIPANTS

This classroom-based action research study was applied in an EFL classroom in an Ecuadorian University UNAE. This is the first public University in Ecuador to offer education-only related majors. It is located in the city of Azogues in Ecuador. Due to higher education policies in Ecuador, students are required to obtain a B1 level in a foreign language in order to graduate stated in *Reglamento de Régimen Académico article 80*. Therefore, UNAE offers language courses to fulfill this requirement. There are 6 levels of English offered in the Language Institute of UNAE. In order to enroll in the final level of majors, students must take a proficiency B1 exam, which is designed by the teachers of the University. To teach English, teachers use English File and the Touchstone series and each level covers 6 units per semester. Participants have 4 hours of class per week. They have a total of 60 hours of English per semester.

Fifteen students voluntarily accepted to participate in this research by signing an informed consent (see **Appendix 1**). Their English level was A.1. and A.2. Students who participated hailed from different provinces in Ecuador, some of whom were first generation college students. Students came from low or low-middle income; therefore, scholarships were given to many students by the government. The native language of all of the students was Spanish. This group of students were in the third level of English according to the leveling of the English area at UNAE. The participants passed the first and second level respectively. There were 12 women and 3 men in the classroom. Each of the students was completing a major in an education-related field.

### RESEARCH DESIGN

This study was a classroom-based action research project, which employed quantitative and qualitative tools to collect and analyze data. A classroom-based action research study involves conducting research in a classroom in which the teacher attempts to improve the students' performance by

<sup>3</sup> The statutes, regulations, and other rules that govern the Ecuadorian higher education system.



taking into account the quality and purpose of their practices (Convery, 2019). The study involved a pre-test and post-test to measure students' oral production. A group pretest-posttest design is defined by Mertler (2016) as a kind of study in which no comparison is made – rather, there is no control group. Instead, therefore, the study was comprised of just one group which received the experimental treatment. Moreover, a focus group discussion was carried out at the end of the treatment to analyze the students' perceptions regarding the strategies applied, and to understand in depth the participants' point of view. This methodology helped to collect qualitative data.

## DATA COLLECTION TECHNIQUES AND INSTRUMENTS

### *Quantitative Data: Procedure*

In order to collect pre-intervention data, students completed a Cambridge A2 speaking exam. All the students were assessed in three categories which evaluated oral production, described in the exam as grammar and vocabulary, pronunciation, and interaction (see Appendix 2). Students were evaluated following the same logic of the international exam. Students completed the pre-test in pairs. After the treatment the same Cambridge A2 speaking exam was applied. All the students were evaluated in pairs. A rubric was used which gave 5 points for each category previously described. In total, students were assessed out of 15 points.

To collect the quantitative data, the pre-test and post-test grades were used to explore the influence of the critical thinking strategies applied in the development of speaking skills. Later, in order to analyze the data, the SPSS 25 software was used with a significance level of 0.05. Graphics (e.g. Histograms, etc.) illustrated whether the variables distribution is symmetric or asymmetric across the data set. These results showed the type of distribution that variables followed, in order to decide the use of parametric or non-parametric tests.

### *Qualitative Data: Procedure*

The qualitative data was collected by applying a focus group discussion to a group of participants to know the students' points of view about the strategies applied in their English lessons. According to Flores and Alonso (1995), a focus group is a technique used in research which entails the

collection of data by the researcher which involves the discussion of certain topics or questions by the participants of the study. It is said that focus groups can provide more meaningful information based on the interaction among participants and moderator (Lederman, 1990). This led to the collection of information from the participants in which they expressed their ideas freely, avoiding the interference of the researcher's prejudices in their opinions (Bertrand, Brown & Ward, 1992). Key participants were selected to be part of the focus group discussion. In order to get meaningful data, participants who had high, medium and low results in the post test were chosen. A topic guide was created based on the following aspects: study's objectives, unpredictable information collected in the intervention, and the pre-test and post-test results. Furthermore, during the focus group discussion, a question guide was used to help students direct their conversation. The moderator was the first author, based on her familiarity with the study. The discussion, conducted in Spanish, was recorded, transcribed, and translated into English. Later the data was coded manually, and the information was classified into themes and categories. These results were analyzed and interpreted.

