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Effective Grammar Teaching Strategies for EFL Learners in Saudi Universities: A Comparison of Inductive and Deductive Approaches

Abdulrahman Alqahtani

ab-alqahtani@ub.edu.sa

University of Bisha

Article

Keywords:

Posted Date: February 26th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-7715918/v1

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Additional Declarations: No competing interests reported.

Abstract

English grammar plays a vital role in language acquisition, particularly for EFL learners in Saudi Arabia, where mastery is essential not only for academic success but also for future professional communication. Despite its importance, grammar is often perceived by students as difficult and unengaging, making the method of instruction crucial. This study aimed to compare the effectiveness of deductive and inductive approaches to grammar instruction among Saudi university EFL learners, specifically in learning the English past tense. The research was conducted on 24 undergraduate students, studying English as a Foreign Language at a public Saudi university. This research employed four instruments: a 20-item pre-test and post-test to assess knowledge and improvement, a Likert-scale questionnaire to explore learner perceptions, and a t-test analysis to evaluate statistical differences in performance. Results showed that both instructional approaches led to significant gains in grammar proficiency. However, the inductive approach yielded slightly better outcomes and more positive learner feedback, suggesting it may be more effective in enhancing both achievement and engagement in grammar learning.

Introduction

English grammar is a crucial element in the attainment of language learners. Grammar rules are, however, not only about passing EFL exams but a vital component of communication in the academic and career setting for students in Saudi Arabia. A good understanding of the foundational grammar builds towards good writing, speaking clearly, and being able to comprehend language better. Grammar, though very crucial, is usually considered a hard and dull topic by learners. Hence, how it is taught remains imperative.

There have been controversies worldwide among educators on the most effective methods to teach grammar. The two approaches that are major approaches are the inductive and deductive teaching. Deductive teaching is teacher-centered. A rule is introduced to the teacher, and examples of its application are illustrated thereafter. The rule is then practiced by students. Inductive teaching places its focus on the students. The teacher begins by providing examples, and learners analyze them in the discovery of the rule. Notably, the approach proves more interactive.

Most professors in the Saudi universities are conservative and adhere to a deductive structure. Such methods are conventional and appear to be effective, yet may not be associated with both long-term learning and engagement of the student. With the rising trends in the world to focus on communicative competence and learner autonomy, Saudi EFL teachers are also considering the emergence of new teaching methods. One of them is the adoption of inductive methods in classrooms.

In this research, the impacts of deductive teaching of grammar and inductive teaching of grammar are compared. Its purpose is to measure which mode is more effective in enhancing grammar proficiency among students and determine which one students prefer. The study relies on a controlled design to test the results of each approach by paying attention to the past tense.

Research Questions:

1. To what extent does inductive or deductive grammar instruction improve grammatical proficiency among EFL undergraduates in a Saudi university?
2. What are students' perceptions of learning grammar inductively vs. deductively?

The research contributes to the literature on the issue of grammar in the teaching process and provides recommendations that can help to improve the teaching of English at Saudi Arabian universities.

Literature Review

The development of the teaching of grammar in the EFL falls in line with some overall tendencies in the teaching of the second language, i.e. the shift beyond the structural approach to pedagogy to more communicative and integrative orientation. Despite the fact that the previous grammar-translation approach focused on the repetition of rules and translation tasks, the method lacked practical communication in real life. This model has been greatly displaced in the last twenty years or so in favor of communicative language teaching (CLT), with its emphasis on teaching grammar as a part of meaning-based contexts (2025 CLT revised principles). In this changing model, explicit grammar teaching is a controversial topic, especially when it comes to the question of deductive versus inductive teaching.

Deductive Grammar Teaching

The deductive grammar teaching, characteristic of Saudi Arabia, is still widely used in different contexts, where teachers provide grammar rules directly and then the respective task work is practiced based on the offered textbooks and curriculum guidelines. A recent research article by Alsakaker (2025) in the *Arab World English Journal* affirms that instructors at Saudi universities mostly employ deductive procedures, which pursue the principles of clearness and productivity in classrooms that have little time allocated to instruction.

Deductive learning is more appropriate with adults whose ideal approach is a highly defined method and logically orderly content. The method is time-saving and does not require a different method of educating instructors. Its effect on communicative competence has, however, been discredited by its recent empirical findings. As an example, Obeidat and Alomari (2020) note that deductive learners did well on written assessments but rarely could produce spontaneous speech, thus indicating that memorising rules may not imply language diversity and creativity.

Inductive Grammar Teaching

On the contrary, restrictive grammar learning students are given a set of rules based on examples, or examples are left to the students to deduce rules, which is an experiential and discovery learning method

that encourages more involvement of the mind. The embedded assumption of the technique is wisdom-based literature and constructivist theory, where the ability of the learner to solve the problem is reinforced. Prior foundational studies (e.g. Bruner, Wong & VanPatten) have continued to be influential; however, more recent studies have supported this old method as being effective.

Alzu'bi (2015) study in a Jordanian university compared the effects of inductive and deductive grammar instruction and demonstrated a marked difference in favor of students in the inductive group in grammar achievement results. The same results were observed in Indonesia, where Best Practice in TEFL studies was observed that a combination of the various inductive methods, along with the introduction of storytelling and tasks, facilitated higher levels of grammatical understanding and recall, which also kept the students engaged. Babadilla et al.'s quasi-experimental study in Makassar (Indonesia) demonstrated that students who had been exposed to a combined inductive-deductive treatment improved their tests by 36 – 22 percent, as compared to the deductive-only group.

