



NATURAL APPROACH OR COGNITIVE APPROACH LEARNING OR ACQUIRING A FOREIGN LANGUAGE?

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ABSTRACT

There is a big dilemma among instructors teaching English as a foreign language. Competence and teaching grammar rules are the primary pedagogical concern. Competence is directly related to the ability of proper grammar use of a language. However, methodological discussions end up accepting that grammatical rules are neither sufficient nor demonstrating the acquisition of the language. Learner students may have correctly learned grammatical rules, but some studies disagree on teaching only grammar because it will not be enough for students to speak forcefully. These circumstances lead to the discussion on the English Teaching method used at the Autonomous University of Ciudad Juárez (UACJ). This study aims to answer 1.) Which of the following approaches are more suitable to teach a second language, Natural Approach vs. Cognitive Approach? 2.) As to what extent should we emphasis grammar rules on teaching a second language to obtain the most benefit? Lastly, a sizable neurolinguistics portion of information is added to help us understand how the brain responds to learning a foreign language.

1. Introduction

A great dilemma has been detected on instructors who teach English as a foreign language, as to what to focus on; either teaching a cognitive method of “grammar rules” or concentrating on teaching students to become competent in speaking the foreign language. Focusing, only on teaching grammar usually, learners fail to acquire the skill of the utterance, unless “they are psycholinguistically ready to acquire it” Pienemann (1984, cited in (Fotos, 1998). To such enigma, it is important to know the reasons as to why foreign English instructors are having a tough time by implementing both methods. It is known that there are several tactics as to how English pedagogical instructions should be presented. For example, the cornerstone to either approach is grounded on the significance of the development of verbal reasoning skills, listening skills, reading skills and high achievement in writing skills, as well as having a better understanding of the culture where the language is spoken. However, most of foreign language instructors decide to apply the cognitive approach which is strongly linked to their prior and own experience in learning a foreign language. Such position cannot be criticized because for decades the approach of teaching grammar has been and still is a teaching method in many foreign countries. Conversely, the specialized literature shows that foreign language instruction is much more complex than a simple grammar choose (Ur, 1991). Although, it is typical to come across with instructors who resort to cognitive method “grammar rules” because they have been practicing it for years (King, 2016) and quite often they make a decision of reorienting a new pedagogical approach assigned by their institutions. Until the present day, the cognitive method aspects of teaching still exist, even though new thriving approaches came out from supportive theories of teaching and acquiring a foreign language. For example, in recent years, the curriculum programs have been changed to be more task-oriented, which means, it establishes how learners develop communication and rely less on “grading grammar elements” (Nunan, 1990). However, instructors believe that to produce the spoken language; students need to learn grammar first to achieve the best results,

then students must practice communication on their own outside of the classroom. In an attempt to find the best and most accurate method for students at the university level in a foreign country, the following questions were considered. 1.) Which of the following approaches are more suitable to teach a second language, Natural Approach vs. Cognitive Approach? 2.) As to what extent should we emphasis grammar rules on teaching a second language to obtain the most benefit?

2. The brain of second language learning in a foreign country (L2)

As aforementioned, the lack of the right methodological approach can affect students who want to become bilingual. On the other hand, there must be neuropsychological factors to explain why a wide range of students are not acquiring the second language (L2). This project is not about gathering and analyzing data from the neuropsychological perspective, but instead, consider different theories as possible explanations to why students are not able to acquire a second language. Firstly, we start by exploring how language process in the brain. The brain is divided into approximately equal halves, the right and left hemispheres. Several parts of the cortical areas in particular the left hemisphere is responsible for performing specific tasks n the role of language use (Glezerman T. & Balkoski, 2002). We start by hearing a word, and the acoustic phonetics are then registered in the auditory cortex found in the dorsal part of the temporal lobe. The auditory information is driven into what is called the Wernicke’s area, “which handles understanding and comprehending the language” (Mason, 2018), and the information then travels into the “Broca’s area, which is placed in front of the motor cortex”. In this area, the data is processed and transformed into an oral language. Due to the complexity of anatomical language, scientists rely on functional neuroimaging. This accurate method brings precise and valuable information to the anatomical Broca’s area where the language is developed and has been sub-divided into three regions, phonology area, semantic, and syntax (Bookheimer, 2002). Functional magnetic resonance imaging (fMRI) study points out that prior phonemic cognitive representations are grasped and stored in the left Broca’s area