## PROCEDURE OF INTERVENTION

Fifteen English language learners, who voluntarily agreed in participating, were part of this study. All the students belonged to the third level of English according to the leveling of the university. The intervention lasted for 4 months, from April 2019 until July 2019. The topics were based on the university syllabus. We covered six topics during the semester: making friends, interests, health, celebrations, growing up, and around town. Each strategy was used based on the topics under study.

During the intervention, Teacher Questioning, Think-Pair-Share, and Debates were applied. Sometimes two of the strategies were used in each class due to the importance of discussion in speaking ability. Teacher questioning was mainly used in each class because of the nature of the strategy. To apply Teacher Questioning, the teacher created a series of high order thinking questions based on the topics. Think-Pair-Share was applied when students needed to interact amongst themselves. Debates were planned in order to organize the topic, the participants on each team, and the time. Students sometimes prepared their ideas at home to defend them during the debates. The Debates were also based



on the topics listed above. As Debates needed more preparation, this strategy was used mostly at the end of units in which students were able to use all the new vocabulary and grammar structures learned during the unit in order to illustrate their improvement. For example, one Debate topic considered whether Saint Valentine's should or shouldn't be celebrated. This debate topic is an example of the "celebrations" unit.

#### DATA ANALYSIS

The information processing was carried out in the statistical program SPSS 25 and the creation of tables and graphs in Excel 2019. The results are expressed through measures of central tendency and dispersion. In addition, to determine the number of students with or without changes, absolute frequency measures were used. To determine the changes generated, the statistical test was used for related Wilcoxon

samples, and decisions were made with a significance of 5%. On the other hand, the qualitative part was analyzed organizing the information in different themes. After that, the information was organized and categorized. Finally, the information was interpreted and summarized.

## RESULTS

#### QUANTITATIVE RESULTS

Oral production was measured as the sum of grammar and vocabulary, pronunciation, and interactive communication, and presented oscillations between 6 and 24 with an average of 14.00 (SD = 4.96). This result implies that the students reached 46% of the maximum grade. Table 1 shows that the interactive communication skill was the weakest (M = 4.13; SD = 1.92).

**Table 1.**

*Pre test results*

	Minimum	Maximum	Mean	SD
Grammar and Vocabulary (/10)	2	8	4.93	1.67
Pronunciation (/10)	2	8	4.93	1.83
Interactive Communication (/10)	2	8	4.13	1.92
Results (/30)	6	24	14.00	4.96

**Source:** Ochoa, J., & Calle, A.M. (2020).

It was also detected that 5 students were in an A1 level; 5 in A1.1 and 5 in A2.

#### GENERATED CHANGES

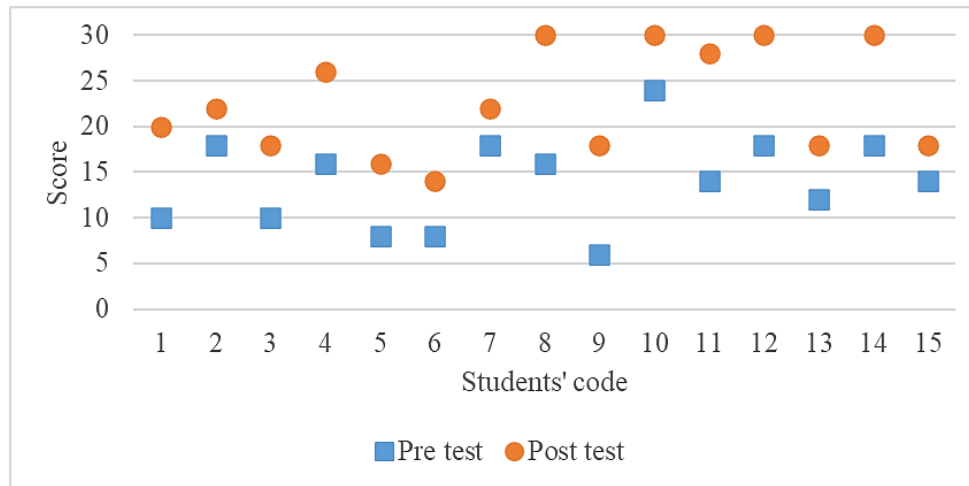
The results revealed that after the intervention no student reflected negative changes and that at least 11 had improved in their oral production skills; 4 people remained unchanged in grammar and vocabulary, 2 in pronunciation and one in interactive communication; improving on average 2.27 points (SD = 1.67) in grammar and vocabulary, 2.80

(SD = 1.66) in pronunciation and 3.60 (SD = 1.72) in interactive communication, implying that this last skill was the one with the greatest improvement. In all cases the improvement was significant ( $p < 0.05$ ).

