

# The Role of Grammar Learning Strategies in EFL Achievement

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Čabraja, Josipa

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J.J. Strossmayer University of Osijek

Faculty of Humanities and Social Sciences

Double Major MA Study Programme in English Language and Literature –  
Teaching English as a Foreign Language and Pedagogy

Josipa Čabraja

**The Role of Grammar Learning Strategies in EFL Achievement**  
(Master's Thesis)

Mentor: Dr. Višnja Pavičić Takač, full professor

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## IZJAVA

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Josipa Čabraja, 0122230179

## **Abstract**

The term "grammar learning strategies" refers to the various approaches or techniques that learners use to acquire and internalize grammatical rules and structures of a language. This master's thesis investigates the relationship between grammar learning strategies and learners' achievement in the context of two grammar schools located in Osijek and Slavonski Brod. The study employs a quantitative research approach, utilizing a questionnaire administered to learners in both schools. Data from the questionnaire is analyzed using the SPSS statistical software. The research explores the concept of grammar learning strategies, focusing on how different learners employ specific techniques and approaches to acquire grammar knowledge. Furthermore, the study examines potential differences in strategy use and achievement between male and female participants, as well as among participants from lower and upper classes. The findings shed light on the effectiveness of different strategies in grammar learning and provide insights into how achievement, gender, and other factors may influence language learning outcomes. The results contribute to the existing literature on language acquisition and offer practical implications for educators and curriculum designers to enhance grammar instruction in school settings. By better understanding the relationship between grammar learning strategies and learners' achievement, this research seeks to improve language learning outcomes for students in Croatian schools.

key words: grammar learning strategies, EFL learning achievement, correlation

## **Sažetak**

Pojam "strategije učenja gramatike" odnosi se na različite pristupe ili tehnike kojima se učenici koriste za usvajanje i internalizaciju gramatičkih pravila i strukture jezika. Ovaj diplomski rad istražuje odnos između strategija učenja gramatike i postignuća učenika u kontekstu gimnazija u Osijeku i Slavonskom Brodu. U istraživanju je primijenjen kvantitativni istraživački pristup. Osnovni je istraživački instrument upitnik. Podaci prikupljeni upitnikom analizirani su pomoću statističkog softvera SPSS. U središtu zanimanja je pojam strategija učenja gramatike, odnosno pitanje kako različiti učenici primjenjuju određene tehnike i pristupe za usvajanje gramatičkog znanja. Nadalje, istraživanje ispituje moguće razlike u uporabi strategija i postignuću između muških i ženskih ispitanika, kao i između ispitanika iz nižih i viših razreda. Rezultati pružaju uvid u učinkovitost različitih strategija u učenju gramatike te nude spoznaje o tome kako postignuće, spol i drugi čimbenici mogu utjecati na rezultate učenja jezika. Rezultati doprinose postojećoj literaturi o usvajanju jezika i pružaju praktične implikacije za učitelje i autore kurikula o mogućnostima unaprjeđivanja nastave gramatike u školskim okružjima. Boljim razumijevanjem odnosa između strategija učenja gramatike i postignuća učenika, ovo istraživanje nastoji poboljšati rezultate učenja jezika učenika u hrvatskim školama.

Ključne riječi: strategije učenja gramatike, uspjeh u učenju engleskog jezika, korelacija



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## **1. Introduction**

Language learning strategies have been an important topic of many SLA studies over the last few decades. Language learning strategies can be defined as “specifications, behaviors, steps, or techniques - such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task” (Scarcella and Oxford, 1992: 63). They represent an important aid to the process of successful learning. Grammar learning strategies are defined as cognitive, metacognitive, affective and social processes and actions that second and foreign language learners employ in order to use grammatical structures more effectively, efficiently, and correctly (Oxford et al, 2007). Research on specific grammar learning strategies and their usage in the English classroom is scarce. Pawlak (2019) attributes this to the recent emphasis on the communicative aspect of SLA, which might ignore the grammar aspect of the language.

This diploma paper firstly covers the theoretical basis of language and grammar learning strategies, followed by a review of previous research on the topic. Then, it reports on the study on grammar learning strategies and their relationship with achievement in learning English as a foreign language in the Croatian context. The final part of the paper brings the discussion and conclusion of the findings.

## 2. Language Learning Strategies

### 2.1. Definitions and types of language learning strategies

Language learning strategies have multiple definitions which explain their purpose and usage in the foreign language classroom. Halo (2005) defines language learning strategies as mental and communicative procedures a learner uses in order to learn and utilize a language. Scarcella and Oxford (1992: 63) define language learning strategies as “specifications, behaviors, steps, or techniques- such as seeking out conversation partners, or giving oneself encouragement to tackle a difficult language task”.

The word strategy, according to Oxford (1990) comes from the ancient Greek word *strategia* which holds the meaning of steps or actions taken in order to win a battle or war. The meaning has remained until today and we use the word strategies whenever referring to actions needed to be conducted or while performing any task at hand. Scarcella and Oxford (1993) also use the word toolkit to describe strategies, as if a learner has a box filled with tools, i.e. a wide range of learning strategies, they can choose from while acquiring a new language. For a strategy to be useful and applicable, it has to follow a set of rules (Oxford, 1990). Firstly, it must relate well to the task at hand, i.e. if the task is to recite a poem, the strategies used to acquire that knowledge must help the learner learn lines of text by heart. Secondly, the strategy has to fit the learner’s learning style. If a learner has an auditory learning style, the strategies they use will most likely fit that style, e.g. they will listen to a text in order to remember the most important facts rather than read it or look at pictures. Finally, the learner has to use the strategy when needed and connect it with other relevant strategies in order to make the learning process easier. Allwright (1990) and Little (1991) state that the appropriate usage of strategies enables learners to become more autonomous learners through life.

According to Oxford (1990), there are six types of language learning strategies. The first type, cognitive strategies, refer to any kind of cognitive manipulation of the material at hand in a direct way such as note-taking, summarizing, outlining, reasoning, translating, repeating, reciting, and categorizing. The second group of strategies refers to metacognitive strategies, i.e. the organizing and gathering of materials and planning the learning process before and during performing a task. This includes planning (setting goals and developing a plan of action to achieve those goals, such as creating a study schedule or identifying specific

areas of focus), monitoring which means checking progress and assessing one's own understanding such as keeping track of new vocabulary, evaluating, i.e. identifying areas for improvement, self-regulation, problem-solving and deliberate or undeliberate strategy selection. The third group of strategies are memory-related strategies which help learners link and remember language items solely based on their memory, without deeper meaning involved such as rhyming, the use of acronyms, flashcards, and body movement. Compensatory strategies are used when the learner has to compensate or replace their lack of knowledge. Some compensatory strategies are synonym use, talking around the missing word, using body language and gestures, simplifying language, asking for clarification, using bilingual dictionaries, using technology, and guessing from context. Affective strategies are those connected to the learner's psyche and emotions, such as identifying one's mood, anxiety level, expressing their feelings, using positive messages to encourage themselves, positive self-talk, gaining social support, practising mindfulness, emotional regulation, and rewarding themselves after acquiring a new language item. Finally, social strategies are those used when the learner seeks help from other people or asks questions to get verification or clarification, studies or collaborates with peers, or strikes up a conversation with a native speaker.

