



C A P Í T U L O 7

HOW TO LEARN GRAMMAR INDUCTIVELY

María Guadalupe Talavera Curiel

ORCID: 0000-0001-5828-2395

Alani Belegui Hernández Sánchez

Erika Hernández Andraca

Samantha Malinayi Martínez Hidalgo

Universidad De Guadalajara

ABSTRACT: This study explores the challenges faced by Mexican English teachers in implementing inductive grammar teaching methods and examines the impact of such methods on student motivation. Previous research, including Apolonio (2021), indicates that many Mexican English teachers struggle to adopt inductive approaches due to a prevailing reliance on traditional deductive methods learned during their training. This tendency often limits teachers' ability to effectively engage students using inductive strategies. Additionally, teaching methods can significantly influence student motivation, an important factor in language acquisition. To investigate these challenges, a case study was conducted at a public institution in Veracruz, Mexico, involving 16 college students enrolled in online English courses. An inductive approach to grammar instruction was introduced, contrasting with the students' prior experience of largely deductive, passive learning. Findings revealed that students initially found the inductive method unfamiliar, highlighting the need for active engagement to foster comprehension and motivation. Teachers also reported difficulties adapting to and confidently applying the inductive approach in their instruction. The study underscores the necessity of providing English teachers with targeted training on inductive grammar teaching to overcome existing pedagogical constraints. It also emphasizes the importance of fostering student-centered learning environments to enhance motivation and language development. Ultimately, this research advocates for the development of optimized inductive teaching methodologies tailored to the Mexican educational context, aiming to improve both teaching efficacy and student outcomes in English grammar learning.

KEYWORDS: Inductive grammar teaching, english language teaching, teacher challenges, student motivation, active learning.

RESUMEN: Este estudio explora los desafíos que enfrentan los profesores mexicanos de inglés al implementar métodos inductivos para la enseñanza de la gramática y examina el impacto de dichos métodos en la motivación de los estudiantes. Investigaciones previas, incluida la de Apolonio (2021), indican que muchos profesores mexicanos de inglés tienen dificultades para adoptar enfoques inductivos debido a una dependencia predominante de los métodos deductivos tradicionales aprendidos durante su formación. Esta tendencia limita a menudo la capacidad de los docentes para involucrar efectivamente a los estudiantes mediante estrategias inductivas. Además, los métodos de enseñanza pueden influir significativamente en la motivación estudiantil, un factor importante en la adquisición del idioma. Para investigar estos desafíos, se realizó un estudio de caso en una institución pública de Veracruz, México, con la participación de 16 estudiantes universitarios inscritos en cursos de inglés en línea. Se introdujo un enfoque inductivo para la enseñanza de la gramática, que contrastó con la experiencia previa de los estudiantes, basada mayormente en un aprendizaje deductivo y pasivo. Los resultados revelaron que los estudiantes inicialmente encontraron el método inductivo poco familiar, subrayando la necesidad de un compromiso activo para fomentar la comprensión y la motivación. Los docentes también reportaron dificultades para adaptarse y aplicar con confianza el enfoque inductivo en su enseñanza. El estudio destaca la necesidad de brindar a los profesores de inglés una capacitación específica sobre la enseñanza inductiva de la gramática para superar las limitaciones pedagógicas existentes. También enfatiza la importancia de fomentar ambientes de aprendizaje centrados en el estudiante para mejorar la motivación y el desarrollo del idioma. En última instancia, esta investigación aboga por el desarrollo de metodologías inductivas optimizadas y adaptadas al contexto educativo mexicano, con el objetivo de mejorar tanto la eficacia docente como los resultados de aprendizaje de la gramática inglesa.

PALABRAS CLAVE: Enseñanza inductiva de la gramática, enseñanza del idioma inglés, desafíos docentes, motivación estudiantil, aprendizaje activo.

SETTING OF THE PROBLEM

Research indicates that Mexican English teachers often face challenges when implementing inductive grammar teaching methods. A study by Apolonio (2021) highlights the difficulties educators encounter in adopting inductive approaches, noting that teachers tend to rely on the methods they were taught, which may not include inductive strategies. Student motivation can also be influenced by the teaching method employed.