Benitez-Correa et al. (2019) and Pawlak (2021) emphasize the pedagogical importance of the inductive approach to grammar teaching as the method that teaches learners to think, notice patterns and be more cognitively engaged. They claim that induction, where the learner develops the rule out of situation creates a better and more active learning than the regular learning of the rule through the facilitation of inquiry. This method corresponds well to the ideas of the Communicative Language Teaching (CLT), the aim of which is to enable learners to use a language instead of memorizing a set of rules. Inductive learning works especially well on simpler, regular rules of grammar, such as regular past tense forms. Under these circumstances, it is easier to observe the patterns and generalize the rules out of examples done by the learners. The aspect accounts for less preference for inductive teaching as effective in early grammar instruction, particularly after it tends to be disconnected with meaningful communication in EFL where grammar acquisition is highly disorganized (Benítez-Correa et al., 2019). The students work on problem-solving to figure out rules, which also serve to enhance their autonomy and retention.

It is important to note that inductive instruction presents challenges, particularly in structured educational systems like those in Saudi universities. Pawlak (2021) points out that inductive methods require planning and managing the classroom. Teachers must prepare resources that will assist them in focusing their attention on the grammatical patterns without inducing stress or confusion. Inductive lessons, when improperly conducted, can result in frustration of the students or even students forming wrong rules.

Moreover, inductive teaching normally takes longer periods of time compared to deductive teaching. Teachers must allocate sufficient classroom time for exploration, discussion, and correction. In highly scheduled Saudi curricula, where grammar is often allocated limited hours, this time demand may not always be feasible. According to Metwally and Bib-Hady (2025), balancing clarity with discovery is key when it comes to AI integration in Saudi ESL curiculum. To make learning as efficient as possible, scaffolds and clear feedback should be provided to reinforce inductive activities to teachers as much as possible.

Comparative Effectiveness: Recent Evidence

Several empirical studies affirm the benefits of inductive and combined instructional methods in teaching grammar. A good example is that study undertaken by Alsakaker (2025), who comprehensively surveyed Saudi EFL undergraduate students and EFL teachers to compare the effectiveness of inductive and deductive methods of grammar teaching. The research indicated that neither of the approaches could be considered more successful compared to the other in terms of assisting with grammar learning, but the students reported their preference for inductive lessons because they were more engaging and related to greater feelings of retention.

On the same breadth, a quasi-experimental study by Noveria (2021) in Makassar showed that a combined inductive-deductive approach produced much more significant improvements regarding grammar accuracy, with the learners in the hybrid group gaining more (36%) than those under a deductive-only approach (22%). Likewise, Alzu'bi (2015) concluded that both university and elementary students in Jordan achieved a better grammar result on the inductive instruction, which is an essential characteristic of the method in terms of its wide application across age groups and environments.

Although supportive evidence has grown significantly, some studies suggest mixed outcomes. In one such study, Huang (2023) compared inductive and deductive training on Chinese high school learners and observed no significant difference in the approaches, with the learners receiving similar grammar scores on different topics. This implies that the effectiveness of a certain instructional procedure might vary depending on the circumstantial variables like the familiarity of a particular learner, available time in the teaching process and the complexity of the grammatical construct in question.

On the same note, in a study performed among German population, Farahani (2018) found no statistically significant difference between the use of inductive and deductive methods when teaching future tense and conditional forms. These results highlight the importance of instructional flexibility, the fact that there is no single instructional method that is always the best, and that the selection of pedagogical methods should consider the needs, preferences and the situation of the learners.

Grammar Teaching in Saudi Arabia

Traditionally, EFL classrooms in Saudi Arabia were rote-based and follow the deductive instruction. As reported by Elyas & Picard (2010), they depended on drills in grammar, translation, and rather on teaching according to the rules to prepare the students toward exam but not communication enhancement. Nevertheless, the school reform based on Vision 2030 contributes to the growing awareness of a student-centered approach to pedagogy, makes learning more willing to inductive methods, task-based and project-based learning, teamwork in classrooms (Chen, 2022).

Despite all these attempts at reform, in the Saudi case, empirical evidence remains limited. The article by Alsakaker (2025) is one of the limited articles published lately comparing the deductive and inductive

grammar teaching practices to the Saudi university students. It established not only the objective improvements in proficiency but also the student preference towards inductive methods, which implies that instructors might well be advised to engage them using the methods of guided discovery and pattern-based teaching along with classical explanations.

Integrating Educational Technology and AI

The development of AI and educational technology has progressively transformed grammar teaching in EFL settings, both methodically and attitudinally. The novelty of these AI innovations is in the means of promoting student learning by using personalized and interactive tools. Whereas instructional grammar typically used traditional inductive methods with teachers providing examples and students discovering the concepts by themselves, AI-enabled learning proves imperative in flexible student-centric zones.

Chung et al. (2025) study introduces a powerful illustration of AI-supported shift among ESL learners. It introduces an AI-based reading support tool to native South Korean EFL learners. The students could get grammar and semantic explanations at demand when reading authentic English texts by using this tool. Particularly, having seen the unfamiliar constructs, learners were able to seek real-time feedback or guidance using the interface of the tool. This lowered the necessity of teacher presence and prompted independence in the learners. Despite designing the tool to assist in the reading comprehension aspect, the tool characteristics offered facilitation in grammar discovery and analysis in a direct way. The findings indicated that the program had positive effects on raising the confidence in reading and quantifiable effects on the comprehension of complex texts among learners. Noteworthy, students reported feeling more control over their learning, which is the major objective of inductive instruction.

Although the research by Chung et al. was not narrowed to only the acquisition of grammar, it does reinforce the notion that AI can supplement discovery-based learning environments. The power of the tool to explain something only when asked corresponds to the principle of induction taking examples to rules. According to Noveria (2021), such sort of on-demand, contextual grammar scaffolding allows students to discover naturally and strengthen grammar learning through context.

Talukder (2023) debunks the opportunities of smart technologies and EFL education as well. *Smart Transformation of EFL Teaching and Learning Approaches* (Talukder, 2023) postulates that adaptive learning technologies and big data customize the grammar content material to the user profile of a given learner and combine inductive tasks with in situ directions to achieve optimal outcomes. AI-backed systems use the analysis and identification of user behavior to determine gaps in understanding and provides unique grammar activities. According to Talukder (2023), such tools can be created by integrating inductive learning of grammar with hints and scaffold. To illustrate, when a learner has a constant problem with using the past tense form, then the system can give various examples of that construction used in various contexts and lead the learner gradually to deduce the rule.