Language learning strategies can also be categorized based on various language tasks, including reading, writing, speaking, listening, vocabulary learning, and grammar learning. For reading tasks, strategies such as skimming, scanning, and using context clues are employed to enhance comprehension (Oxford, 1990). Writing strategies encompass planning, organizing ideas, and revising, with the inclusion of proofreading and editing techniques (Ferris & Hedgcock, 2014). Speaking strategies involve using communication strategies, such as paraphrasing or circumlocution, to compensate for vocabulary gaps or difficulties (Yule, 2006). Listening strategies comprise techniques such as active listening, note-taking, and predicting content to improve understanding (Vandergrift, 2007). Vocabulary learning strategies include using mnemonic devices, context analysis, and spaced repetition for effective acquisition (Schmitt, 2000). Lastly, grammar learning strategies involve activities like analyzing sentence patterns, practicing through exercises, and seeking explicit explanations (Lightbown & Spada, 2013). By employing these task-specific strategies, language learners can optimize their proficiency development in various linguistic domains.

## 2.2. Grammar learning strategies

Grammar today is defined as the study of the classes of words, their inflections, and their functions and relations in the sentence (Merriam-Webster). Thus, Oxford et al. (2007) defined grammar learning strategies as cognitive processes and actions that second and foreign language learners employ in order to use grammatical structures more effectively, efficiently, and correctly. Oxford (2017: 244) defined grammar learning strategies as “teachable, dynamic thoughts and behaviors that learners consciously select and employ in specific contexts to improve their self-regulated, autonomous L2 grammar development for effective task performance and long-term efficiency”.

Despite the importance of grammar in second language acquisition, the research on grammar learning strategies has been limited compared to other areas of language learning, such as vocabulary acquisition and reading comprehension. Pawlak (2019: 2) states that “it was a major surprise to discover how little research existed on strategies that learners apply to learn grammar”. He found that the skillful use of grammar learning strategies along with their automation plays an important part in mastering of the target language grammar. He further states that the emphasis on the communicative approach of the target language is partly to blame for the neglect and lack of research regarding grammar learning strategies. He notes that most research regarding grammar learning strategies has included university-level English students, whose results differ from an average high-schooler or a learner in elementary school. Other reason for this may be the historical emphasis on explicit grammar instruction in language classrooms, where teachers provide learners with grammar rules and exercises to practice. This approach may have led to the assumption that grammar learning strategies are not as crucial for language learning as other skills, such as communication or fluency. Additionally, there may be a lack of consensus among researchers on what constitutes effective grammar learning strategies and how they should be measured. Moreover, the difficulty of measuring grammar learning strategies in a reliable and valid way may have caused the lack of research in this area. Some studies suggest that self-reported measures of language learning strategies may be unreliable due to social desirability bias and differences in individual understanding of what constitutes a learning strategy (MacIntyre, MacKinnon, & Clément, 2009). Additionally, the use of retrospective self-report measures may not capture the full range of strategies used during language learning, as learners may not always be aware of the strategies they are using (Oxford & Burry-Stock, 1995).

When talking about the division of grammar learning strategies, Pawlak (2019), following the classification of general learning strategies, groups GLS into metacognitive, affective, social, and cognitive. Cognitive strategies also include strategies which include the aid of production and comprehension of grammar, explicit and implicit knowledge, and the use of corrective feedback when it comes to incorrect grammar use. Pawlak further explains that GLS are divided into morphological, semantic, and syntactic and that their use depends on age, stage of language development, the learner's native language as well as the foreign language being acquired (Oxford and Lee, 2007; Oxford 2011, as cited in Pawlak, 2019).

There are other various grammar learning strategies classification systems that have been proposed. One of them is based on Oxford's (1990) classification. It divides grammar learning strategies into 5 groups. The first group is metalinguistic strategies and it covers strategies which use analyzing and identifying grammatical patterns such as breaking down sentences into grammatical components such as subject, verb, object, etc., to understand their relationship and recognizing recurring patterns in sentences such as verb tenses, noun-verb agreement, etc., to grasp grammar rules. The second group are cognitive strategies which include deductive and inductive reasoning. Deductive reasoning refers to applying logical reasoning to understand and apply grammar rules based on general principles while inductive reasoning includes inferring grammar rules based on patterns observed in language use without explicit instruction. The next group is memory strategies which include repetition and rehearsal (repeating and practicing grammar rules or sentence patterns to reinforce memory and recall) and mnemonic devices (creating memorable associations or mental images to aid in remembering grammar rules or exceptions). The fourth group are communication strategies which are used during the process of communication in the target language such as circumlocution (using alternative words or expressions to describe a concept when the precise vocabulary or grammar is unknown) and paraphrasing (expressing ideas in different words or sentence structures to convey meaning when specific grammar rules are uncertain). The last group are social strategies, meant to be used in a social setting. They include collaborative learning, i.e. engaging in group activities, discussions, or language exchanges to practice and reinforce grammar skills, and seeking clarification which means to ask questions or seek feedback from native speakers or proficient language users to improve grammatical accuracy.

Božinović (2012) has classified grammar learning strategies into 5 groups or rather, factors. The first group of grammar learning strategies refers to strategies that can be associated with learning a foreign language within the context of regular instruction, and their implementation is based on intrinsic motivation for learning a foreign language, which involves self-criticism and self-discipline in the process of learning foreign language grammar. For example, the learner will make an effort to identify their grammatical mistakes, listen carefully to the teacher while explaining grammar, strive to use learned verb forms in conversation or writing, seek opportunities to practice grammar, learn from their grammatical errors, attempt to find answers to specific grammar questions on their own, self-encourage persistence in learning grammar, make connections between the material and previously learned content, and so on. These strategies are also called active learning strategies, and are mostly based on Oxford's cognitive and metacognitive strategies. The second strategy group involves memory strategies for grammar that focus on the target language and require mental language processing, aiding learners in comprehending and using the foreign language. For example, students will translate grammar forms and structures into their native language to aid in memorization. They will utilize their knowledge of the native language when constructing sentences, committing irregular verb forms to memory, practicing grammar forms and structures, striving to remember verb endings and irregular forms, memorizing grammar forms by associating them with their placement in study materials, making an effort to memorize sentence formation rules, easily recalling grammar forms they find appealing, and memorizing verb forms in smaller groups or segments. The third group includes social strategies for learning grammar, which don't have a direct impact on the target language but play a crucial role in language acquisition by facilitating interactions with other participants in the learning process. These strategies aim to increase students' exposure to communication in the foreign language, promote interactive practice, and foster collaboration with peers to develop their language skills. For instance, students will regularly practice grammar with their friends, seek assistance from peers who share similar learning habits and logical thinking, ask for help when they encounter difficulties with grammar, and engage in discussions with classmates to explore different approaches to solving grammar-related assignments. By incorporating and utilizing social strategies, communication within the instructional setting becomes more intense and of higher quality, ultimately leading to more effective acquisition of grammatical knowledge. The fourth factor relates to visual strategies in grammar learning, which include marking techniques like using a marker to underline grammar forms, employing different colored

markers to emphasize the forms that require mastery, highlighting essential aspects of grammar, and writing down new grammar forms to aid in memorization. The fifth and final group of grammar learning strategies by Božinović (2012) are strategies for independent grammar discovery, which can be loosely categorized as self-motivational strategies but primarily involve a learner's orientation towards learning the grammar of a foreign language. These strategies rely on conscious and self-initiated approaches to grammar learning. They are likely to be employed by highly motivated learners who are willing to autonomously explore the grammar of a foreign language. For instance, learners logically attempt to determine correct and incorrect forms, solve grammar exercises based on their auditory perception, employ logical reasoning to comprehend grammar rules, make contextual guesses to infer the meaning of new grammar forms, and enhance their memorization of grammar by forming associations..

### 2.3. How to measure grammar learning strategies?

One of the most commonly used measures of language learning strategy use is the Strategy Inventory for Language Learning (SILL) developed by Oxford (1990). The SILL is a self-report instrument that measures the frequency and type of language learning strategies that learners use. Even though the SILL does include items related to grammar learning strategies, which can be used to research their use amongst learners, such as: “When I study grammar, I try to figure out the underlying rules or patterns.”, “I use grammar charts or tables to help me understand grammar rules.”, “I practice using grammar exercises or drills.”, and “I pay attention to grammar when I listen to or read something in the target language.”, it does not include a separate subscale for grammar learning strategies. Still, the SILL has been widely used in second language research and has been translated into several languages, including Chinese, French, and Japanese.