Research conducted at a public institution in Veracruz, Mexico, implemented an inductive approach to teaching grammar to 16 college students enrolled in online English classes. The study found that students were accustomed to passive

learning through deductive instruction, indicating a need for greater emphasis on active engagement when introducing inductive methods. Learning how to use the inductive approach to teach grammar has always been a great struggle for English teachers, so it is intended to find an optimal method.

JUSTIFICATION

This research is meant to impact the English learning process through inductive teaching due to the lack of motivation on students from deductive teaching classes. This happens at different levels; University, high school, middle school and elementary school. So the impact can be at all levels. The main innovations of this approach rely on online settings that can also receive the benefit of this research. In other words, the 2020 pandemic scenario provided an urgent necessity to improve such online settings.

CONTEXT

The research was carried out at Universidad de Guadalajara (UdG) one of the largest public universities in Mexico with 332,903 students (Numeralia UdG, 2024A). UdG has 17 campuses to offer bachelor degrees, master programs and PhD programs.

It also offers classes at high school levels. One of these campuses is Centro Universitario de Ciencias Sociales y Humanidades (CUCSH). This site has 10,406 students (Numeralia UdG, 2024A) The bachelor's degree in *Licenciatura en Docencia de Inglés como Lengua Extranjera* (LIDILE) or English Language Teaching as a Foreign Language in English, is offered in CUCSH. There are 147 students enrolled in the English teaching program (Numeralia UdG, 2024A). As part of this program, students are asked to get into groups of four called micro-teaching groups to teach basic English classes in 6 levels. Each microteaching group plans and performs a class from 7 to 8 a.m. or from 8 to 9 a.m. Monday through Thursday. LIDILE students are exposed to a teaching program called *Programa Abierto de Lenguas* (PAL) during 4 semesters. The last two semesters of LIDILE, they coordinate PAL by administering students, observing microteaching groups and giving academic feedback. Teachers in LIDILE are also involved as observers to evaluate microteaching groups. In the semester calendar 2025A, there were six groups formed for level 1, level 2, level 3, level 4, level 5 and level 6. This structure and program have peculiar characteristics for teaching online and face to face. As students in this program, we had a valuable opportunity to conduct research with our Mexican classmates. The main goal was to compare how students learn and comprehend new topics by teaching them using inductive and deductive methods. This approach is new in Mexico, so it was important to study the success and difficulties of implementing it.

Inductive grammar is a teaching approach where students discover grammar rules by observing examples and identifying patterns, rather than being explicitly taught the rules first.

According to Anani (2017) in her research called *Teaching and learning of Grammar at the basic level of education: Revisiting inductive teaching approach* at the University of professional studies in Ghana, students who took inductive teaching, showed better skills than those who were taught through the deductive grammar method. She recommended that teachers use it to help students grasp grammar rules easily. This insight provides a better idea of the use and results of inductive grammar. The students are able to understand when they are exposed to the language or interacting with it.

Sousa (2017) states that it is essential to provide them with the necessary tools and opportunities for constant practice. However, it also establishes that: *“This does not mean that the brain will receive the information the students find necessary”* making it difficult to manage or include an inductive approach in the investigations.

Talaram (2016), in the research *Traditional vs Non-traditional* conducted at Griffith University, notes a lack of collaborative learning opportunities. Mostly due to the lack of students' low motivation levels, a problem that persists even when traditional teaching methods are employed. This brought another perspective to the table on how to use this approach, and it discussed the importance of motivation in students and how it affects their own learning process.

Another aspect supporting this research comes from the words of Mc Laughlin (2010) in his study, *Brain potentials reveals discrete stages of L2 grammatical learning* at the University of Washington. He explains that learners acquire a vast lexicon and acquire a set of well-formedness constraints that applies at multiple levels. This same process can be applied to the present research, where students can explore and learn on their own with the assistance of other tools.