where the opercular part is responsible for obtaining access to words through an articulatory route (Paulesu et al., 1997). Both approaches focus on the fact that during the acquisition of phonology, semantics, and syntax, there are critical neuronal changes. Accordingly, it is widely assumed for us to think that second language learners process the language in the same neural area as their first language (L1). However, a new research study conducted with bilingual brains, reveals that their brain has to master two lexicons and two phonological systems (Golestani, Molko, Dehaene, LeBihan, & Pallier, 2007). Additional research, however, is still warranted to determine where, exactly, the phonological system's storage a second language. Many experts in the field such as (Jacquemot, Pallier, LeBihan, Dehaene, & Dupoux, 2003) point out that the phonological system might store the information either nearby or in the auditory cortex. Until now, however, many of the studies in the neuroscience still refer the processes of L2 as taking place in the same neural structural system in charge for L1. Either or, there is no doubt that there is neural activity in the L2 brain, as the results obtained by (Abutalebi, 2008) established that such motion would disappear as soon as proficiency reached as to "native-like" by continues practicing communication. Other detail studies found fundamental changes on the L2 brain, "the increased gray matter (GM) density and white matter (WM) integrity" (Li, Legault, & Litcofsky, 2014) in the production of a second language. The increased of (GM) and (WM) were observed in all of a wide age range, including children, young adults, and elderly. As a result in most cases where the students have studied phonology, there is a typical manifestation of increased gray matter density according to the functional imaging study (Grogan, Green, Ali, Crinion, & Price, 2009). However, it can be considered that the age of the acquisition can be subject to the competence and the specific characteristics of the language and the individual differences (Li et al., 2014).

There is apparently no single answer as to how learners acquire, store, and perceive the sound (phonology) of a second language. However, learning the auditory word (phonology) appears to be directly related to properties of the second language speech.

Therefore, the lack of not be able to understand the auditory word may hinder learner's processing speech accuracy in L2. For example, in many cases, second language learners have never been introduced to phonetics or semantics. Findings indicate that students only hear their instructor babbling but not be able to understand the meaning of the language because it has not existed prior prints of phonetics in their auditory cortex or the area where the second language is stored.

3. Method

Students who enrolled in English classes from the Universidad Autónoma de Ciudad Juárez (UACJ) took part in this project. The purpose of the project consists of comparing two teaching methodologies, using the second language acquisition theory to support the hypothesis questions. 1.) Which of the following approaches are more suitable to teach a second language, Natural Approach vs. Cognitive Approach? 2.) As to what extent would be beneficial to only emphasis grammar rules on teaching a second language.? The experimental group is taught using natural approach and control group is taught using cognitive approach. There were 85 totals second language university students (42 males, and 43 female). There were 15 males, and 27 females as part of the experimental group and 16 women and 27 men were part of the controlled group. The study began with 85 students, but with only one student marked as a voluntary withdraw. The age of the participants ranged between 17 to 23 years old. Students were from both a private or public school's backgrounds and different socioeconomic status. The student's education-focused included major as Engineering, Nursing, Business, Dietitian, Physician, Software Engineering, and Education. All second language students completed the third level out of 11th grade, according to the UACJ curriculum program. Students reported starting learning English as a second language, at full length from middle school to high school. They asserted not learning much throughout those years, but a few vocabulary words. Students claim that the second language program from the Universidad Autónoma de Ciudad Juárez (UACJ) gave them more vocabulary knowledge and grammar. However,

the real issue here lies on speakers who still not able to develop the verbal and listening skill to communicate, even though they are taking L2 fourth level. It is important to reference that when the research took place, the University of (UACJ), did not have the IRB regulation. In acknowledging the importance of rules and regulations, informed consent was provided, contending a full explanation on the purposes of the study, confidentiality, description of procedures and the expected duration. The inform consent, written in Spanish, shows that the participation in the research is entirely voluntary, free from coercion or influence. Every student had the freedom to withdraw from the study without any penalty or loss any benefits that students are otherwise entitled to. They were also informed, they would not receive any financial compensation for their participation, and this study would not be subject to a grade change, or possibility thereof.