Another measure of grammar learning strategies is the Metacognitive Awareness of Grammar Questionnaire (MAGQ) developed by Nassaji and Fotos (2007). The MAGQ is a self-report instrument that measures learners' awareness of the process of learning grammar. It consists of several subscales, including the knowledge of grammar rules subscale, which measures the extent to which learners are aware of the grammar rules they have learned. The MAGQ has been used in several studies to investigate the relationship between learners' metacognitive awareness of grammar and their grammar proficiency.

Božinović (2012) has created an original questionnaire pertaining to grammar learning



strategies divided into five groups, as previously explained. This questionnaire was specifically designed for her research, with which she wanted to explore grammar learning strategies and grammatical competence in foreign language. The five groups in question are active grammar learning strategies, memory strategies, visual, social, and self-motivational strategies or rather independent grammar discovery strategies.

Besides self-report measures, some researchers have used think-aloud protocols to measure grammar learning strategies. Think-aloud protocols involve asking learners to verbalize their thoughts while they are completing a grammar task. This method provides researchers with insight into learners' thought processes and the strategies they use to complete grammar tasks. Think-aloud protocols have been used in several studies to investigate the relationship between grammar learning strategies and grammar proficiency (e.g., Cai, 2015; Jin & Deane, 2014).

#### 2.4. Previous research on grammar learning strategies

Research has consistently shown that effective grammar learning strategies can have a significant impact on language learning achievement. The choice of grammar learning strategies is influenced by a wide range of factors, including cognitive and affective factors, as well as cultural and social factors. Cognitive factors, such as memory and attention, play a key role in grammar learning, as learners need to retain and process grammatical rules and structures. Affective factors, such as motivation and anxiety, also play an important role in grammar learning, as learners who are highly motivated tend to engage in more effective grammar learning strategies and those with high levels of anxiety may struggle to learn grammar effectively (Pekrun, Elliot, & Maier, 2009).

Culture and social factors also have a significant impact on grammar learning strategies. For example, learners from different linguistic and cultural backgrounds may approach grammar learning differently, based on their prior language learning experiences and cultural attitudes towards language learning (Kanno & Stuart, 2011). Additionally, social factors such as peer influence and teacher feedback can affect grammar learning strategies. Learners who receive supportive feedback from their teachers and peers tend to engage in more effective grammar learning strategies, such as seeking clarification and feedback (Naiman, Frohlich, Stern, & Todesco, 1978).

In addition to these factors, the type of instruction and materials used in grammar learning also influence the strategies used by learners. For example, explicit grammar instruction,

which involves explicit explanations of grammatical rules, tends to encourage the use of metalinguistic strategies, such as analyzing and categorizing grammatical structures (Ellis, 2008). On the other hand, implicit grammar instruction, which involves learning grammar rules through exposure to authentic language input, tends to encourage the use of inferential strategies, such as guessing meaning from context (Doughty & Williams, 1998).

Studies have found that learners who use strategies such as practicing grammar drills, using language learning software, and seeking feedback from teachers or peers tend to perform better on grammar tests and demonstrate greater accuracy in their language production (Chamot & O'Malley, 1994; Schmidt, 1990). Moreover, learners who use a combination of grammar learning strategies and receive explicit grammar instruction are more likely to make gains in their grammar proficiency than those who only receive explicit instruction (Norris & Ortega, 2009). This is because the use of effective grammar learning strategies enables learners to actively engage with and apply the grammar rules and structures they are learning. Additionally, learners who use grammar learning strategies are better able to internalize the grammar rules and structures, which can lead to more fluent and accurate language production. Therefore, it is essential for language learners to employ effective grammar learning strategies in order to achieve greater success in their language learning endeavors.

Regarding the relationship between a learner's achievement and the GLS they use, according to the socio-educational model of second language acquisition, learners' motivation and attitudes toward learning are affected by their achievement in the target language (Gardner, 1985). Therefore, learners who perform well in grammar tests are more likely to use more effective grammar learning strategies than learners who perform poorly. Ellis and Yuan (2004) found that planning can also influence the effectiveness of grammar learning strategies, with pre-task planning leading to better performance on grammar-focused tasks. These would be considered metacognitive strategies. Similarly, Nassaji and Fotos (2007) found that learners who scored higher on a grammar test were more likely to use cognitive strategies, such as using examples and explanations, and metacognitive strategies, such as monitoring their understanding and progress.

Next, Spada and Lightbown (2008) found that learners who scored higher on a grammar test reported using more metalinguistic strategies, such as analyzing and comparing grammar rules, than learners who scored lower on the test. Similarly, Jin and Deane (2014) found that learners who performed better on a grammar test reported using more cognitive and

metacognitive strategies, such as planning and self-monitoring, than learners who performed worse on the test. However, the relationship between grammar learning strategies and achievement is not limited to language classrooms. In fact, studies have shown that the use of grammar learning strategies outside the classroom, such as through self-study or language exchange programs, can also lead to improved language proficiency (Sasaki & Hirose, 1996; Wei, 2011).

Moreover, the choice of grammar learning strategies may also depend on learners' proficiency level. Learners at different proficiency levels may use different strategies to acquire grammar rules. For example, Ellis (1997) found that beginners tend to rely more on deductive strategies, such as memorizing grammar rules, while advanced learners tend to use more inductive strategies, such as analyzing and inferring grammar rules from context.

Regarding other previous research, Tilfarliogu (2005) has found no difference between successful and unsuccessful learners and their usage of grammar learning strategies, i.e. both groups employ GLS to a similar extent. Vempati and Soundarya (2022) have found low correlation between learner's achievement and their GLS. However, successful learners "have a firm grasp of the methods they use and the rationale behind them. They may adapt these methods to meet the demands of the course materials and their own unique requirements as language students. Some less successful students can name these methods as well, but they lack the understanding to choose the most effective ones for every specific assignment" (380).

Griffiths and Cansiz (2015) have found that female learners use language learning strategies more often than their male counterparts.

Chamot and O'Malley (1987) proved that higher level students reported greater use of metacognitive strategies. Green and Oxford (1995) noted that LLS of all kinds are used more frequently by higher level students. Also, Griffiths (2003) has found a positive correlation between advanced students and frequency of LLS usage, especially social, vocabulary, reading, and affective strategies.

Studies in Croatia have also investigated the use of grammar learning strategies. A study by Babić-Kekez (2016) investigated the role of grammar learning strategies in the development of communicative competence in English as a foreign language (EFL) among Croatian university students. The study involved 159 students who completed a questionnaire on their use of grammar learning strategies and took an English proficiency test. The findings of the

study revealed that there is a significant relationship between the use of grammar learning strategies and EFL communicative competence. The study found that the use of strategies such as metacognitive, cognitive, and affective strategies were positively related to EFL communicative competence. In addition, the study found that the use of grammar learning strategies differed depending on the students' English proficiency level. The study found that students with higher English proficiency levels used more metacognitive, cognitive, and affective strategies than those with lower proficiency levels. Specifically, higher proficiency students used more strategies such as goal setting, planning, seeking feedback, and using mental imagery. On the other hand, lower proficiency students tended to rely more on grammatical rules and repetition, and less on strategies such as seeking feedback, self-monitoring, and self-evaluation. Therefore, the study suggests that different levels of English proficiency may require different types of grammar learning strategies, and that language teachers should take into account the proficiency level of their students when designing instruction and providing support for learning strategies. The study concludes that the use of grammar learning strategies is an important factor in developing EFL communicative competence and that language learners should be encouraged to use a variety of strategies to improve their language learning outcomes.