Although numerous studies have addressed the inductive approach on a superficial level, examining its use and cognitive process, it is also crucial to conduct more extensive research on this matter in Mexico. According to Castillo Gallardo (2023) in the research *Perceptions regarding inductive and deductive grammar teaching* at the University of Guanajuato in the division of social sciences and humanities, students perceive the implementation of the inductive approach. It is an indicative teaching strategy that generates an appealing learning environment, unfortunately it took too much time for the students and participants to do some exercises. It can be implemented even though it could take more time as expected, but definitely a good use for the students and a way to learn English grammar effectively.

OBJECTIVES

This research aims to determine how to effectively teach English grammar in Mexican schools using the inductive grammar approach. Additional objectives for this research are to analyze techniques for teaching grammar inductively, to compare inductive and deductive grammar teaching techniques, and to identify which approach is the most appealing and effective for ESL students.

HYPOTHESIS

An inductive teaching approach will lead to greater acquisition and longer-term retention of new grammar points among students.

THEORETICAL BACKGROUND

Overview & proponents

Some important concepts that need to be understood when referring to inductive grammar teaching are explained as follows:

The first issue that is encountered is the traditional teaching-center mode, which is propitious to come into play as a guide, since the teacher supervises the activity by imparting system knowledge and academic opinions. C.Liu & F. Long. (2014). This clearly affects students' perception and prevents them from receiving the wisdom and development of their knowledge.

Unlike this concept, the inductive teaching approach shows that a well-established precept of educational psychology is that people are strongly motivated to learn things they clearly perceive a need to know. In other words, students' learning process is also motivated by their own need to know, as stated by Prince and Felder (2006). Thus, instead of telling them about things they know or asking for previous knowledge; students attempt to analyze the structure and be able to understand what they are learning.

In addition to this, active learning is also an important part of teaching, as the theory emphasizes that individuals learn through building their own knowledge, connecting new ideas and experiences to existing knowledge to form a new enhanced understanding. (Brands Ford, 1999). It is just essential for a proper learning environment to involve the students as much as possible.

Therefore, when choosing learning activities, it is useful to reflect on the learning process and what people actually do when something is learned, which was examined by C. Hughes, S. Toohey and S. Hatherley (1992). Because of this, there are several models of learning that teachers can use.

Furthermore, language acquisition is key in the teaching field, as it is the process by which humans acquire the ability to comprehend and produce language, either as their first or second language, as stated by Franklin UGA. (N.A.). The study of language acquisition provides evidence for theoretical linguistics and has practical applications in language pedagogy. This is heavily related to the foreign language learning, which refers to two phenomena: (a) the provision in one country of instruction in a language whose home base is another country, and (b) instruction in a transnational language such as English or Arabic whose identification with a particular country is minimal.

However, it is true that grammar is often the most important part of a lesson, which is why it is defined by Ur (1991) as follows: "It is the way language manipulates and combines words (or bits of words) in order to form longer units of meaning.". This definition is quite close to the common understanding of what grammar is. The main difference is that it establishes how the rules of language actually work, as stated in the work of Luu, T. & Nguyen, T. (2010). It is understood then that grammar arranges and shapes words.

In this aspect, motivation has also been seen as a key foundational component for predicting skill improvement and language learning achievement (Meltzer & Hamann, 2004). A variety of relevant motivational concepts (e.g., self-regulation, self-efficacy, and attitudes) and theories (e.g., self-determination, attribution theory, and goal theory) have been developed and investigated in literacy and second language teaching and learning settings.

Along with this, cultural context does a great job at creating an immersive class where learners gain insights into the beliefs, customs, and traditions of the target culture, as stated by Berns, M. (2013). This understanding promotes cultural sensitivity and enables learners to engage in respectful and meaningful interactions with native speakers.

Finally, it is important to put into practice the cognitive load theory, which assumes that knowledge can be divided into biologically primary knowledge that humans have evolved to acquire and biologically secondary knowledge that is important for cultural reasons. Secondary knowledge, unlike primary knowledge, is the subject of instruction. It is processed in a manner that is analogous to the manner in which biological evolution processes information, which was examined by Sweller, J. (2011). Thus, when dealing with secondary knowledge, human cognition requires a very large information store, the contents of which are acquired largely by obtaining information from other information stores.