Considering the total oral production score, it was observed (Figure 1) that all students recorded positive changes of between 4 and 14 points with an average change of 8.67, and a high dispersion of data (SD = 3.6) reflecting a heterogeneous behavior of changes. This means that each student differed in their results.



**Figure 1.** Pre test vs Post test scores



Source: Ochoa, J., & Calle, A.M. (2020).

## POST TEST

After the intervention of the use of critical thinking strategies, it was found that the scores of each sub-skill of oral production ranged between 4 and 10, with averages greater than 7.20 / 10. It was also found that the grammar and vocabulary sub-skill reached the lowest performance and greatest data dispersion. ( $M = 7.20$ ;  $2.24$ ); while pronunciation and interactive communication were in the same conditions ( $M = 7.73$ ;  $SD = 1.98$ ) with a lower

dispersion of data reflecting similar behavior in students. The final qualification registered a minimum of 14 points while the maximum was 30 with an average of 22.67 ( $SD = 5.79$ ), achieving 75% of the maximum qualification.

It was also found that 2 students were in level A1 in this skill, 8 in level A2 and the remaining 5 in B1

**Table 2.**

*Post test results*

	Minimum	Maximum	Mean	SD
Grammar and Vocabulary (/10)	4	10	7.20	2.24
Pronunciation (/10)	4	10	7.73	1.98
Interactive Communication (/10)	4	10	7.73	1.98
Results (/30)	14	30	22.67	5.79

Source: Ochoa, J., & Calle, A.M. (2020).



## QUALITATIVE RESULTS

The following table displays the qualitative results by means of themes and categories.

**Table 3.**

*Focus group results*

Themes	Categories	Students' Quotes
	Students enjoyed the critical thinking strategies applied	<p>"The strategies are really good"</p> <p>"I like them a lot"</p>
	Participants considered Debates as their favorite strategy	<p>"I wanted to win the debate, so I spoke more to do it"</p> <p>"We had to do collaborative and cooperative work"</p> <p>"They made us think in order to provide answers"</p> <p>"I provided my own ideas"</p> <p>"We all participated"</p>
Positive effects of applying Teachers Questioning, Think-Pair-Share and Debates in an EFL classroom in an Ecuadorian University	Students felt they developed more their fluency and vocabulary in relation to oral production	<p>"Debates helped us to improve our fluency and vocabulary"</p> <p>"We could prepare our ideas in advance"</p> <p>"We spoke all the time with the teacher and classmates"</p> <p>"I extend my vocabulary"</p> <p>"They helped me to speak fluently"</p> <p>"We interact with our classmates"</p>
	Increased some participants motivation and created a good classroom environment	<p>"I was willing to learn"</p> <p>"We had a nice teaching environment"</p> <p>"I felt really good"</p> <p>"I felt comfortable"</p>
	Participants had the time to think before speaking	<p>"We reason and then speak"</p> <p>"I thought more than usual"</p>



<p>Negative effects of applying Teachers Questioning, Think-Pair-Share and Debates in an EFL classroom in an Ecuadorian University</p>	<p>Use of Spanish</p> <p>Some participants felt stressed using the strategies</p> <p>Topics they did not like to defend while working on debates</p>	<p>“We provided good answers to questions”</p> <p>“We sometimes spoke in Spanish when interacting with peers”</p> <p>“At the beginning I was stressed because I did not have vocabulary to speak”</p> <p>“I had to defend topics I did not agree with”</p>
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Source: Ochoa, J., & Calle, A.M. (2020).

According to the qualitative data, all of the students who were part of the focus groups discussion agreed that the strategies were good for their learning. All of them mentioned this phrase: “The strategies are very good and I liked them a lot”. This illustrates that critical thinking strategies used in an EFL classroom have a positive effect on students’ preferences. Students mentioned different reasons to support their predilections towards these strategies. They indicated that these strategies helped them to improve their oral production. One of the participants mentioned that these strategies helped them to interact with the teachers as well as with their classmates. Another participant mentioned the way in which these strategies helped them to acquire new vocabulary, specifically because they needed it to communicate their ideas. “We could talk and think more”, mentioned one participant. Another participant referred to the steps they followed during the activities. He said, “We thought, reasoned, and later spoke.” These reasons helped to support the fact that these strategies indeed were useful among students during the treatment. Even though the teachers applied other strategies and worked with different

activities, participants stated their opinions specifically towards critical thinking activities.