Miškulin (2019) studied the use of grammar learning strategies by Croatian students of English as a foreign language. The study involved 62 participants who completed a grammar learning strategy questionnaire. The study found that the most frequently used grammar learning strategies by Croatian students were cognitive strategies, followed by metacognitive and social/affective strategies. The most commonly used specific strategies were using dictionaries, translating, and memorization.

The study also found that there were differences in the use of grammar learning strategies depending on gender, with females reporting higher use of cognitive strategies and males reporting higher use of social/affective strategies. In addition, the study found that there were no significant differences in the use of grammar learning strategies based on the students' level of English proficiency.

Tomašević (2020) examined the use of grammar learning strategies by Croatian high school students of English as a foreign language. The study involved 77 participants who completed a grammar learning strategy questionnaire. The study found that the most frequently used grammar learning strategies by Croatian high school students were metacognitive strategies, followed by cognitive and affective strategies. The most commonly used specific strategies

were using grammar rules, practicing grammar exercises, and reading texts.

The study also found that there were differences in the use of grammar learning strategies depending on gender, with females reporting higher use of cognitive and metacognitive strategies than males. In addition, the study found that there were no significant differences in the use of grammar learning strategies based on the students' grade level or the type of school they attended.

Overall, there is numerous research which proves that teaching language learning strategies to learners improves their second language acquisition. Kralj and Seljan (2019) argue that students who are taught specific learning strategies, such as the use of mnemonic devices or metacognitive strategies, can improve their language proficiency and overall academic performance. Novak and Matetić (2020) emphasize the teacher's role in providing an overview of language learning strategies the learners can use. The authors argue that teachers should be aware of the different learning styles and preferences of their students and provide them with opportunities to practice and develop their language skills.

Lastly, Božinović and Perić (2012) have found that beginner learners used social learning strategies more often than more experienced learners, which is probably explained by novice learners needing and seeking help more often than their experiences counterparts. Božinović (2012) found differences in the use of grammar learning strategies based on gender; male students and female students significantly differed in terms of the use of memory strategies and visual strategies for grammar learning. The more frequent use of these strategies was observed among female students. There were also differences based on the level of foreign language learning (participants at the beginner level more frequently employed memory strategies and social strategies for grammar learning compared to participants at the intermediate level of foreign language learning). The author explains that the findings suggest that students with a higher degree of morphological and syntactic competence in a foreign language do not utilize all grammar learning strategies for that language, but only some of them. Finally, Božinović (2012), while researching the use of grammar learning strategies in a foreign language (German and Spanish) has determined that there is a statistically significant difference in the use of specific grammar learning strategies among all participants. The results showed that the highest mean values were obtained for the group of strategies related to independent discovery of grammar, followed by memory strategies for grammar learning and active learning strategies for grammar. The least commonly used grammar learning strategies for the foreign language, indicated by the lowest mean values,

were found in the group of visual strategies for grammar learning and social strategies for grammar learning. The results also indicate that participants who have no prior experience in learning a foreign language more frequently employ active grammar learning strategies and visual grammar learning strategies compared to participants with previous experience in learning a foreign language. According to this research, male and female students significantly differ in the dimension of grammar memory strategies and visual grammar learning strategies. Specifically, a more frequent use of grammar memory strategies and visual grammar learning strategies has been found among female students. However, differences were not observed for all types of foreign language grammar learning strategies. One possible explanation for the presence of gender differences in strategies for learning foreign language grammar could be attributed to the higher motivation among women to learn a foreign language and their willingness to exert additional effort in language learning. In Croatian culture (where this research took place), communication skills and job opportunities linked to foreign language proficiency are commonly regarded as socially desirable occupations for women, who perceive them as worthwhile investments requiring extra effort. The results of this study indicate that there are variations in the utilization of grammar learning strategies among adult learners of a foreign language based on their prior language learning background. The findings reveal that learners without prior language learning experience tend to employ active grammar learning strategies and visual grammar learning strategies more frequently compared to those who have previous language learning experience. This suggests that learners who have not been exposed to foreign language learning before display higher motivation to learn and invest extra effort in acquiring the target grammatical structures, enabling them to actively participate in the learning process alongside learners who possess previous language learning experience. Božinović (2012) has found that the utilization of memory strategies for grammar, social strategies for grammar learning, and strategies for independent grammar discovery has a statistically significant impact on the assessed syntactic competence in the German language. This implies that incorporating these strategies contributes to the improvement of syntactic competence in German. In simpler terms, continuous development and application of these strategy groups by students foster the enhancement of their syntactic competence in German, leading to an increased ability to construct sentences correctly. Furthermore, the study has found that incorporating active grammar learning strategies, particularly self-motivational strategies, aids in the advancement of morphological competence in the Spanish language.

### **3. The study**

#### 3.1. Aim and research questions:

The main aim of this study was to investigate the relationship between grammar learning strategies and learners' achievement. The following are the research questions:

1. Which GLS are used the most frequently?
2. Is there a correlation between Ls' GLS and their achievement, as measured by their final grade?
3. Is there a difference between more and less successful learners and their choice of GLS?
4. Is there a difference between male and female participants in their use of GLS?
5. Is there a difference between lower and upper classes in their use of GLS?

#### 3.2. Participants

A total of 149 participants took part in the study. 99 attend the Second Grammar School in Osijek and 50 attend the Second Grammar School "Matija Mesić" in Slavonski Brod. There were 20 first-graders, 59 second-graders, 50 third-graders and 20 fourth-graders. 69.8% were female students (104 participants), whereas 30.2% were male students (45 participants). Croatian is the first language for 146 participants, and three participants listed Croatian as their second language. The participants have been studying English for span of 8 to 14 years. 5 learners have been learning English for 8 years, 16 for 9 years, 54 for 10 years, 45 for 11 years, 28 for 12 years, and 1 learner has been learning English for 14 years.

### 3.3. Instrument

The instrument designed for this study was a 47-item questionnaire in Croatian (see Appendix A). The original questionnaire was created in 2012 by Božinović and consisted of 65 items which have been edited down to be applicable to the present research. The GLS were classified into 5 groups, consisting of metacognitive and cognitive strategies, rote learning strategies, logical strategies, visual, and finally, social learning strategies. The items were followed by a 5-point Likert scale, with 1 meaning they never use the strategy, 2 they rarely use the strategy, 3 they sometimes use the strategy, 4 they often use the strategy, and finally, 5 meaning they always or almost always use the strategy. Finally, participants' achievement was asked to provide their last final grade in English.

### 3.4. Procedure

The data were collected in December of 2022 and April of 2023. The questionnaire in Croatian was administered to the students of Second Grammar School in Osijek and Grammar School "Matija Mesić" during their regular English classes and with the prior approval of their teacher. Before completing the questionnaire, the participants were given clear instructions in their mother tongue on the purpose of the study and time required to fill in the questionnaire. They were informed that the data collected was anonymous, that taking part in the study was voluntary, and that they could withdraw at any moment as well as ask for clarification.

After all the data were collected, they were entered into the Statistical Package for Social Sciences (SPSS) programme which was then used to analyze the data in order to answer the previously formulated research questions.

In order to find out the relationship between learners' grammar learning strategies and their achievement, descriptive statistics were calculated. Mean scores and standard deviation were calculated. Next, Pearson product-moment correlation coefficient test was used to find out whether there was a correlation between the overall usage of strategies and learners' achievement. Lastly, an Independent-Samples t-test was conducted to investigate whether there was a difference between male and female participants, more and less successful students, and lower and upper classes and their achievement.



### 3.5. Results

This section focuses on the results that were obtained by the quantitative analyses.