METHODOLOGY

The methodology applied for the following research will use a qualitative and quasi-experimental design. According to Brannam, D, G., Brannam, M, J. & Tenny S. The Qualitative research design uses several techniques to develop a better understanding of the results of the techniques. Such as interviews, focus groups and observations. This design is considered as appropriate to see the results of the learners, being able to discover more of the students' perspectives according to their learning process and in what kind of method they acquire English grammar if they feel they want to learn more.

Finally, the Quasi-experimental design is a form of research that shares characteristics with a traditional experiment. It involves the manipulation of independent variables, such as participants and conditions, while the dependent variables are systematically measured (Cook & Campbell, 1979).

These methods will be used to compare the results and align with the primary objective of this research. It will be possible to determine the effectiveness of the inductive approach in Mexican students. Furthermore, these methods will allow the research to compare the results and suggest improvements to enhance students' learning process through the inductive teaching of English grammar.

INSTRUMENTS & RATIONALE

The study will involve a class taught entirely with an inductive approach. Given that the instruction was online, the activities were designed as digital tasks, which facilitated the inductive teaching method. The activities will center around a "News Reporter and Breaking News" theme to help students relate grammar concepts to a real-life situation. The content will cover grammar points that students have recently learned, allowing us to test the knowledge they acquired after being exposed to the inductive approach

Based on the results, teachers will be able to assess the effectiveness of the approach. It is also planned to teach some lessons using a deductive approach in order to directly compare students' acquisition and learning of the English language. For the class, teachers have chosen to focus on one use of the present perfect (for recent events). Students will be assessed throughout the research by playing an *Educaplay* game designed to test their knowledge.

Finally, the lesson will conclude by having students complete a reflection and commentary on the experience using a Google Forms questionnaire. This will be administered after they have been exposed to the grammar point through both the inductive and deductive approaches. The questionnaire will prompt students

to answer questions regarding their feelings about each method, which approach they found more appealing, and their comfort level with the inductive approach. It will also assess the perceived difficulty of the activity. The questionnaire will be written in Spanish (L1) to allow students to more effectively recall prior experiences of learning English grammar in Mexican schools. This will enable a clear comparison between their previous learning methods and those used in the course.

APPLICATION

The first activity applied was an alphabet game in *Educaplay*, which was used in order to activate the students. They tried to guess the vocabulary related to news or breaking news. The teacher assigned a student to read a word, and even when it was difficult at first, every student was able to perform the task correctly.

The presentation was filled with examples with color coding and missing words. No formula or mention of a formula was needed. Students were exposed to some examples, which included relatable or realistic scenarios that they may have experienced or at least heard of before. After looking at an example of the present perfect, teachers asked students if they noticed any difference between the two examples. Students guessed the correct form without the need of a formula; however, it took some time for them to identify it.

The majority answered correctly by saying that it took place in the present. With this topic covered, the student was able to create original examples, eliciting each example and correcting it. Additionally, a part of choral and individual repetition was necessary since some of the students were having a difficult time trying to pronounce the words.

The next exercise was a game of spotting the mistakes in a text. Students demonstrated a high level of comprehension towards the topic. Most of the students were engaged in being able to solve the possible mistakes located in the text.

For the last exercise, students needed to test their knowledge. This activity consisted of choosing between standard news or breaking news. Students chose a piece of news and wrote a report using the present perfect at least three times. The students were assigned with a model as an example. Altogether, the students shared their own news with each other. Finally, students were asked to answer a brief survey about the experience with this approach. Showing different opinions toward this new type of teaching and a different way to learn English grammar in an online setting.