3.1. Instruments

The university provided three exams the pretest, midterm, and the posttest and the last two were administered after the two groups covered the exact specific numbers of units. All tests were exact, and all were equally administered to the fourth English level in both the experimental and controlled group. The tests covered mostly grammar and a small portion of listening comprehension. The exam is based on conjugating verbs in different tenses and vocabulary. The exam format was multiple choice, filling in the blanks, conjugating verbs and listening comprehension activities.

3.2. Procedures

The same instructor taught both the experimental and controlled group. The teaching classes were conducted during the 16 weeks of the regular semester. All students met for three hours during the teaching sessions every week. The experimental group received the natural approach instruction, while the controlled group was taught using the cognitive approach, the same method that the UACJ has been using for several years. Both group's tests were scored on a scale of 0 to 100 points, ranging from 36 points of multiple choice, 34 points for fill in the blank, 25 points

for complete the sentences and 5 points for listening comprehension.

4. Natural approach

In 2011, The Modern Language Journal conducted a study on Subcomponents of Second-Language Aptitude and Second-Language Proficiency (Sparks & St, 1998). The researchers revealed that the ability to learn a second language (L2) relies on two factors, the student's ability to learn an L2 and how the L2 heavily depends on the students' skill levels of the first language (Sparks, Humbach, Patton, & Ganschow, 2011). If we scrutinize those factors, there is no doubt that a learner should have developed the four skills of his or her first language, including; reading, writing, listening (phonology), and speaking. However, what happens when one or two skills failed? Unfortunately, we cannot dismiss the strong deficiency on reading and writing competence across the Mexican nation. Notably, each teacher has various reasons for not supporting their students' reading and writing skills on a daily basis (Jennings, Rule, & Zanden, 2014). Such situation may come as a shock, but researchers such as Anders & Guizzetti; Moore; Anders, Filip & Jaffe cited in (Hall, 2005), are amongst many who argue that teachers may not recognize the essential role that they play to help students to read and write (Hall, 2005). To a fact, Mexican students hardly read, and if they do so, the frequency is minimal. The consequence of it is that students show a lazy predisposition, lose interest, and begin to see reading and writing just like another boring assignment. We might find it a bit paradoxical because according to a research conducted in México students read short stories in Spanish, discuss them in a simple preparation. The next activity, students were asked unplanned random questions. There was no writing task. Hence, students lost the opportunity actually to write (Spicer-Escalante, 2011). The salient point here is that many students if not all transfer such a lack of skills into a second language. In fact, without a formal reading and writing instructions, second language learners struggle to achieve the comprehension of syntax, semantics, and pragmatic skills and intelligible speech.

Now let me zero in on Krashen's natural approach theory that contains five hypotheses in second language acquisition (Krashen,