Elsheikh et al. (2025) projects that technologies show great potential in Saudi EFL classes, as there are big classes, and feedback can be provided to each student only in the fewest cases. The combination of AI-based tools and inductive methods allows students to get a personalized grammar course with the possibility of self-paced learning and development as independent learners. With Saudi universities gradually investing in digital infrastructure, it is possible to utilize such tools to further improve grammar teaching and ensure its compliance with the current objectives of the modern educational outcomes. Additionally, critical thinking strategies must back up the attempts to enhance culturally responsive AI language acquisition in EFL students. According to Lujain and Talal (2024), an alignment with Saudi Vision 2030 necessitates not only gradual inclusion of AI into EFL context but also an increase in affective attributes of learners. For this reason, AI proves a requisite tool for teaching grammar and assessment, as well. As such, the same developments are indicative that inductive grammar teaching is increasingly becoming dependent on intelligent learning systems.

Literature Implications and Summary

Recent literature review (2019–2025) offers strong perspectives on the current development state of grammar teaching in EFL. Inductive grammar instruction can easily promote more profound comprehension, stronger cognitive retention, and more participation compared with deductive instruction. According to research by Noveria (2021), and Alsakaker (2025), inductive teaching not only ensures cognitive engagement but also boosts confidence and grammar-rule application over time for learners.

Furthermore, an increasing amount of literature suggests the adoption of a combined or mixed-method methodology which incorporates both inductive and deductive in them. This integrated approach seems to be a win-win scenario: learners can explore and discover at the same time, and benefit from explicit instruction and clarity. As an example, Noveria (2021) discovered that students taught using a hybrid approach showed profound growth in terms of grammatical accuracy and the perception of the learning process. This also allows teachers more freedom to adjust the teaching to the readiness of the students, the complexity of grammar, and time limitations in teaching.

Nonetheless, these techniques are not always applicable since they vary with situational events. As the studies of Huang (2023) and Farahani (2018) carried out in China and Germany show, inductive and deductive approaches may be equally effective in some circumstances. These results reinstate the significance of getting instructions, in particular environmental conditions, student desires, and the character of the grammar content being lectured.

The pedagogical context in the Saudi EFL setting is changing slowly, having relied on deductive instruction so far, and is becoming more non-deductive, and integrative in nature. Nevertheless, there is a paucity of empirical studies that compare the two methods in the Saudi classrooms. Such studies as those by Alsakaker (2025) are thus highly beneficial as they add local data to the wider pedagogical change. Last, new technologies of digital learning, in particular AI-based reading and writing

technologies, present the exciting prospect of inductive grammar instruction scaffolding and instructional personalization. All these innovations can lead to the increased motivation and autonomy of learners, making grammar teaching more closely aligned with the aims of current communicative language teaching.

According to the contemporary literature, a specific tendency can be observed as after decades of uses, deductive grammar teaching still proves to have the benefits in terms of time efficiency and clarity, which is especially appreciated in exam-intense settings. In contrast, inductive methods, especially when combined with explicit presentation, tend to produce higher long-term retention, a better level of knowledge, and are of higher interest to the learners. More recent empirical research from around the world (Jordan, Indonesia, Saudi Arabia) corroborates this position. In Saudi Arabia in particular preliminary data have indicated the student preference and positive student results with guided inductive teaching and therefore language education changes according to the vision 2030 may be facilitated through encouraging teachers to combine grammar learning in discovery mode as being combined with communicative and technology supporting methodologies.

Methods

Participants

This research was performed on 24 undergraduate University students who have a Foreign Language English major at a public Saudi University. All the respondents were first-language Arabic speakers, and their English proficiency level was intermediate. The 24 students have already been divided into two separate groups according to the schedule by the English Department:

The 24 students were randomly divided into two equal groups:

- Group A (12 students): Taught using the deductive method.
- Group B (12 students): Taught using the inductive method.

The two groups were equally matched in terms of grammatical knowledge before the intervention and in terms of using past tense forms in particular. The students were not provided with any formalized learning of the exact grammatical structure utilized in the current research.

Informed consent was upheld by all participants. The ethics board of the university approved the research design.

Instruments

In this study, four major instruments were employed:

Pre-test: This consisted of a 20-item grammar test, which identified the level of knowledge that the students had on the English past tense. It covered sentence completion improvement as well as

correction of errors and identification of verb forms.

***Post-test*:** used a design similar to the pre-test, but it used various items. It assessed the growth in the knowledge and application of past tense verbs appropriately.

Likert-scale Questionnaire: The students participated in a Likert-scale Questionnaire with 15 questions at the end of the lessons (*see Appendix A*). The comments were centered on engagement / enjoyment, clarity of instructions, confidence in using grammar, perception of teaching method, future preference. They used a five-point scale to do the rating (1 = strongly disagree, 5 = strongly agree).

***T-test Analysis*:** T-tests that were conducted on the pre- and post-test data were statistical tests. This enabled the researchers to compare the performances of each group and between the groups.

Procedure

The study was conducted for 14 days. It had a definite and uniform method of handling both groups.

Step 1: **Pre-test**- They were asked to undertake the same grammar pre-test before the teaching of lessons. The test was pegged on the application of past-tense verbs, and it also contributed to providing a baseline.

Step 2: **Instruction (4 Sessions)**- There were four English past tense lessons with each of the groups. The teaching was done in the same content, but the method changed:

- *Deductive Group (A):* In this group, the lesson started with the explanation of grammar rule, which was provided by the teacher. This was supported by illustrations and practice using activities. Students learned and formulated the rule and drilled and practiced it by completing sentences.
- *Inductive Group (B):* Lessons began with the teacher presenting multiple example sentences. Students worked in pairs or small groups to identify patterns. The teacher then guided a class discussion to help them discover the rule. Practice included peer teaching and writing their own example sentences.