DATA COLLECTION & DATA ANALYSIS

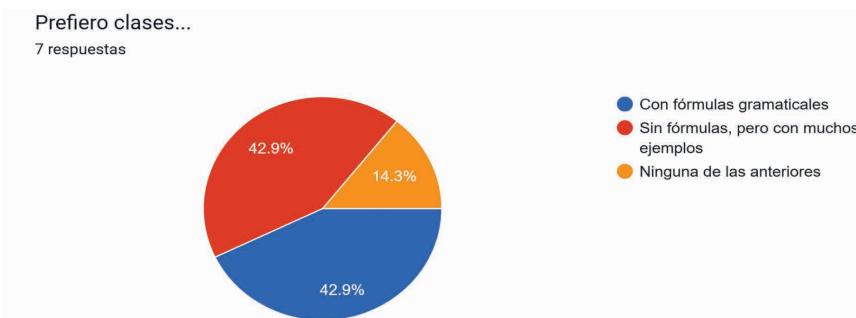
The data needed for the research was collected with the assistance of Google Forms, which was applied right after the class. 7 students in total participated in the survey and the results show their opinions on learning the English language as a whole.

Graph 1.



This graph shows that students consider grammatical rules to be a very important aspect of learning the language. Three students mentioned that learning such rules is important as it allows them to follow the structure and create sentences with ease.

Graph 2.



This graph shows that 42.9% of students prefer formulas, since it is easier for them to follow a predetermined structure, while the other 42.9% of them prefer to have a class where the formulas are not the focus as it feels unnatural. On the other hand, 14.3% of students prefer to learn by practicing the language first hand, and some also say it must be equal.

Graph 3.



A significant majority (71.4%) of students find it difficult to identify language structure from multiple examples, indicating that despite potential exposure to patterns, it is still perceived as a difficult task. Only a small percentage (14.3%) find it very easy, with another 14.3% of them who think it is somewhat easy. Notably, no one selected simply easy, which may either indicate it is clearly difficult, or just manageable under certain conditions.

Graph 4.



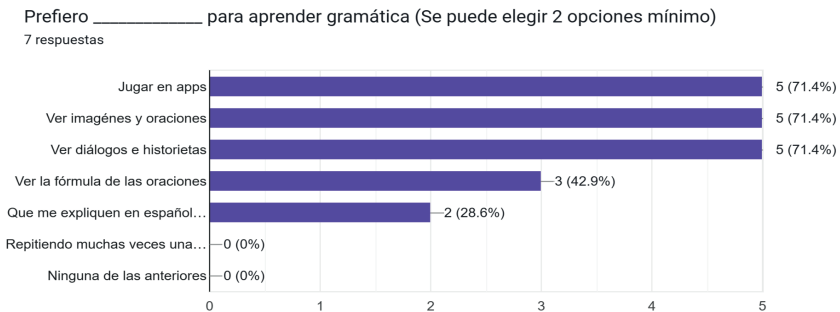
Students are evenly split between two methods as the most effective way to present grammar: using visual aids and color-coded words (each with 42.9%). Only one person found the use of a formula most effective. No one rejected all listed methods. This might suggest that visual and color-based learning strategies are clearly preferred over abstract, formula-based instruction, at least in the context of understanding grammar in full sentences.

Graph 5.



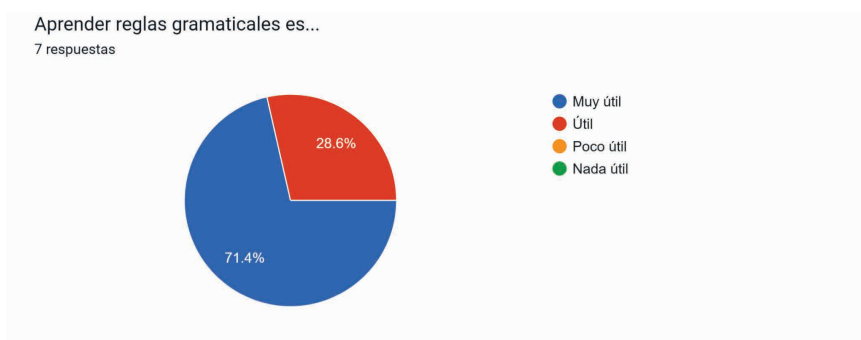
This graph seems to show that Kahoot is perceived by students as a highly effective tool for facilitating grammar learning. The absence of any negative responses indicates how beloved it is among students. This also supports the idea that game-based learning methods are valuable supplements to traditional instruction, particularly in language education.

Graph 6.