#### 3.5.1. Frequency of GLS usage

Table 1 showcases the frequency of GLS usage amongst all participants. The most used grammar strategies are: “I logically conclude what is correct and incorrect” (M=4.21, SD=1.01), “I try to recognize my grammar mistakes” (M=4.19, SD=1.3), “Examples help me the most while studying grammar” (M=4.13, SD=1.09), “I study better if my notes are neatly written” (M=4.13, SD=1.27), “I remember more quickly when a grammatical form reminds me of something” (M=4.04, SD=1.21), and “I learn based on my own grammatical mistakes” (M=4.01, SD=1.04). The grammar learning strategies used the least by learners participating in this study are: “I practice grammar alone” (M=2.57, SD=1.59), “I separate irregular verbs into groups” (M=2.47, SD=1.45), “I mimic the teacher’s pronunciation of grammar forms” (M=2.46, SD=1.71), “I practice with my friends to be more successful at grammar” (M=2.06, SD=1.18), “I practice grammar with other people” (M=1.92, SD=1.11), and “I reward myself after a successful exam” (M=1.90, SD=1.71)

*Table 1: Frequency of GLS usage amongst all participants.*

	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>I logically conclude what is correct and incorrect</b>	<b>149</b>	<b>4.21</b>	<b>1.01</b>
<b>I try to recognize my grammar mistakes</b>	<b>149</b>	<b>4.19</b>	<b>1.3</b>
<b>Examples help me the most while studying grammar</b>	<b>149</b>	<b>4.13</b>	<b>1.09</b>
<b>I study better if my notes are neatly written</b>	<b>149</b>	<b>4.13</b>	<b>1.27</b>
<b>I remember more quickly when a grammatical form reminds me of something</b>	<b>149</b>	<b>4.03</b>	<b>1.21</b>
<b>I learn based on my own grammatical mistakes</b>	<b>149</b>	<b>4.01</b>	<b>1.04</b>
<b>I learn irregular verb forms by heart</b>	<b>149</b>	<b>3.98</b>	<b>1.95</b>
<b>I solve grammatical tasks by auditory perception</b>	<b>149</b>	<b>3.85</b>	<b>1.16</b>
<b>I guess the meaning grammatical forms from context</b>	<b>149</b>	<b>3.80</b>	<b>1.13</b>
<b>I remember a grammatical form more quickly if I like it</b>	<b>149</b>	<b>3.80</b>	<b>1.30</b>
<b>I self-check my knowledge before an exam</b>	<b>149</b>	<b>3.75</b>	<b>1.34</b>
<b>I write notes down during a grammar class</b>	<b>149</b>	<b>3.72</b>	<b>1.46</b>
<b>I remember better when different verbs are similar in form</b>	<b>149</b>	<b>3.51</b>	<b>1.29</b>
<b>I emphasize important grammatical forms in my notebook</b>	<b>149</b>	<b>3.48</b>	<b>1.49</b>
<b>I repeat grammatical forms until I remember them</b>	<b>149</b>	<b>3.44</b>	<b>1.38</b>
<b>I learn better when my teacher corrects my mistakes</b>	<b>149</b>	<b>3.43</b>	<b>1.18</b>
<b>I learn by reading instructions on tense use in my book</b>	<b>149</b>	<b>3.34</b>	<b>1.24</b>
<b>If something is unclear, I ask the teacher to explain</b>	<b>149</b>	<b>3.35</b>	<b>1.52</b>

<b>I try to incorporate new verb forms I learn in my speech/writing</b>	<b>149</b>	<b>3.17</b>	<b>1.08</b>
<b>I write a grammar form repeatedly to remember it more easily</b>	<b>149</b>	<b>3.17</b>	<b>1.36</b>
<b>I acquire grammar by connecting it to previous knowledge</b>	<b>149</b>	<b>3.14</b>	<b>1.28</b>
<b>I learn grammar by doing homework</b>	<b>149</b>	<b>3.12</b>	<b>1.51</b>
<b>When I do not understand something, I ask a friend</b>	<b>149</b>	<b>3.04</b>	<b>1.26</b>
<b>I prepare for an exam by going through the mock-test</b>	<b>149</b>	<b>2.94</b>	<b>1.43</b>
<b>I use Croatian when forming a sentence</b>	<b>149</b>	<b>2.91</b>	<b>1.47</b>
<b>I try to find answers to tasks on my own</b>	<b>149</b>	<b>2.89</b>	<b>1.15</b>
<b>I translate a grammar form into Croatian to understand it</b>	<b>149</b>	<b>2.85</b>	<b>1.44</b>
<b>I encourage myself to be persistent when studying grammar</b>	<b>149</b>	<b>2.79</b>	<b>1.34</b>
<b>I underline grammar forms and tenses in a text</b>	<b>149</b>	<b>2.73</b>	<b>1.18</b>
<b>I practice grammar by solving tasks on the internet</b>	<b>149</b>	<b>2.62</b>	<b>1.49</b>
<b>I practice grammar alone</b>	<b>149</b>	<b>2.57</b>	<b>1.59</b>
<b>I separate irregular verbs into groups</b>		<b>2.47</b>	<b>1.35</b>
<b>I mimic the teacher's pronunciation of grammar forms</b>	<b>149</b>	<b>2.46</b>	<b>1.71</b>
<b>I practice with my friends to be more successful at grammar</b>	<b>149</b>	<b>2.06</b>	<b>1.18</b>
<b>I practice grammar with other people</b>		<b>1.92</b>	<b>1.11</b>
<b>I reward myself after a successful exam</b>		<b>1.90</b>	<b>1.71</b>

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Table 2 shows the frequency of grouped GLS usage amongst all participants. The strategy group used most by all learners are logical strategies (M=3.49, SD=.7), and the group used the least by learners are social strategies (M=2.66, SD=1.02).

*Table 2: Frequency of GLS usage amongst all participants (grouped)*

	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Logical Strategies</b>	<b>149</b>	<b>3.49</b>	<b>.7</b>
<b>Visual strategies</b>	<b>149</b>	<b>3.45</b>	<b>1.2</b>
<b>Rote learning strategies</b>	<b>149</b>	<b>3.33</b>	<b>.93</b>
<b>Metacognitive and cognitive strategies</b>	<b>149</b>	<b>3.32</b>	<b>.66</b>
<b>Social strategies</b>	<b>149</b>	<b>2.66</b>	<b>1.02</b>

### *3.5.2. Correlation between learners' usage of grammar learning strategies and their achievement.*

The relationship between learners' achievement and visual grammar learning strategies was investigated using Pearson product-moment correlation coefficient (Table 3). There was a medium, positive correlation between the two variables,  $r = .260$ ,  $n = 146$ ,  $p < .01$ , with the usage of visual grammar learning strategies associated with more successful achievement.

The relationship between learners' achievement and grammar learning strategies overall was investigated using Pearson product-moment correlation coefficient (Table 3). There was no correlation between the two variables,  $r = .945$ ,  $n = 146$ ,  $p > .05$ , with the usage of grammar learning strategies overall not associated with more successful achievement.

The relationship between learners' achievement and metacognitive and cognitive grammar learning strategies was investigated using Pearson product-moment correlation coefficient (Table 3). There was no correlation between the two variables,  $r = .644$ ,  $n = 146$ ,  $p > .05$ , with the usage of metacognitive and cognitive grammar learning strategies not associated with more successful achievement.

The relationship between learners' achievement and rote learning strategies was investigated using Pearson product-moment correlation coefficient (Table 3). There was no correlation

between the two variables,  $r = .925$ ,  $n = 146$ ,  $p > .05$ , with the usage of rote learning strategies not associated with more successful achievement.

The relationship between learners' achievement and social learning strategies was investigated using Pearson product-moment correlation coefficient (Table 3). There was no correlation between the two variables,  $r = .312$ ,  $n = 146$ ,  $p > .05$ , with the usage of social learning strategies not associated with more successful achievement.