Both groups had equal class time, the same teacher, and the same practice materials—adapted only in order of presentation.

Step 3: **Post-test**- At two weeks of the instruction period, there was a post-test done between the two groups. This test was able to measure learning and gain, and gave a chance to compare statistically. The 20-item test instruments were used to determine the consumption of the English simple past tense by the learners. The questions were composed of a combination of multiple-choice, sentence corrections, and gap-fill sentence items. These tests were both structurally the same (in terms of difficulty) but differed in vocabulary and sentence context to allow less potential deviation due to test familiarity. Expert review was used to make sure the contents had content validity, conducted by two senior EFL

teachers. The tests were also piloted in the other similar group of learners in order to clarify them, establish timing, and reliability.

Step 4: **Learner Satisfaction Questionnaire**- A Likert-type questionnaire composed of 15 items was administered after the intervention to identify the perception of the instructional method used by learners. The questionnaire items evaluated the 5 areas here, which included engagement/ enjoyment, clarity of instructions, confidence in using grammar, perception of teaching method, future preference. The responses were captured using the 5-point scale (1 = Strongly disagree, 5 = Strongly agree). The questionnaire items were:

1. I was actively engaged during the grammar lesson. (1-5)
2. The instructional method kept my attention throughout the lesson. (1-5)
3. I found the grammar lesson enjoyable. (1-5)
4. I liked the grammar lessons. (1-5)
5. The grammar rules and instructions were explained clearly. (1-5)
6. I understood what was expected of me during the grammar activities. (1-5)
7. I learned the grammar rules with clarity. (1-5)
8. I feel more confident using the grammar structures after the lesson. (1-5)
9. I am likely to use the grammar I learned in my speaking or writing. (1-5)
10. I am much more confident with the past tense. (1-5)
11. I liked the teaching method employed. (1-5)
12. I had fun participating in the activities during the grammar lesson. (1-5)
13. I would like more grammar lessons to be taught using this method. (1-5)
14. This instructional approach should be used again in future classes. (1-5)
15. I would like this method in future grammar classes. (1-5)

Internal consistency reliability was determined using (Cronbach alpha =0. 83): a reliability indicator rating of attitudinal studies.

Step 5: **Data Analysis**- Paired sample t-tests using *Excel Toolpack* were conducted to enable the comparison of the scores of the two groups on its respective performance pre- and post-instruction. An independent sample t-test was applied to compare the results obtained in the post-test presented in two groups. The answers in the questionnaires were presented in the form of means and standard deviations.

Results

The findings indicate that the two strategies resulted in significant improvements in the grammar performance. The inductive group, however, gained a bit more and listed more positive experiences in

their learning. The following is a detailed presentation of the study's findings, which aimed to explore the impact of both deductive and inductive approaches on teaching grammar to Saudi university students learning English as a foreign language. This section compares the effectiveness of each approach in improving students' understanding of grammar and their ability to apply it in various linguistic situations, to determine the most effective strategy for developing learners' grammatical proficiency.

Pre-test and Post-test Analysis

Table 1
Descriptive Statistics and t-Test results for Grammar Pre- and Post-Test Scores

Group	Test	Mean(x)	SD	t	df	p
Inductive Group	Pre-test	49.18	2.99	-	-	-
	Post-test	72.25	5.50	11.65	11	< .001
Deductive Group	Pre-test	45.03	4.49	-	-	-
	Post-test	67.09	5.45	9.57	11	< .001
Between-Groups	Post-test	-	-	2.63	22	0.15

Table 1 (above) shows descriptive statistics (mean and standard deviation of the two groups in the pre-test and post-test stages. Pre-test scores (M = 49.18, SD = 2.99) of the inductive group showed significant improvement post-test (M = 72.25, SD = 5.50). Similarly, the scores of the deductive group increased from a pre-test mean average of 45.03 (SD = 4.49) to a post-test mean average of 67.09 (SD = 5.45). The descriptive results indicate that both groups have shown overall significant improvement; however, the inductive group performed better overall on the post-test.

Learner Perceptions (Questionnaire Analysis)

Descriptive analysis of the responses of the post-instant questionnaire (*Results and Data Analysis Excel attached*) showed clear variations between the two instructional groups. The mean scores of all fifteen items were also significantly higher in the inductive group than the deductive group, which had an average mean of M = 4.3, SD = 0.5, as opposed to the deductive group having M = 3.3, SD = 0.6.

Engagement

92% of the learners who were in the inductive group responded that the lesson was engaging, or agreed strongly with the statement, as opposed to 50% of the learners in the deductive group.

Clarity and Confidence

There was an increase in the notion of confidence in the use of the past tense by both groups, but those in the inductive group agreed more (M = 4.58, 4.41) that they had a clear understanding of the grammar

compared to the deductive group (M = 3.5, 3.16).

Enjoyment and Preference

More of the learners (M = 4.38, 4.33) in the inductive group expressed interest in the teacher using the inductive method in future grammar classes, compared to deductive group (M = 2.66, 2.83).

These results correlate with the outcomes of the quantitative grammar test and indicate that inductive instruction can potentially bring about higher rates of learner satisfaction, probably because of its participatory and exploratory nature.

Within-Group Comparisons

The improvements in each group were maintained in both inductive and deductive groups, although the overall improvement of the inductive group was better in terms of grammar skills. Figure 1 below, demonstrates the means of the scores of each group before and after instruction:

To assess the statistical significance of the increase in the scores between individual groups, paired-sample t- t-tests were used. There was strong evidence of learning in the inductive group because there was a significant pre to post-test growth, $t(11) = 11.614$, $p < .001$. Similarly, the improvement in the deductive group was also very high, $t(11) = 9.57$, $p < .001$. As shown in Fig. 1 the findings affirm that the two teaching approaches were efficient in improving the performance of grammar over time.