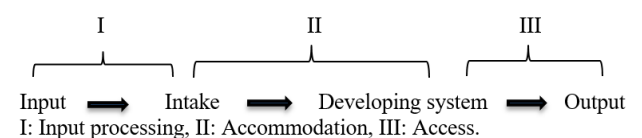
1982a) acquiring versus learning, “the natural order, the monitor, the input and the effective filter”. Out of the five, input and the affective filter hypothesis are essential in this review because it may hold the variables as to how to resolve so many issues that teachers encounter in the second language teaching. Notwithstanding, acquisition versus learning mayhap, represents the core of Krashen's theory since he was entirely opposed to the idea of learning a language. The main point of Krashen's philosophy is that all humans are capable of acquiring the language that they are exposed to as a child, and they will do so naturally, without teaching them any grammar rules. So that, Krashen suggested replicating the same natural subconscious process to second language learner students (Krashen, 1982b). Moreover, the acquisition may take place, according to Krashen when students understand the input of the target language. The input hypothesis is that students need to concentrate on meaning and not much for structure. To do so, according to Krashen teachers must use extra-linguistic input, meaning go beyond student's current level of competence (i+1). So, what exactly Krashen suggests when he talks about applying (i+1) on a regular basis classroom? Regarding, comprehensible input (i+1) Krashen and Terrell recommend "Total Physical Response" (TPR) method (Asher, 1968), through which teachers are modeling actions such as 'walk around, stand up; clap, sit down, and so on. So, students can reproduce the language as well as the commands. In real practice, providing input (i+1) is very complex, difficult, and exhaustive to teachers mainly by modeling on a daily basis. When the (i=1) is too complex to explain, teachers need a little bit of help such as using realia, and visual aids. In other words, acquiring a language is an implicit, natural learning, or so-called "picking-up" a language. As part of the acquisition of the language is to recognize how each word (lexicon) function, how they are pronounced, what they refer to, and how do they relate to other words in a sentence. There is, therefore, an important thing to clarify, hopefully, can learners recognized grammatical error when they use the language as to "sounds" right, or "feels" right, utterance errors feels wrong (Krashen, 1982b), even though an individual does not consciously know what the rule was violated.

The monitor hypothesis takes place in the acquisition and learning in a unique way, according to (Krashen, 1982b), for example, the monitor hypothesis in learning is a constant reminder to L2 speakers to apply correct grammar rules at any point in time while speaking or writing. For second language learners become very complex to do that. Because transferring a thought message into speech may take many steps to do so. Speech planning bears three stages according to (Martin Taylor & Taylor, 1989) parallel model. The first stage is called conceptualization, meaning what the speaker wants to say. The second stage is called formulation; here the concepts are represented onto the linguistic form (grammar and phonology encoding). L2 students are stuck here because they must be aware of avoiding making speaking or writing errors, Krashen will refer to as conscious monitor hypothesis. Moreover, the last stage is called the process of articulation. That is, second language users should know how to build sentences in their speech.

5. Cognitive approach

On the other side of the natural approach is the one suggested by authors such as (VanPatten, 2002) and those whose fundamental tendency is the explicit instruction of grammar. This approach is known as the cognitive method. It has existed for a very long time and continuously refined throughout the years and still is an essential contemporary component in the instruction of a foreign language. VanPatten suggested three types of cognitive processes that characterize this approach. The first type, the input (what learners hear “phonology”) then transfer into the intake (what he/she understands). The second type is the intake that refers to how learners develop their new grammar and the third type process is to use the correct grammar to produce a speech. Figure 1 represents (VanPatten, 1993)

Figure 1.



Source: VanPatten, 1993.

Its distinguishing feature of this model is the instruction of the formal code of the language (i.e. grammar) as stressed by (T. D. Terrell, 1991). It is to teach a set of rules associated with a lexicon and when applied to an instruction requires students study grammar rules, practicing and apply them in an interactive context of the target language. The cognitive method in some way represents an alternative of reconciliation between the instruction procedure that focuses on communication and the form (VanPatten, 2002). Following Richard and Rodgers, we find that those who hold the cognitive method they link to a more sophisticated model of structuralism to a form that makes more use of the intellect. It is a theory of learning that is more metalinguistic and less behavioral, unlike from the natural approach (Richards & Rodgers, 1986). The cognitive method, then, is more linked to learning, which we identify more with the study of rules or grammatical rules and that is carried out as an entirely conscious process. (VanPatten, 2002) by reviewing the theoretical scheme of the natural method, (Tracy D. Terrell, 1977) explains that this approach includes exclusively listening comprehension activities, considered as comprehensible input. Not all comprehensible input has a positive effect, in some cases, incomprehensible input can trigger the acquisition of subconscious grammar as stated by (White, 1995). When referring to comprehensible input Terrell deduces that learners stores a considerable amount of information in which they will use it later in an authentic speaking. However, according to the cognitive perspective, input processing is the psycholinguistic mechanism that occurs through the connection between meaning and form during comprehension. The concept of psycholinguistic input mechanism encompasses the syntactic structure of the sentences (meaning and form) which is equally identified as the "intake" what she/he understands (Gass, 2002).