The relationship between learners' achievement and logical learning strategies was investigated using Pearson product-moment correlation coefficient (Table 3). There was no correlation between the two variables,  $r = .321$ ,  $n = 146$ ,  $p > .05$ , with the usage of logical learning strategies not associated with more successful achievement.

*Table 3: Correlation between GLS and learners' achievement*

	<b>Sum of all strategies</b>	<b>Metacognitive and cognitive strategies</b>	<b>Rote learning strategies</b>	<b>Social strategies</b>	<b>Visual strategies</b>	<b>Logical strategies</b>
<b>Final grade</b>	<b>.954</b>	<b>.644</b>	<b>.925</b>	<b>.312</b>	<b>.260**</b>	<b>.321</b>

**p<0.5\***  
**p<0.1\*\***

### 3.5.3. *Difference between more and less successful learners and their GLS.*

An independent-samples t-test was conducted to compare usage of grammar learning strategies overall for more and less successful learners (Table 4). There was no significant difference in scores for more successful learners (MSL) ( $M = 3.28, SD = .57$ ) and less successful learners (LSL) ( $M = 3.45, SD = .56, t(134) = -.89, p > 0.5$ ), two-tailed).

An independent-samples t-test was conducted to compare usage of cognitive and metacognitive GLS for more and less successful learners (Table 4). There was no significant difference in scores for more successful learners (MSL) ( $M = 3.34, SD = .67$ ) and less successful learners (LSL) ( $M = 3.45, SD = .97, t(134) = -.89, p > 0.5$ ), two-tailed).

An independent-samples t-test was conducted to compare usage of rote GLS for more and less successful learners (Table 4). There was no significant difference in scores for more successful learners (MSL) ( $M = 3.35, SD = .95$ ) and less successful learners (LSL) ( $M = 3.38, SD = .77, t(134) = -1.11, p > 0.5$ ), two-tailed).

An independent-samples t-test was conducted to compare usage of social GLS for more and less successful learners (Table 4). There was no significant difference in scores for more successful learners (MSL) ( $M = 2.74, SD = 1.19$ ) and less successful learners (LSL) ( $M = 2.3, SD = .75, t(134) = 1.09, p > 0.5$ ), two-tailed).

An independent-samples t-test was conducted to compare usage of visual GLS for more and less successful learners (Table 4). There was no significant difference in scores for more successful learners (MSL) ( $M = 3.52, SD = 1.3$ ) and less successful learners (LSL) ( $M = 3.66, SD = .70, t(134) = -.31, p > 0.5$ ), two-tailed).

An independent-samples t-test was conducted to compare usage of logical GLS for more and less successful learners (Table 4). There was no significant difference in scores for more successful learners (MSL) ( $M = 3.48, SD = .58$ ) and less successful learners (LSL) ( $M = 3.55, SD = .63, t(134) = -.37, p > 0.5$ ), two-tailed).

Table 4: Difference between more and less successful learners and their GLS.

<b>Variable</b>	<b>MSL</b>	<b>LSL</b>	<b>t-test</b>	<b>Sig.</b>
<b>GLS overall</b>	<b>3.28</b>	<b>3.45</b>	<b>-.89</b>	<b>.37</b>
<b>Cognitive and metacognitive GLS</b>	<b>3.34</b>	<b>3.7</b>	<b>-1.49</b>	<b>.14</b>
<b>Rote learning GLS</b>	<b>3.35</b>	<b>3.38</b>	<b>-1.11</b>	<b>.91</b>
<b>Social GLS</b>	<b>2.74</b>	<b>2.30</b>	<b>1.09</b>	<b>.27</b>
<b>Visual GLS</b>	<b>3.52</b>	<b>3.66</b>	<b>-.31</b>	<b>.76</b>
<b>Logical GLS</b>	<b>3.48</b>	<b>3.55</b>	<b>-.37</b>	<b>.71</b>

#### 3.5.4. GLS most used by most and least successful learners

The group of strategies used most by more successful learners were the visual strategies (N=100, Mean=3.53, SD=1.33). The group of strategies used least by more successful learners was the social strategies group (M=2.74, SD=1.19), as seen in Table 5.

Table 5: GLS used by more successful learners

	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Visual GLS</b>	<b>100</b>	<b>3.53</b>	<b>1.33</b>
<b>Logical GLS</b>	<b>100</b>	<b>3.48</b>	<b>.56</b>
<b>Rote learning GLS</b>	<b>100</b>	<b>3.35</b>	<b>.95</b>
<b>Metacognitive and cognitive GLS</b>	<b>100</b>	<b>3.33</b>	<b>.67</b>
<b>Social GLS</b>	<b>100</b>	<b>2.74</b>	<b>1.19</b>

As seen in Table 6, the group of strategies used most by less successful learners are

metacognitive and cognitive strategies ( $M=3.7$ ,  $SD=.97$ ) and the least used are social strategies ( $M=2.30$ ,  $SD=.75$ )

*Table 6: GLS used by less successful learners*

	<b>N</b>	<b>Mean</b>	<b>SD</b>
<b>Metacognitive and cognitive GLS</b>	<b>49</b>	<b>3.70</b>	<b>.97</b>
<b>Visual GLS</b>	<b>49</b>	<b>3.67</b>	<b>.71</b>
<b>Logical GLS</b>	<b>49</b>	<b>3.56</b>	<b>.63</b>
<b>Rote learning GLS</b>	<b>49</b>	<b>3.39</b>	<b>.77</b>
<b>Social GLS</b>	<b>49</b>	<b>2.30</b>	<b>.75</b>

### *3.5.5. Difference between male and female participants in the use of GLS*

An independent-samples t-test was conducted to compare usage of grammar learning strategies overall for males and females (Table 7). There was a significant difference in scores for males ( $M = 3.09$ ,  $SD = .67$ ) and females ( $M = 3.33$ ,  $SD = 0.43$   $t(147) = -2.6$ ,  $p = .01$ , two-tailed).

An independent-samples t-test was conducted to compare usage of cognitive and metacognitive grammar learning strategies for males and females (Table 7). There was a significant difference in scores for males ( $M = 3.15$ ,  $SD = .76$ ) and females ( $M = 3.40$ ,  $SD = 0.60$   $t(147) = -2.15$ ,  $p < .05$ , two-tailed).

An independent-samples t-test was conducted to compare usage of rote grammar learning strategies for males and females (Table 7). There was a significant difference in scores for males ( $M = 3.06$ ,  $SD = 1.15$ ) and females ( $M = 3.45$ ,  $SD = 0.80$   $t(147) = -2.39$ ,  $p < .05$ , two-tailed).

An independent-samples t-test was conducted to compare usage of social grammar learning strategies for males and females (Table 7). There was no significant difference in scores for males ( $M = 2.66$ ,  $SD = 1.07$ ) and females ( $M = 2.66$ ,  $SD = 1.57$   $t(147) = .15$ ,  $p > .05$ , two-tailed).



An independent-samples t-test was conducted to compare usage of visual grammar learning strategies for males and females (Table 7). There was no significant difference in scores for males ( $M = 3.2, SD = 1.11$ ) and females ( $M = 3.55, SD = 1.07, t(147) = 1.62, p > .05$ , two-tailed).

An independent-samples t-test was conducted to compare usage of social grammar learning strategies for males and females (Table 7). There was no significant difference in scores for males ( $M = 3.33, SD = 1.2$ ) and females ( $M = 3.56, SD = 1.17, t(147) = -1.84, p > .05$ , two-tailed).