Between-Group Comparisons

Comparison was made on post-test mean scores for both groups. The inductive group achieved higher scores than the deductive group, indicating stronger performance after instruction using the inductive method, as shown in Fig. 2:

A t-test was conducted on two different groups of post-test scores with the goal of identifying differences between the effectiveness of two methods. The statistical significant result $t(22) = 2.63$, $p = .015$ indicated that there was an effect on performance with the inductive group performing better than deductive group. This finding implies that inductive approach led to greater enhancement in grammar proficiency compared to deductive teaching.

Discussion

The purpose of the research was to compare the effect of the deductive and inductive approaches to grammar instruction in Saudi universities and EFL learners. The findings indicate that the two strategies resulted in significant improvements in the grammar performance. The inductive group, however, gained a bit more and listed more positive experiences in their learning.

The mean post-test score of the inductive group (72.25) was more than the deductive group (67.09), indicating that it is the older method of learning grammar by discovery and example that would have

greater cognitive implications. This aligns with Wong and VanPatten's (2003) finding that asserts that induction learning enables students to internalize grammar. Since the inductive group perceived higher confidence and engagement as well, it can be concluded that the approach positively affects test results, as well as the motivation of learners. Based on this aspect, Saudi higher education can adopt inductive teaching in its grammar pedagogy.

The deductive group experienced a significant improvement in their score as well, with an average of 5.6 points. This result is consistent with the findings of Maulidiyah (2015) and Huang (2023) on the effectiveness of deductive grammar teaching as a potential route to fast and efficient rule acquisition, and in cases where clarity is at stake. Nevertheless, there was lower enthusiasm among students in this group. Their responses to the questionnaires indicated that the respondents were less engaged and had lower preferences for the method.

The observations largely confirm the idea that the inductive method is more effective in achieving the goal of promoting self-directed learning and long-term retention. In the method of inductive teaching, students are motivated to observe, compare, and also conclude. This type of thinking enables them to relate grammar rules to use in the real world. Obeidat and Alomari (2020) note that these approaches become especially effective when instructing students in the use of grammar during speaking and writing, rather than only during tests.

Notably, the educational and cultural background of Saudi EFL students is also to be considered. The majority of them are applied in instructional delivery and memorization of rules. Their enthusiastic reception of inductive techniques here indicates that Saudi students are receptive to a greater degree to more involved learning modalities, under the right guidance. According to Chen (2022), EFL reforms in Saudi Arabia are opening the way to more learner-centered practices, and this study proves students' need to leverage these developments.

Nevertheless, not every student is prepared to study inductively. When learners have to discover grammar rules by themselves, some of them might be confused or frustrated, mainly because of their low level. Teachers have to seek a balance between the need and give. In this research work, the effectiveness of the inductive group could have been facilitated by the fact that the teacher was giving clear directions and well-organized activities, despite asking students to go exploring.

Another element that brings about the effectiveness in inductive instruction is the particular grammar point under teaching. For instance, the past tense is significantly easier to learn inductively by intermediate learners since its forms and applications are overall consistent and easy to see in examples. The learners are able to pick patterns, e.g. the regular -ed suffixes, really fast and use them without getting confused. This is however, not the case with more complex grammatical structures, say conditional forms, passive voice or complicated verb phrase structures, which tend to be based on irregular forms, various usage patterns and slight differences in meaning. These features can overwhelm the learners when presented only through discovery. In this instance, completely inductive procedure may retard development or result in misconception. According to Shaffer (1989), methodological

preference in a complex grammar rule, level of learner proficiency level and general classroom situation should be conducted in order to guarantee accuracy as well as interest in learning.

Notably, the results recommend active, learner-centered instruction in teaching EFL grammar. Increase in engagement and confidence levels amongst the inductive group participants indicates that discovery-oriented tests promote deeper thinking. It reinforces Benitez-Correa et al. (2019) and Pawlak (2021) who noted that students who received inductive instruction have a higher chance of retaining grammar information and using it in the communicative process. These findings highlight the need to introduce systematically designed, inductive approaches into the mainstream curriculum in Saudi higher education.

Another consideration is that inductive methods can serve as a stepping stone toward hybrid models that combine explicit instruction with discovery-based learning. A pure inductive model may not be feasible due to the time limit in Saudi Arabia universities coupled with the high population of the classes. Nonetheless, targeted inductive activities as a part of otherwise deductive lessons will allow teachers to unite the effectiveness of direct instructional methods with the involvement value of the problems and tasks. Such a combined model is likely to optimize the learning results and take into account institutional realities.

Pedagogical Implications

The findings of this research provide five compelling insights to teachers aiming to promote effective grammar instruction in Saudi EFL (English as a Foreign Language) contexts. To begin with, increased gains and satisfaction was observed within the inductive group which indicates the importance of student-centered strategies. Active involvement can be promoted by tasks which make learners aware of the tendency in natural language input processes. As an example, short presentations of texts given in the past tenses with the students being asked to derive other verb forms will allow free thinking of the students along with a possibility of teacher control.

Second, the process of incorporating inductive activities into the current curricula requires adequate planning. The examples given by teachers should be clear, representative and have no distracting anomalies. Scaffolding is critical; one has to use prompting questions, group discussions and step-by-step feedback must be used to ensure that learners are not confused, or end up with wrong generalization of rules. This is especially relevant in Saudi classrooms where most students have been used to being told what rules to follow instead of finding out themselves.

In-line with stellar planning, effective use of inductive teaching is also compatible with technology tools. According to the recent studies reports (Chung et al., 2025; Talukder, 2023), AI-powered platforms enable learners to learn grammar in real-time, get explanations when they want and need them, and get tasks based on their achievement levels. Such an integration is not only favorable to the discovery process; it also allows students to practice at their own pace after the lesson, making it a feasible addition to classes.

Fourth, instructional professional training of teachers has proven imperative in advancing the use of effective inductive grammar teaching. The transformation of student-centered discovery methods in teaching is not an easy task among many EFL instructors in Saudi Arabia because most of them have been trained using deductive and teacher-centered styles. Targeted training programs are thus advised to not only impart theoretical knowledge but also give a practical demonstration, model lessons and chances in collaborative lessons planning. Workshops can be dedicated to the components of clear examples design, scaffolding discovery by the learners, and classroom discussion management. Moreover, by means of peer observation, exchanging feedback and reflective practice, teachers may improve skills, grow in confidence, learn how to adjust their inductive strategies to different student needs and classroom environments successfully.