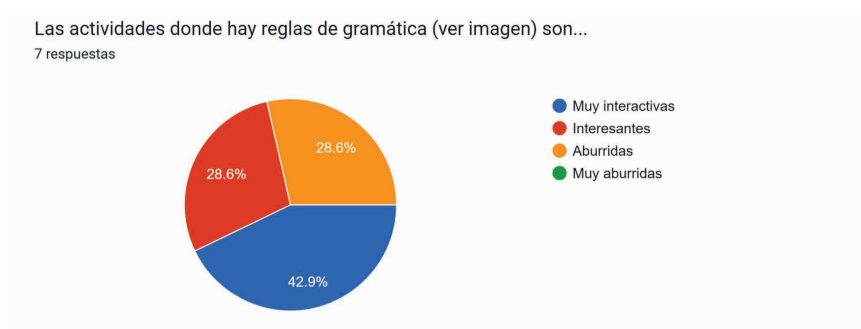
This graph portrays that the majority of students prefer grammar learning methods that are interactive, visual, and contextual, rather than those methods that focus solely on memorization or traditional explanations. This shows tech-based and visual content such as images and dialogues should be incorporated in the class when teaching grammar.

Graph 7.



This graph shows that all participants find learning grammar rules at least useful, with a strong majority (71.4%) finding it very useful. This demonstrates that students have a positive attitude towards grammar instruction, even if their preferred learning methods lean more toward interactive and visual strategies.

Graph 8.



The graph illustrates that a great majority of students (71.5%) perceive grammar activities as either interactive or interesting, suggesting an overall positive impression. However, a significant minority (28.6%) finds them boring. The absence of responses in the “very boring” category is a positive sign that the activities are not viewed as completely unengaging.

Graph 9.



This graph portrays that a great majority of students were taught English either with rules / formulas or through a mix of all methods mentioned, which emphasizes a strong influence of structured instruction. However, visual and intuitive methods had a smaller role in the learning process of some students (14.3% each), while translation was not reported as a primary teaching method whatsoever. Ultimately, this suggests that grammar-based and mixed approaches were the most dominant ones in the students' education.

CONCLUSION

The results show a great difference between the deductive and inductive approaches as to which is preferred by students. With these results, it is possible to determine the advantages and disadvantages of the inductive approach.

ADVANTAGES

The results of this research have found that inductive teaching is quite successful in the learning process of the students. Most of them have demonstrated engagement thanks to the interactive activities, gamification in class, repetition and multiple examples. These elements facilitated the learning process for students to acquire the grammar points seen in class, and the results after taking an inductive class were quite positive since a great improvement was shown.

Additionally, learners demonstrated to be committed to completing each of the activities as they tested their knowledge on the topics by following the instructions correctly after being exposed to an inductive virtual class. Some key elements used to accomplish this were interactive activities, color-coding, comparing answers with other classmates, doing comparison activities and creating original examples.

DISADVANTAGES

In spite of these positive results, there is also an enormous difference between these two approaches. Students were more comfortable with the deductive approach rather than the inductive approach. Not to mention that there were students who struggled with grammar without formulas. This led to the conclusion that Mexican schools from all levels seem to take this approach for teaching English grammar instead of innovating and encouraging students to get more involved in the class.

OVERALL CONCLUSION

Each one of the graphs demonstrate an interesting perspective about inductive approach in an online setting. It is clear that students went through deductive approach and reasoning as the main path to learn English. It is fascinating to see how students have different preferences when learning English grammar. Some of them are seemingly convinced to learn with rules/formulas, while others seem to prefer inductive classes. This is likely due to the fact that students went through the process of learning grammar deductively their whole life without realizing it.

Despite these traditional preferences, there were students who showed a greater interest in the class when learning grammar through new methods. Ultimately, the inductive approach had a worthwhile effect on the students as they seemed pretty engaged with the lesson, as the student's motivation and engagement increased significantly.