Participants during the focus group also discussed their preferences among the three strategies used in the treatment. Six of the seven students who participated in the focus group discussion agreed that debates were their favorite treatment. One of the participants had a different opinion and mentioned his preference for Think-Pair-Share, because he could interact with his classmates. One of the students also mentioned Teacher Questioning and Debates both together as her favorite activities. The participants suggested that Debates were their favorite strategy because they pushed them to speak and express their ideas, as students were motivated to win the debate. Moreover, they wanted to defend their thoughts and achieved the use of more vocabulary. A participant mentioned that working on Debates helped him to develop collaborative and cooperative work. Everybody wanted to speak and make themselves heard while expressing their ideas. A participant concluded that while working with Debates in class, they gained fluency and vocabulary. Debates forced participants to think and



speak, as they had to reply their classmates with answers they spontaneously created. A participant stated that he preferred the Teacher Questioning Strategy because the questions made him think and he had time to reflect and give a well-thought-out answer. He said that having time to think was very effective because he could provide a better answer.

In relation to the sub-skill they developed the most during the treatment, three participants suggested that fluency was the area they developed the most. This happened because they had to speak consistently, and they did not focus on accuracy but on fluency. A participant mentioned they interacted quite a bit with the teacher and with their classmates. Three participants agreed that they acquired a good amount of vocabulary and improved their lexicon. This was as a result of having time to organize their ideas and look for new words in the dictionary in order to speak to the whole class or with their classmates.

The participants also mentioned some of the things they did not like about the treatment. Some students said that while they worked with their peers, they tended to speak in Spanish rather than in English. Also, they felt nervous and a little bit anxious at the very beginning of the treatment because they did not know the way the strategies worked, and because of their English level. Participants could not express everything that they wanted to, but with time and practice, they overcame their initial fear and began to improve in both confidence and language ability. Two participants noted two negative things about debates; namely they mentioned that defending a topic that sometimes they did not agree with was difficult because they did not feel comfortable speaking about said topic. Furthermore, a participant mentioned that when participating on debates some students did not stay on topic, and this situation of students not being on task, created conflicts among them which made difficult to manage the strategy.

Three of the participants of the focus group mentioned that they were nervous and afraid during the first classes because they did not have enough language ability to communicate their ideas. They also noted that this changed when they learned more vocabulary and built confidence in themselves, their classmates and the teacher. One of the participants mentioned he was very motivated to learn and speak because he felt that he was improving his English language abilities.

Three of the participants reported that they felt comfortable and happy during the treatment.

## DISCUSSION

This study's main objective was to observe the effects that three critical thinking strategies had on oral production applied in an EFL classroom in Ecuador. The participants started the course with a 46% of achievement out of 100%. This was the result of the pre-test. Also, it is important to mention that interactive communication was the weakest sub skill. After the treatment, the results showed the improvement students had. Eleven out of fifteen students had positive changes in their oral production. These results are in line with the findings by [Ramezani, Larsari, and Kiasi \(2016\)](#) who concluded that students who are better critical thinkers performed higher in their speaking tests. The results of the present study showed a 74% level of achievement out of 100%. We can notice that most of the students had positive effects in their performance in the post-test. Therefore, the results reveal that critical thinking strategies used in an EFL classroom have positive effects in the participants' oral production. This aligns with [Malmir and Shoorcheh's \(2012\)](#) study which concluded that a student who thinks critically will learn English more effectively.

Analyzing the quantitative results, we can also see that grammar and vocabulary had the lowest improvement in speech production; meanwhile, interactive communication had the highest improvement in oral production. This also has to do with the focus on fluency over accuracy. Students were more engaged with speaking freely or fluently rather than accurately. This is supported by [Marin and Pava \(2017\)](#) who concluded in their research that critical thinking strategies is an important element in an EFL classroom as they offer students communicative competence. [Pineda \(2004\)](#) noted that critical thinking strategies enhance second language learning.