Lastly, it is imperative to recommend an adaptable curriculum in teaching grammar. Even though inductive approaches have proven to be quite fruitful in creating engagement, retention and active learning, these are not always as effective toward all grammar issues or learner types. Structures with an irregular shape or the abstract use of rules may be subject to further explanation to prevent some confusion. Therefore, teachers must attentively address the complexity of the aimed grammar point, the level of the learner at the moment, and the time that will be spent to give directions. The move will help in reaching the most optimal mix of inductive and deductive teaching. Evidence-based and flexible classroom techniques enable Saudi EFL teachers to adapt their teaching to the realities of the classroom, optimize learner comprehension, and maximize accuracy and communicative competence in their English language teaching environment, which eventually gives rise to their achievement in a broad variety of situations teaching approaches.

Conclusion

In conclusion, this research contrasted two approaches to grammar instruction: deductive and inductive, in identifying the most effective one among Saudi EFL students at the undergraduate level. There was a significant increase in the scores achieved in both methods, although the inductive approach showed a greater improvement in the scores and satisfaction of the learners. The findings indicate the possibility of teaching grammar in an inductive manner and achieving greater success to promote understanding, retention, and motivation of the learner. Not only did the learners in the inductive group perform better, but they also demonstrated greater engagement and confidence. Although the deductive approach remains relevant for explaining complex rules efficiently in a short time, it may be less effective in building a deeper understanding or active language use. In Saudi universities where traditional learning of grammar still prevails, it will be worthwhile to incorporate inductive approaches in teaching grammar. And with reasonable planning and guidance, inductive teaching can make an EFL learner experience deeper learning and also enhance communicative abilities. The result demonstrates the importance of both grammar teaching methods in general and the inductive method in particular. The inductive method showed a significant advantage in enhancing learning and increasing motivation among English language learners. Therefore, English language instructors in Saudi universities may intensify the

integration of the inductive strategy to improve the efficiency of English grammar learning among Saudi university learners.

Limitations

As with any research, this one also has its limitations. To begin with, it entailed a small sample (n = 24) of students from a single university. This reduces the degree of generalisation that can be made using the findings. In the future, more subjects representing different universities and geographical locations in Saudi Arabia should be involved.

Second, grammar instruction only touched on one grammar point, the past tense. Despite being crucial, these are not all the points of grammar. Given the importance of inductive instruction, different rules may be more effective in inductive instruction compared to others. The above areas should also be further researched with a wider scope of grammar to determine the effectiveness of each method in a given context.

The other limitation is that the teaching period was short. The number of grammar lessons that students had during the two weeks was four. Although the outcome of the post-tests was successful, knowledge retention cannot be ascertained. A follow-up test after several weeks would assist in gauging the long-term retention.

Fourth, all participants were male, as education is, in most cases, gender-segregated. Including female participants would provide more comprehensive results and help identify the most effective approaches for teaching English grammar to both genders.

Lastly, the research employed self-reported values with the use of a survey. Such data, although helpful, does not provide the complete picture in terms of what the students think or feel. More insights would be gained through an interview or observations in the classroom.

Recommendations

Given the results and limitations of the current study, a few recommendations are provided to improve the effectiveness of teaching grammar in EFL settings, especially in Saudi Arabia. The following recommendations are intended to help bridge this divide between teacher-centered teaching tactics and those more learner-centered, not only to recognize the realities of teacher training and classroom interactions.

To begin with, the balanced approach or a hybrid approach to grammatical teaching can be recommended, which implies both inductive and deductive approaches. Instead of following just one approach, the teachers must evaluate the difficulty of the grammar point and the individual needs of the learners. A deductive approach can be more appropriate when the rules are abstract or complex, whereas induction can be more interesting and practical when used in simpler things. This combination

approach enables teachers to provide clarity and hands-on practice, which adapts teaching to achieve the best educational experience.

Second, the professional development activities must focus on instruction in inductive teaching methods. Most of the EFL teachers in Saudi Arabia are highly trained in deductive, teacher-fronted lesson plans, and may be unconfident in inductive approaches, or be unfamiliar with its working practice. The process of collaborative learning, peer assistance, and in-class teaching simulations would be effective in providing educators with the tools and methods needed to design and administer inductive grammar instruction in a way that is meaningful and manageable.

Third, when using inductive teaching approach, to begin with, one must teach simple and concrete features of grammar, i.e., the past tense, the present simple, plural nouns. These are easier topics for learners and they are easy to recognize patterns and make discoveries. These rules can be used as a starter to give the student confidence to learn the grammar without being taught and this can result in increased involvement as well as independence in language acquisition.

The other recommendation entails increasing the students in inductive lessons. Peer discussions, group work, and guided activities ensure that the learners are actively involved in grammar rules construction (Obeidat & Alomari, 2020). Such an approach helps develop critical thinking and results in a lively classroom wherein the student is at the focal point of the learning process. The instructors must devise lesson plans to involve such interactive details to increase the learner's participation levels.

The other potential aspect is technology incorporation. The digital materials, such as online grammar apps, video tutorials, and online quizzes, can be useful to improve and streamline the learning process (Talukder, 2023). Such resources facilitate the discovery and pattern-recognition aspect that is inherent in inductive instruction and serve the variety of learning styles.

Ultimately, teachers must actively monitor learner preferences and opinions on a regular basis. Surveying the students, reflection journals, or informal chats on the preferred pedagogical approach can be the key to the answers that will help to identify the most efficient teaching strategies and course design. Such data can orchestrate lesson planning in the future and give way to more responsive teaching behaviors.

Declarations

key Statements:

1. **Competing interests:**

The author declares no competing interests.

2. **Data availability:**

The datasets generated and analyzed during the current study are available from the corresponding author upon reasonable request.