In the so-called hypothesis of Krashen's monitor, there are aspects of teaching grammar that are suggest being used only for self-correction. Krashen posits that covering grammar can lower the effective filter of some adult students and this will affect the process of language acquisition. While most aspects of Krashen's natural approach focus on acquiring a second language without teaching grammar,

VanPatten (2002) argues that teaching should have more analytical approaches in the grammatical categories. For this purpose, Van Patten suggests a scheme divided into three parts: 1) input processing 2) accommodation and restructuring, and 3) access. Regarding point number two, this is considered as the process of incorporating or rejecting the intake within a development system. Point number three, access, is responsible for rewarding the syntactic and grammatical forms used in the output. The hold idea of grammatical construction is to set forth the semiological function of the language, that is referring to the connectedness between meaning and form (Achard, 2008). Although, on the other hand, the existence of grammatical explanation would isolate the natural process, which according to this method grammatical rules should be internalized subconsciously. Nonetheless, do surround the cognitive teaching approach has little or no impediment to be widely used in teaching a foreign language across the globe.

6. Data analysis

The This study aimed to apply in a regular classroom setting the principles of Krashen natural approach theory for second language learners. However, before describing the tasks, it is relevant to mention that the participants were not a new beginner regarding language learning, they took three English grammar classes at the University level with a passing grade. As stated by the University guidelines, regardless the teaching methodology that the instructor may focus on, she/he must use the Blockbuster grammar textbook and the complementary students' workbook, assigned by the English program. In addressing the textbook material such as vocabulary & conjugation of verbs, instructions were conducted 100% in English supporting by realia, visual aids, and Total Physical Response (TPR). Subsequently, after every instruction, students were paired up to engage in 3 to 4 minutes' conversational task. There were many occasions, for instance, where participants attempted to translate words into Spanish while working with their pairs. We realized that even using (TPR), role play, hand-on activities, and visual aids, there was incomprehensible input as (White, 1995) mentioned in her study, particularly with verbs

conjugation, and the pronunciation of the vocabulary words. Because, “English spelling system often fails to represent the sound of English in a straightforward manner” as stated by (Peter, 1992). This factor is perhaps the most crucial to highlighter because pronunciation is still not part of English teaching curricula in foreign countries (Isabelle, 2018). Even though our focus was not pronunciation per se, we were inherently repetitive in every class for the comprehensible input took place. However, based upon in practical terms, it is almost impossible to cover twenty units from the Blockbuster's textbook in the attempt to apply Krashen's theory. It is fair to say that there were so many exhausting moments where we were terrified of not having enough time to cover every lesson's material. The other component that was part of every lesson activities was the student's workbook follow up. The follow up took about ten to fifteen minutes of every class, but many students pointed out that they drifted off from vocabulary words. To ensure inherent comprehensible input we created activities that carried out answers to clarify vocabulary uncertainty.

Data was analyzed using SPSS, T-test, and alpha level set at $\alpha = .05$. The T-test results obtaining on the pretest indicates that $t = .247$, and $p < .001$ is less than the critical value, the midterm exam findings show the $t = -10.292$ and $p < .040$, is less than $p < .05$ and the post-test yielded at $t = -5.618$ and $p < .003$ is smaller than the critical value indicating that the results are statistically significant, therefore we reject the null hypothesis.