Another important element to discover was the students' perceptions in relation to the strategies applied in class. All the participants mentioned that they enjoyed the critical thinking strategies because they helped them to enhance their oral production as they had to speak in class frequently. Participants mentioned these strategies helped them to think before speaking, which is one of the advantages that critical



thinking strategies offer. When students have time to think before speaking, they produce better structured sentences and with more meaningful content. Also, they mentioned the importance of having time to prepare their ideas at home or in class with their classmates.

The favorite strategy according to students were debates, because participants mentioned they were motivated to express and defend their ideas using valid arguments. [Krieger \(2005\)](#) suggested the importance of debates to develop a second language. Participants mentioned that debates provided them with the ability to increase their fluency and vocabulary as they had a limited time to speak in their debates. This suggests that students increased their fluency in their second language.

Students mentioned during the focus group that they improved their vocabulary because they needed the words to speak in class. Critical thinking strategies like Teacher Questioning, Think-Pair-Share, and Debates force students to produce oral speech in class. Therefore, according to the results of this study, students increased their vocabulary. This matches with research conducted by [Sanavi and Tarighat \(2014\)](#) in which deeper learning of new vocabulary was seen during the course they carried out in which they trained students in the use of critical thinking skills. Also, [Fahim and Komijani \(2010\)](#) found a positive effect on critical thinking on L2 vocabulary learning.

The area that participants developed the most according to students' perceptions was fluency, as they interacted with the teachers and their peers. Students mentioned the importance of teacher questioning, more specifically that they should answer the questions in English. [Sanavi and Tarighat \(2014\)](#) reinforced this idea in their study which found that participants who belonged to the experimental group performed better in their speaking ability than those in the control group. This forced student to improve their vocabulary because the questions were challenging for them. The participants needed more complex vocabulary in order to answer the questions. Also, students valued the necessity of interacting with their classmates. They felt less anxious when they worked with their classmates. Moreover, they said they developed cooperative and collaborative learning abilities because they helped each other during the activities. However, I found interesting that one of the participants

mentioned that sometimes when they had to interact with their friends, they did it in Spanish. He mentioned that this was not good for their English practice.

Most of the students reported that they were nervous and afraid at the beginning of the course. The participants argued that speaking in another language produces anxiety because they could not express what they have in their minds in the target language. However, they mentioned that this changed with time as they started to feel more comfortable and confident in class. Students struggled with oral production at the beginning of the course because they were not used to working on similar strategies in their previous courses.

## CONCLUSIONS

Critical thinking strategies applied in a university-level English class had positive effects in the development of oral production. Participants showed an increase in communicative interactions as these strategies allowed students to interact with the teacher and their classmates frequently and consistently. It can be concluded that these strategies helped students to develop their speaking skills. However, grammar was the sub skill in oral production that showed the least improvement. This corresponds with the nature of the strategies considered. It can be said that these strategies are more useful to develop fluency than accuracy.

Critical thinking strategies are appealing to students. In fact, participants mentioned that they liked the strategies. University students like to provide their opinions, but they need to be trained to think and opportunities should be provided in class in which they can have the chance to participate actively. These strategies give a voice to students and allow them to improve their oral production while training their brain to think critically and analyze their answers before speaking.

It can be concluded that these strategies can help to increase vocabulary acquisition. Students mentioned many times that they learned a considerable amount of new vocabulary, as they needed the words to speak. Even though this study did not focus on vocabulary acquisition, it is important to



consider it in further research.

Critical thinking strategies provide students with time to reason. This is extremely important to students in early levels of second language learning because they need to organize their ideas before producing speech. Using these strategies with students who have an A1 level of English is possible. It could be misinterpreted that these high order level of thinking strategies are better applied with higher levels of proficiency, but we can now say that A1 and A2 students can work with these strategies as well as others.

All of the strategies included in the study were easy to use and adapt to the topics presented in class. Teacher Questioning needs to be prepared in advanced if the teacher is using this strategy for the first time. Think-Pair-Share is a very adaptable strategy, as the instructor does not need to prepare anything in advance, just a discussion topic or question. It takes up very little time in class as well. Debates usually take more time to set up, regarding specifically the formation of groups and asking students to organize themselves and gather ideas. Also, during this study, this strategy needed more time to be completed as students liked to give their opinions and defend them.

Even though this study has contributed to the Ecuadorian EFL context, further research needs to be conducted in other type of universities and high schools, private and public ones. Thus, by carrying out research in different conditions of other educational contexts, we will be able to have a better idea of what is happening in our country regarding the effects of critical thinking skills in oral production in our EFL students. Also, the effects of the employment of these strategies can be studied in other language skills, such as vocabulary.