3. **Ethical approval:**

This study was approved by the Scientific Research Committee at the College of Arts and Letters, University of Bisha (Approval No. **UB.25.10.6. ALSRU.1**) on April 13, 2015. Informed consent was obtained from all participants between April 14 and April 16, 2025, prior to data collection. The study was conducted over a 14-day instructional period, from April 20 to May 7, 2025. The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments. The questionnaire and methodology for this study were approved by the Scientific Research Committee at the College of Arts and Letters, University of Bisha. All procedures involving human participants were conducted in accordance with the ethical standards of the institutional and national research committee. Informed consent was obtained from all participants prior to data collection, and their confidentiality and anonymity were fully ensured throughout the study.

4. **Informed consent:**

Informed consent was obtained from all participants between April 14 and April 16, 2025, prior to data collection. The study was conducted over a 14-day instructional period, from April 20 to May 7, 2025. Participants were informed that participation in this study is entirely voluntary. They may choose to skip any question or withdraw at any time without penalty. They were also informed that their responses would remain anonymous and confidential. They were informed that the data collected **will be used** solely for academic research purposes (see Appendix A).

5. **Author contributions:**

A.A. conceived and designed the study, prepared the instructional materials, collected and analyzed the data, and wrote and revised the manuscript.

6. **Funding Declaration**

This research did **not** receive any specific grant from funding agencies in the public, commercial, or not-for-profit sectors.

Consent to Participate in a Research Study

KEY INFORMATION

You are being invited to take part in the following research study: *Effective Grammar Teaching Strategies for EFL Learners in Saudi Universities: A Comparison of Inductive and Deductive Approaches.*

Researcher(s):

The person conducting this study is Abdulrahman Alqahtani.

Ethical approval:

This study was approved by the Scientific Research Committee at the College of Arts and Letters, University of Bisha (Approval No. **UB.25.10.6. ALSRU.1**) on April 13, 2015. The study **will be conducted** over a 14-day instructional period, from April 20 to May 7, 2025. All procedures will be conducted in accordance with the ethical standards of the institutional and national research committees. The study was performed in accordance with the ethical standards as laid down in the 1964 Declaration of Helsinki and its later amendments.

WHAT ARE THE PURPOSES AND PROCEDURES OF THIS STUDY?

The research compares the effects of deductive and inductive grammar teaching approaches on EFL learners in Saudi universities. It aims to determine which method is more effective in enhancing learners' grammar skills. The research is conducted at a public Saudi university with 24 undergraduate students majoring in English as a foreign language (EFL) as participants. All students are native Arabic speakers with intermediate English proficiency. According to the schedule set by the English Department, the students are divided into two separate groups to follow different grammar teaching approaches, allowing the study to compare the effects of each method.

By doing this study, the researcher hopes to learn the effectiveness of deductive and inductive grammar teaching approaches on EFL learners in Saudi universities for publication. The outcomes may appear as articles or digital works.

WHY ARE WE ASKING YOU TO PARTICIPATE FOR THIS STUDY?

You are being asked to participate in this study because your feedback and performance will help us understand how effective different grammar teaching approaches (deductive and inductive) are for EFL learners. Your participation will provide valuable insights into which method better supports learning and engagement.

WHAT IS THE DURATION OF THIS STUDY?

Your participation in this research will last for 14 days. It had a definite and uniform method of handling both groups. It will involve (forms of data being collected Pre-test, Post-test, Likert-scale Questionnaire and T-test Analysis.

WHAT ARE THE BENEFITS AND RISKS OF PARTICIPATION?

Participation in this study may help you improve your English grammar and provide valuable feedback to enhance teaching methods for future learners. There are no major risks, though you may experience slight and temporary stress or fatigue from completing the lessons or questionnaires.

CONFIDENTIALITY

We will take careful steps to keep your information confidential by **removing any personal identifiers and using coded data in all analyses and reports.** Your responses will be stored securely, and only de-identified information may be used for future research.

IF YOU HAVE QUESTIONS OR CONCERNS OR WANT TO WITHDRAW:

Participation in this study is strictly voluntary. If you decide to take part, you may withdraw at any time without penalty.

The Principal Investigator (PI) at this University, Department of English Language & Literature in charge of this study is Dr. Abdulrahman Alqahtani who may be reached at ab-alqahtan@ub.edu.sa.

If you have any questions, suggestions, or concerns about your rights as a participant, you may contact the Office of Research Integrity and Compliance at the University at mghassan@ub.edu.sa.