REFERENCES

- Berns, M. (2013). *Contexts of competence: Social and cultural considerations in communicative language teaching*. Springer Science & Business Media.
- C. Hughes, S. Toohey and S. Hatherley (1992). "Developing learning-centred trainers and tutors," *Studies in Continuing Education*, 14 (1), 14-27.
- C. Liu & F. Long. (2014). *International Conference on Management, Education and Social Science*. Extracted from: https://scholar.google.es/scholar?hl=es&as_sdt=0%2C5&q=Traditional+teaching&btnG=#d=gs_qabs&t=1742315645774&u=%23p%3DYQz4KDqyyYJ
- D., A., Sousa (2017). *How the brain works*. Fifth Edition. CORWIN, A SAGE publishing company. Extracted from: <https://books.google.es/books?hl=es&lr=&id=wx9uDQAAQBAJ&oi=fnd&pg=PP1&dq=how+brain+learns&ots=yGICrFfBLK&sig=82JVouFSmJJKLCSVn0xkT6WM5L4#v=onepage&q&f=false>

E., Andraca, Hernandez. (2025). Language used in news. Alphabet game. Educaplay. Extracted from: https://www.educaplay.com/learning-resources/23258471-new_s_vocabulary_past_participle_verbs.html

Franklin UGA. (N.A.). 142 *Gilbert Hall. University of Georgia. Athens, GA 30602-6205*. Retrieved from: <https://www.linguistics.uga.edu/research/content/language-acquisition#:~:text=Language%20acquisition%20is%20the%20process,practical%20applications%20in%20language%20pedagogy>.

G., E., Anani (2017) *Teaching and Learning of Grammar at the Basic Level of Education: Revisiting Inductive Teaching Approach*. University of Cape Coast. Education Journal, Extracted from: https://www.researchgate.net/publication/314591623_Teaching_and_Learning_of_Grammar_at_the_Basic_Level_of_Education_Revisiting_Inductive_Teaching_Approach

J., L., C., Gallardo (2023). *Mexican High School Students' Perceptions Regarding Inductive and Deductive Grammar Teaching*. Center for Open Access in Science.

Open Journal for Studies in Linguistics. Extracted from: <https://centerprode.com/ojsl/ojsl0601/coas.ojsl.0601.02011c.pdf>

J., McLaughlin. (2010) *Brain Potentials Reveal Discrete Stages of L2 Grammatical Learning*. Language learning a journal of research and language studies. Extracted from: <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1467-9922.2010.00604.x>

Luu, T. & Nguyen, T. (2010). *Teaching English grammar through games*. Studies in literature and language. Volume 1. (p. 61).

Prince & Felder. (2006). *Journal of engineering education*. Extracted from: https://scholar.google.es/scholar?hl=es&as_sdt=0%2C5&q=Inductive+teaching&btnG=#d=gs_qabs&t=1742316011095&u=%23p%3D_xoLTMe1ER4J

Paul C. Price, Rajiv Jhangiani, & I-Chant A. (2015). *Quasi Experimental research*. Research Methods in Psychology – 2nd Canadian Edition. Chapter 7: Nonexperimental Research. Extracted from: <https://opentextbc.ca/researchmethods/chapter/quasi-experimental-research/#return-footnote-931-1>

Sweller, J. (2011). *Cognitive load theory*. Psychology of learning and motivation. Volume 55 (p. 37-76).

Steven Tenny; Janelle M. Brannan; Grace D. Brannan. (2022). *Qualitative Study*, National Library of Medicine, National Center for Biotechnology Information. Extracted from: <https://www.ncbi.nlm.nih.gov/books/NBK470395/#:~:text=Qualitative%20research%20uses%20several%20techniques,that%20every%20participant%20is%20asked>.

Tsun-Ju Lin. (2012). *Student engagement and motivation in the foreign language classroom*. Washington State University.

T., Gurudeo (2016). *Traditional vs Non-traditional Teaching and Learning Strategies - the case of E-learning*. Griffith University. Extracted from: <https://research-repository.griffith.edu.au/server/api/core/bitstreams/83fc29d5-e1ea-5776-a0d9-652cb2742901/content>

Vez López, E., & Abad Pérez, L. (2024). Implementing inductive grammar instruction with college students taking online English classes. *Enletawa Journal*, 17(1), 1–23. <https://doi.org/10.19053/uptc.2011835X.17610>