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## APPENDIX 1

### Formulario de Participación Voluntaria

**Nombre del estudio:** Efectos de estrategias de pensamiento crítico en el desarrollo de la habilidad de hablar en el idioma inglés.

**Investigador:** Jessica Ochoa D.

**E-mail:** jessicaochoa\_92@hotmail.com

El presente estudio tiene como objetivo analizar los efectos que tienen las estrategias de pensamiento crítico en el segundo idioma. Es de su completa decisión aceptar el ser parte del estudio o no. Después de haber aceptado, usted tendrá la opción de abandonar hasta antes del análisis de datos recolectados. Es importante recalcar que usted no será afectado de ninguna forma por el estudio y sus resultados; al contrario, su participación supone una valiosa contribución para la academia y futuras técnicas de enseñanza del inglés como lengua extranjera.

El estudio comprende la aplicación de técnicas de enseñanza en el inglés y el impacto de las mismas en el dominio de la lengua. Se busca aplicar estrategias que promueven el trabajo en equipo y el progreso estudiantil. El tratamiento del estudio durará 3 meses en los cuales usted desarrollará actividades académicas las cuales serán analizadas para obtener medidas y sacar conclusiones. Todo resultado obtenido del estudio o tareas no será incluido en su promedio de calificaciones.

Toda la información del estudio será de absoluta confidencialidad, así como resultados individuales de los participantes. Usted será asignado un número el cual solo usted y el docente tendrán conocimiento, y en caso de publicación del estudio como artículo académico, su identidad no será revelada por ningún concepto. Finalmente, es importante recalcar que usted no pagará por ser parte estudio ni recibirá un pago por lo mismo.

Su participación es estrictamente voluntaria y si tiene alguna pregunta sobre el estudio, puede contactarme a través del correo electrónico o en persona.

Yo, Jessica Ochoa D., he cumplido con informar de manera completa sobre el estudio al estudiante. He discutido las actividades a realizarse, procedimientos, confidencialidad y he respondido a todas las inquietudes.

Investigador: \_\_\_\_\_

Date: \_\_\_\_\_

Estudiante,

He leído toda la información incluida en este consentimiento escrito. Todas mis dudas fueron respondidas satisfactoriamente. De manera voluntaria, acuerdo participar en este estudio.

Estudiante: \_\_\_\_\_

Date: \_\_\_\_\_



## APPENDIX 2

Speaking Rubric used to evaluate participants' oral production.

A2	Grammar and Vocabulary	Pronunciation	Interactive Communication
5	<ul style="list-style-type: none"> <li>Shows a good degree of control of simple grammatical forms.</li> <li>Uses a range of appropriate vocabulary when talking about everyday situations.</li> </ul>	<ul style="list-style-type: none"> <li>Is mostly intelligible, and has some control of phonological features at both utterance and word levels.</li> </ul>	<ul style="list-style-type: none"> <li>Maintains simple exchanges.</li> <li>Requires very little prompting and support.</li> </ul>
4	<i>Performance shares features of Bands 3 and 5.</i>		
3	<ul style="list-style-type: none"> <li>Shows sufficient control of simple grammatical forms.</li> <li>Uses appropriate vocabulary to talk about everyday situations.</li> </ul>	<ul style="list-style-type: none"> <li>Is mostly intelligible, despite limited control of phonological features.</li> </ul>	<ul style="list-style-type: none"> <li>Maintains simple exchanges, despite some difficulty.</li> <li>Requires prompting and support.</li> </ul>
2	<i>Performance shares features of Bands 1 and 3.</i>		
1	<ul style="list-style-type: none"> <li>Shows only limited control of a few grammatical forms.</li> <li>Uses a vocabulary of isolated words and phrases.</li> </ul>	<ul style="list-style-type: none"> <li>Has very limited control of phonological features and is often unintelligible.</li> </ul>	<ul style="list-style-type: none"> <li>Has considerable difficulty maintaining simple exchanges.</li> <li>Requires additional prompting and support.</li> </ul>
0	<i>Performance below Band 1.</i>		

**Source:** University of Cambridge. (2003). Cambridge Key English Test 1 Student's Book: Examination Papers from the University of Cambridge ESOL Examinations. Cambridge, United Kingdom: Cambridge University Press.