Table 1. The p-value for the t-test results

	Group	N	Mean	SD	SE	T	Sig
Pre Test	Cognitive	42	57.79	15.52	2.39	.247	.001
	Natural	42	57.10	9.28	1.43		
Mid Test	Cognitive	42	60.69	13.11	2.02	-5.61	.003
	Natural	42	74.21	8.45	1.30		
Post Test	Cognitive	42	67.93	10.23	1.58	10.29	.004
	Natural	42	87.55	6.91	1.06		

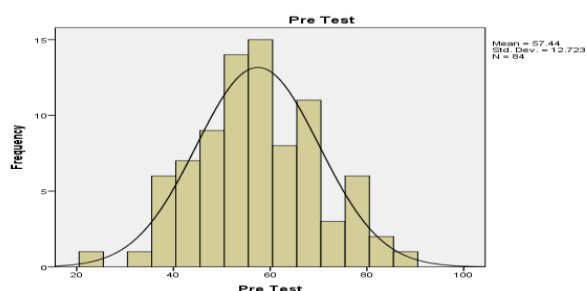
Source: Universidad Autónoma de Ciudad Juárez: Enriqueta Claudia Serrano Romero (2018).

Table 2. Descriptive statistics for the total sample

	Group	N	Percentage
Gender	Female	43	51.19%
	Male	41	48.81%
Citizenship	Mexicans	84	100%
Level of education	Undergrad	84	100%

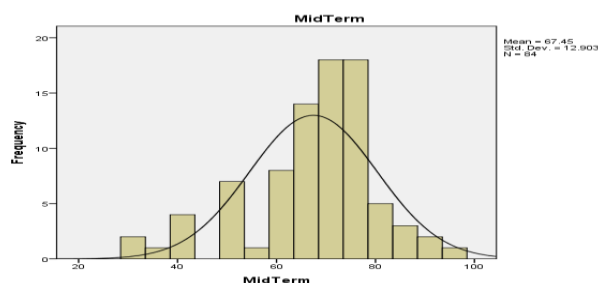
Source: Universidad Autónoma de Ciudad Juárez: Enriqueta Claudia Serrano Romero (2018).

Graph 1. Cognitive and natural group pre-test results



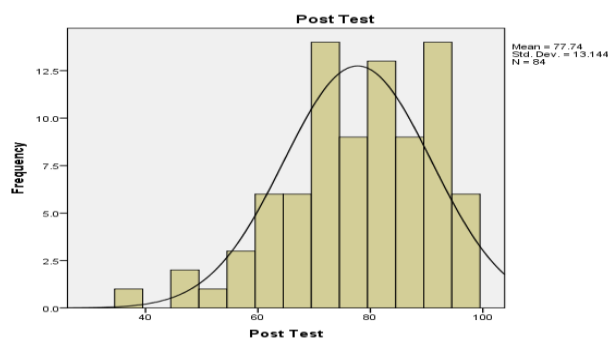
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Graph 2. Cognitive and natural group midterm results



Source: Universidad Autónoma de Ciudad Juárez: Enriqueta Claudia Serrano Romero (2018).

Graph 3. Cognitive and natural group post test results



Source: Universidad Autónoma de Ciudad Juárez: Enriqueta Claudia Serrano Romero (2018).

7. Conclusion

The results wrote down the progress made by participants in this research that natural approach is suitable for learning English as a foreign language. However, there is an essential key point to remark. After analyzing the comprehended approach and data, the natural approach teaching method will be more effective for more advanced levels. Evidence showed that in the use of natural approach, students had higher retention of the new language in comparison with cognitive approach. Nonetheless, we may consider that having grammar background helped them quickly understand the new material. Therefore, grammar terminology such as nouns, verbs, adjectives, adverbs, conjunctions, and phrasal verbs had not represented a challenge for them. This suggestion presented is by no means compelled but certainly will help to get better outcomes in further investigations and for practical classrooms

related matters. On the other hand, it is relevant to bring up student's suggestions, who they believe that teachers must include pronunciation in their daily activities. Also, over the years in the research literature, students voiced it out, however, bear in mind that pronunciation "phonology" still, has not put in real practice. This situation has created a great deal of frustration as to why pronunciation is not part of the curriculum. Recent studies started advocating to adjust pedagogical instructions practice by including phonology that can benefit students. Expecting on building up a robust and clear phonological system in student's brain that will help them recognize the intonation, rhythm, and stress of words to have a successful communication skill (Levis & Grant, 2003). Finally, to have more pragmatic pronunciation approach, teachers must be trained to be more capable of incorporating key pronunciation futures into their pedagogical method

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