*Table 7: Difference between male and female participants in the use of GLS*

<b>Variable</b>	<b>male</b>	<b>female</b>	<b>t-test</b>	<b>Sig.</b>
<b>GLS overall</b>	<b>3.09</b>	<b>3.33</b>	<b>-2.6</b>	<b>.01**</b>
<b>Cognitive and metacognitive GLS</b>	<b>3.15</b>	<b>3.40</b>	<b>-2.15</b>	<b>.03*</b>
<b>Rote GLS</b>	<b>3.06</b>	<b>3.45</b>	<b>-2.39</b>	<b>.02*</b>
<b>Social GLS</b>	<b>2.66</b>	<b>2.66</b>	<b>.15</b>	<b>.99</b>
<b>Visual GLS</b>	<b>3.2</b>	<b>3.55</b>	<b>-1.62</b>	<b>.11</b>
<b>Logical GLS</b>	<b>3.33</b>	<b>3.56</b>	<b>-1.84</b>	<b>.07</b>

**p<.05\***

**p<.01\*\***

### *3.5.6. Difference between lower and upper classes in their use of GLS*

An independent-samples t-test was conducted to compare usage of grammar learning strategies overall for lower and upper classes (Table 8). There was a significant difference in scores for lower classes ( $M = 3.59, SD = .32$ ) and upper classes ( $M = 3.22, SD = 0.40, t(38) = 3.24, p < .05$ , two-tailed).

An independent-samples t-test was conducted to compare usage of cognitive and metacognitive grammar learning strategies for lower and upper classes (Table 8). There was a significant difference in scores for lower classes ( $M = 3.87, SD = .39$ ) and upper classes ( $M = 3.24, SD = 0.35, t(38) = 5.30, p < .001$ , two-tailed).

An independent-samples t-test was conducted to compare usage of rote grammar learning strategies for lower and upper classes (Table 8). There was a significant difference in scores for lower classes ( $M = 4.13$ ,  $SD = .60$ ) and upper classes ( $M = 3.2$ ,  $SD = 0.70$ )  $t(38) = 4.47$ ,  $p < .001$ , two-tailed).

An independent-samples t-test was conducted to compare usage of visual grammar learning strategies for lower and upper classes (Table 8). There was a significant difference in scores for lower classes ( $M = 4.1$ ,  $SD = .62$ ) and upper classes ( $M = 3.51$ ,  $SD = 0.88$ )  $t(38) = 2.45$ ,  $p < .001$ , two-tailed).

An independent-samples t-test was conducted to compare usage of social grammar learning strategies for lower and upper classes (Table 8). There was no significant difference in scores for lower classes ( $M = 2.42$ ,  $SD = .65$ ) and upper classes ( $M = 2.73$ ,  $SD = .56$ )  $t(38) = -1.6$ ,  $p < .05$ , two-tailed).

An independent-samples t-test was conducted to compare usage of logical grammar learning strategies for lower and upper classes (Table 8). There was no significant difference in scores for lower classes ( $M = 3.58$ ,  $SD = .37$ ) and upper classes ( $M = 3.47$ ,  $SD = 1.29$ )  $t(38) = 3.61$ ,  $p < .05$ , two-tailed).

*Table 8: Difference between lower and upper classes in their use of GLS*

<b>Variable</b>	<b>lower classes</b>	<b>upper classes</b>	<b>t-test</b>	<b>Sig.</b>
<b>GLS overall</b>	<b>3.59</b>	<b>3.22</b>	<b>-3.24</b>	<b>.002**</b>
<b>Cognitive and metacognitive GLS</b>	<b>3.87</b>	<b>3.24</b>	<b>5.30</b>	<b>.000***</b>
<b>Rote GLS</b>	<b>4.13</b>	<b>3.2</b>	<b>4.47</b>	<b>.000***</b>
<b>Social GLS</b>	<b>2.42</b>	<b>2.73</b>	<b>-1.6</b>	<b>.116</b>
<b>Visual GLS</b>	<b>4.1</b>	<b>3.51</b>	<b>2.45</b>	<b>.02*</b>
<b>Logical GLS</b>	<b>3.58</b>	<b>3.47</b>	<b>3.6</b>	<b>.72</b>

**p<.05\***

**p<.01\*\***

**p<.001\*\*\***

### 3.6. Discussion

This study examined the relationship between the usage of grammar learning strategies and learners' achievement. Higher level students were not reported using a larger repertoire of strategies overall more frequently than lower level students, i.e. higher level students do not use grammar learning strategies significantly more often than lower level students. Higher level students reported using only the visual strategies significantly more frequently than lower level students, connecting visual strategies with better achievement, i.e. learners with higher usage of visual grammar learning strategies have better achievement than those who do not. Female participants of this study used significantly more grammar learning strategies overall, as well as more cognitive/metacognitive strategies (active strategies), and rote learning strategies (memory related strategies). This gender disparity in foreign language grammar learning strategies can be explained by the fact that women exhibit greater levels of motivation to learn a foreign language and are willing to put in extra effort in their language learning endeavors (Božinović, 2012). Božinović also states that, drawing from practical experience, it can be observed that in Croatian culture, there is a prevalent social desirability of women pursuing careers in communication and employment that are connected to foreign language proficiency. Women perceive these occupations as financially lucrative and thus find it worthwhile to invest extra effort in acquiring language skills. Furthermore, both less and more successful learners scored the lowest on the usage of the social language learning strategies which can be explained by the rare occurrence of pair or group work during grammar learning lessons, thus, learners develop the practice of studying or revising grammar on their own and without the help of others. This research is in line with some previous studies on similar topics which found that female learners use language learning strategies more often than their male counterparts (Božinović, 2012). Griffiths and Cansiz (2015) have found that female learners use language learning strategies significantly more often than their male counterparts. Tomašević (2020) also found that there were differences in the use of grammar learning strategies depending on gender, with females reporting higher use of cognitive and metacognitive strategies. Miškulin (2019) has also found that there were differences in the use of grammar learning strategies depending on gender, with females reporting higher use of cognitive strategies and males reporting higher use of social and affective strategies.

No significant difference was found in which grammar learning strategies are used the most by more and less successful learners. This occurrence can be explained by the fact that this

research took place in two grammar schools with learners that are overall quite successful at English. While there is a difference in final marks between learners, there is not a great difference in knowledge between those learners that were grouped into the less successful group, and those that were grouped into the more successful group. These results might have been different had the research been done in different types of secondary schools rather than grammar schools. While more successful learners use visual and logical strategies the most, less successful learners use metacognitive and cognitive and logical strategies the most. Both groups of learners use social learning strategies the most. Lastly, this research has proven that, similarly to Božinović's (2012) research, lower class learners tend to use significantly more grammar learning strategies than their older counterparts. This research has shown that 1<sup>st</sup> and 2<sup>nd</sup> graders use significantly more grammar learning strategies overall, as well as cognitive/metacognitive, rote learning, and visual grammar learning strategies than 3<sup>rd</sup> and 4<sup>th</sup> graders. This might be explained by the learners' motivation after recently enrolling into grammar school, or it could mean the older learners simply do not need to use as many grammar learning strategies because they have accommodated to their teachers and have learnt how to acquire new knowledge or get good grades without putting much effort in. Božinović (2012) explains that learners without or with less prior language learning experience tend to employ active grammar learning strategies and visual grammar learning strategies more frequently compared to those who have more previous language learning experience. This suggests that learners who have not been exposed to foreign language learning before display higher motivation to learn and invest extra effort in acquiring the target grammatical structures, enabling them to actively participate in the learning process alongside learners who possess previous language learning experience. Similarly to the present study, Tilfarliogu (2005) has also found no difference between successful and unsuccessful learners and their usage of grammar learning strategies, i.e. both groups employ Grammar learning strategies to a similar extent. Miškulin (2019) found that there were no significant differences in the use of grammar learning strategies based on the students' level of English proficiency. Tomašević (2020) also found no significant difference in which grammar learning strategies are used more by the successful learners. Moreover, similarly to this study, Chamot and O'Malley (1987) proved that higher level students reported greater use of visual strategies which directly connects the use of visual grammar learning strategies with higher achievement. Finally, Božinović and Perić (2012) have also found that beginner learners used social learning strategies more often than more experienced learners which is probably explained by novice learners needing and seeking help more often than their

experiences counterparts. Also, younger grammar school learners who are new to the secondary school system, are still used to their primary school experience during which they might have used social strategies more, i.e. their might have been more group and pair work employed during their lessons, which then transcends into their secondary school experience during which they continue to use social strategies for awhile.