A copy of this form is available for you to keep

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Figures

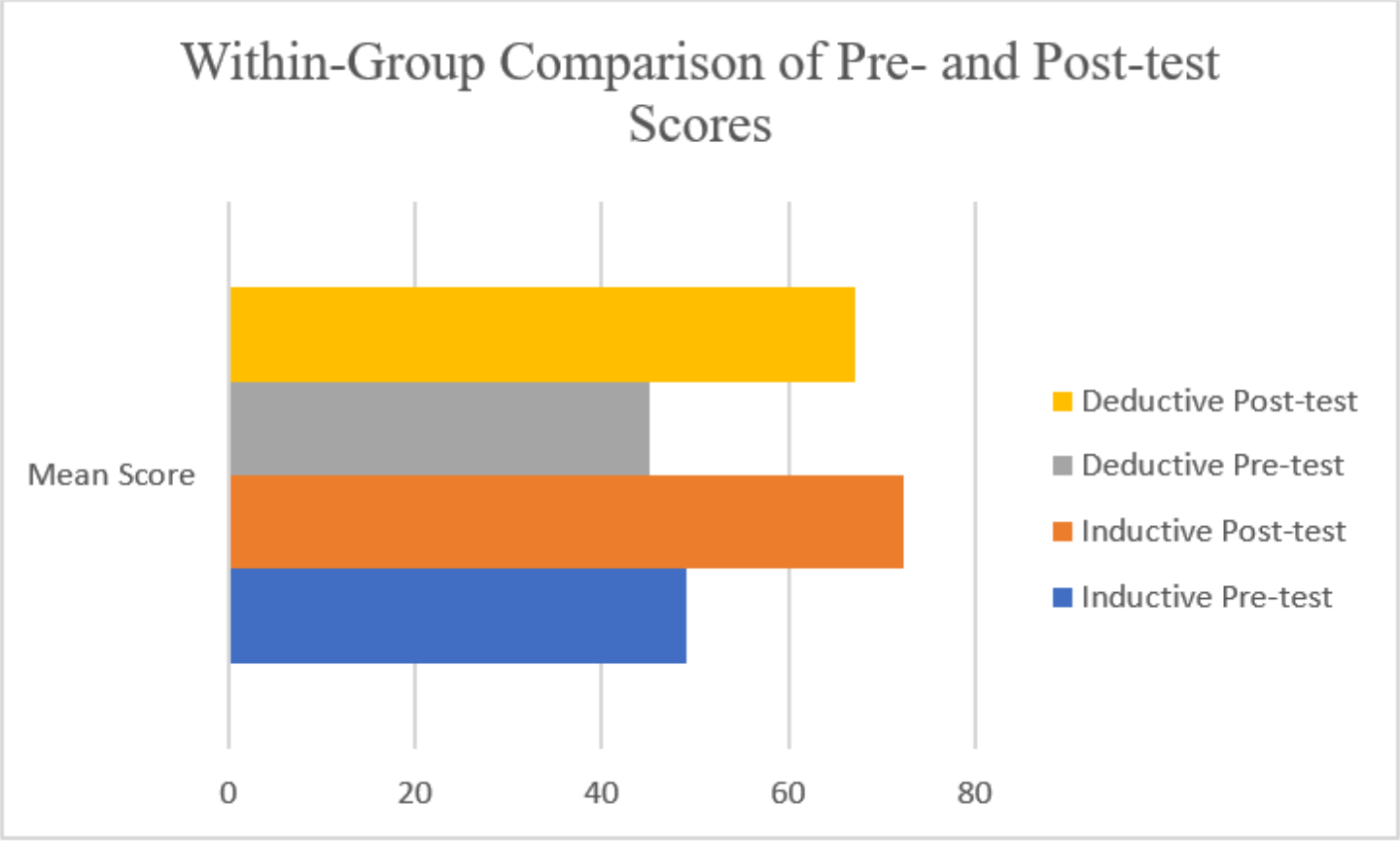


Figure 1

Shows within-group comparison of pre- and post-test scores (t=11, p<0.001)

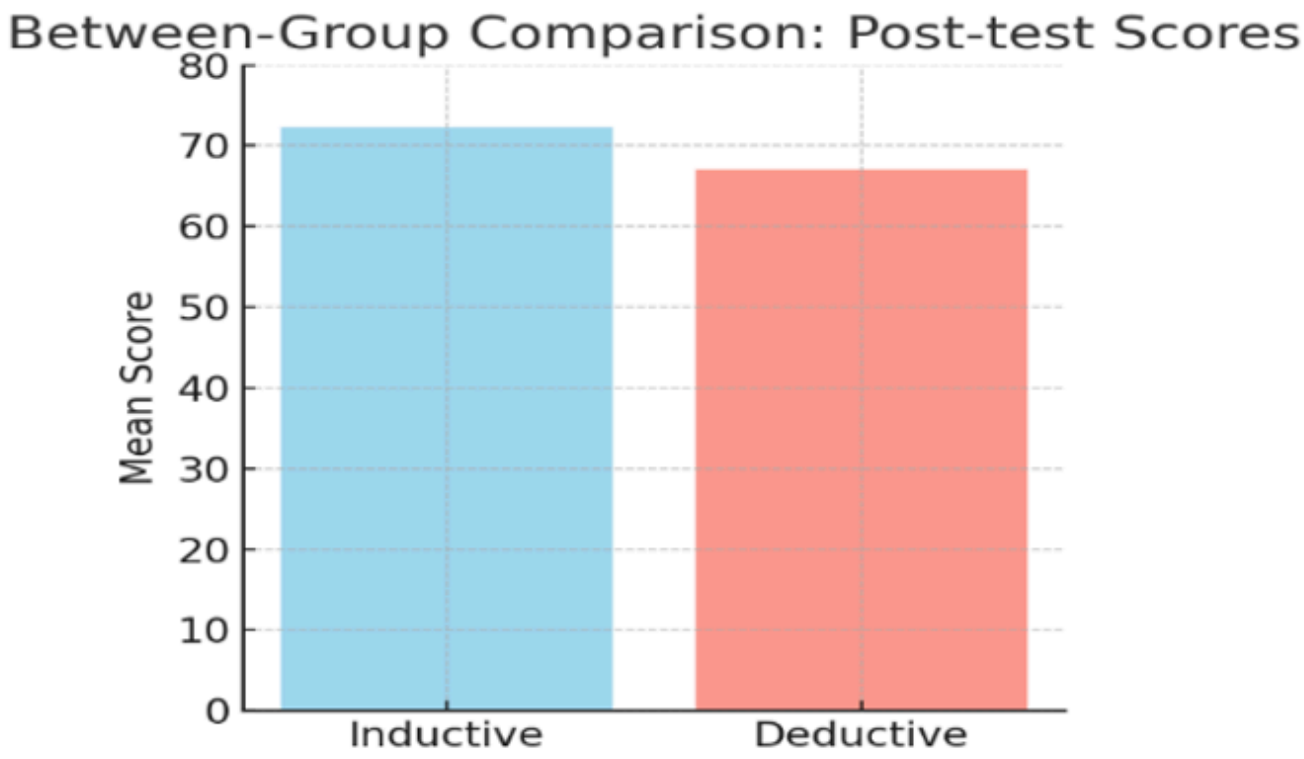


Figure 2

Shows between-group comparison of post-test scores (t=2.63, *p=0.015*)

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- APPENDIXA.docx