## 4. Conclusion

The aim of this study was to investigate the relationship between grammar learning strategies, i.e. whether learner's achievement has an effect on the choice and usage of their grammar learning strategies.

The results of this study showed that there is a significant difference only between the usage of visual grammar learning strategies between more and less successful learners, i.e. we can associate greater achievement with the usage of visual grammar learning strategies and vice versa. No significance was found between any other grammar learning strategy groups and the learners' achievement. However, significant differences were found in the usage of grammar learning strategies between male and female participants. Female participants used significantly more grammar learning strategies overall, as well as more cognitive/metacognitive strategies (active strategies), and rote learning strategies (memory related strategies). Both less and more successful learners scored the lowest on the usage of the social language learning strategies which can be explained by the rare employment of pair or group work during grammar lessons. The most popular group of grammar learning strategies among more successful learners were visual strategies, and among less successful learners it was the metacognitive/ cognitive strategies (active strategies). What was also proven is that cognitive/metacognitive, rote learning, and visual grammar learning strategies are used significantly more by younger, lower class learners, rather than by participants in upper classes. That can be explained by younger learners being more motivated or that they need to use more strategies to acquire grammar knowledge, while older learners are more familiar with their teacher and the exam process. The specific grammar learning strategies used the most overall are "I logically conclude what is correct and incorrect", "I try to recognize my grammar mistakes", "Examples help me the most while studying grammar", "I study better if my notes are neatly written", "I remember more quickly if the new item reminds me of something", and "I learn based on my own grammatical mistakes", while the strategies used most overall by all participants are logical strategies (independent learning strategies). The grammar learning strategies used by more successful learners do not significantly differ from those GLS used by less successful learners, i.e. there is no definite list of strategies that will guarantee a successful grade for all learners which means the process of figuring out which strategies are useful remains an individual process amongst the learners.

This research gives important insight into the English classroom and the importance of explicitly teaching grammar learning strategies learners should use while studying. Even though there is no definite list of grammar learning strategies that guarantee success, this study, along with other studies, proves the positive correlation between the usage of a wide variety of grammar learning strategies (in this case visual learning strategies) and the learners' success and achievement. While this research proves that more successful learners use more visual strategies, it does not prove a positive correlation between other types of strategies and better grades. This means that the choice of strategies is strictly subjective and depends on each student individually, thus, as educators, we must provide our learners with different types of strategies they can use while studying grammar. The questionnaire used in this research and other, simpler questionnaires are great and easy to use in an English classroom to help teacher's assess their learners' learning styles and strategies which will then help them organize their approach to teaching grammar.

Further research of this topic is more than welcomed since this kind of research based on grammar learning strategies is sparse due to the fact that there is no consensus on a classification of effective and useful grammar learning strategies across the English language as well as the fact that there is a communicative approach to the English language in classrooms (Pawlak 2019). This way, many teachers wrongly exclude explicit grammar teaching, learning and examining in their classrooms.

A similar study but with a higher number of participants, across different types of secondary and primary schools such as vocational schools is welcomed because it could result in more significant and quite different results, since most students in grammar schools are considered to be successful in English and eager to learn. It is important to note that there is no list available of effective grammar learning strategies that guarantees success, however, this research along with other similar studies aims to promote the awareness and the importance of the usage of various grammar learning strategies, and the importance of the individual and subjective processes a learner has to employ in order to find effective and useful grammar learning strategies that will enhance their own and personal grammar acquisition.

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## 6. Appendices

### 6.1. Appendix A: questionnaire

#### Upitnik o strategijama učenja gramatike

Ovim upitnikom želimo saznati kako učite gramatiku.

Molimo Vas da pažljivo pročitate svaku rečenicu te da na ponuđenoj ljestvici uz svaku tvrdnju zaokružite broj koji označava koliko često koristite navedeni postupak (brojkama od 1 do 5). Vaši odgovori trebaju pokazati kako učite gramatiku stranoga jezika, a ne kako mislite da biste trebali ili kako netko drugi uči.

Molimo Vas da odgovarate iskreno jer su nam Vaši odgovori važni.

Ovdje nema točnih i netočnih odgovora!

Najljepše se zahvaljujemo.

**1 = Nikada** to ne činim      **2 = Uglavnom** to ne činim      **3 = Ponekad** to činim      **4 = Često** to činim

**5 = Uvijek ili gotovo uvijek** to činim

1.	Pokušavam iz konteksta pogoditi značenje novog gramatičkog oblika.	1	2	3	4	5
2.	Glagolske oblike koje naučim nastojim što prije upotrijebiti u razgovoru ili pisanju.	1	2	3	4	5
3.	U udžbeniku podcrtavam gramatičke oblike u određenom vremenu.	1	2	3	4	5
4.	Vježbam s prijateljima da budem uspješniji/a u gramatici.	1	2	3	4	5
5.	Kad učim nepravilne glagole, razvrstavam ih u skupine.	1	2	3	4	5
6.	Trudim se uočiti svoje gramatičke pogreške.	1	2	3	4	5
7.	Brže zapamtim gramatički oblik ako me asocira na nešto.	1	2	3	4	5
8.	Gramatičke oblike ponavljam više puta dok ih ne zapamtim.	1	2	3	4	5
9.	Koristim se hrvatskim jezikom kada trebam sastaviti rečenicu.	1	2	3	4	5
10.	Najbolje učim i pamtim kada me nastavnik ispravi ako pogrešno upotrijebim oblik u rečenici.	1	2	3	4	5
11.	Lakše zapamtim gramatički oblik koji mi se sviđa.	1	2	3	4	5
12.	U bilježnici ističem važne dijelove gramatike.	1	2	3	4	5
13.	Prije testa sam/a sebe provjeravam koliko znam.	1	2	3	4	5
14.	Za svaki svoj uspjeh na gramatičkom testu nagradim se.	1	2	3	4	5
15.	Pripremam se za test rješavajući ogledni primjerak testa.	1	2	3	4	5
16.	Oponašam nastavnika kako izgovara gramatičke oblike.	1	2	3	4	5
17.	gramatički pokušavam odrediti koji je oblik točan, a koji nije.	1	2	3	4	5
18.	Ispisujem novi gramatički oblik da ga lakše upamtim.	1	2	3	4	5
19.	Gramatiku uvijek učim sam/a.	1	2	3	4	5
20.	Ako nisam shvatio/la gradivo koje je nastavnik objasnio, zamolim da ga ponovo objasni.	1	2	3	4	5
21.	Nastavke glagola i nepravilne oblike učim napamet.	1	2	3	4	5
22.	Sam/a pokušavam pronaći odgovor na određeno gramatičko pitanje.	1	2	3	4	5
23.	Sam/a se ohrabrujem u učenju gramatike da budem uporan/a.	1	2	3	4	5
24.	Gramatiku vježbam s prijateljima.	1	2	3	4	5
25.	Gramatiku učim rješavajući domaću zadaću.	1	2	3	4	5

26.	Lakše učim kada su mi bilješke uredno i pregledno napisane.	1	2	3	4	5
27.	Gramatičke zadatke rješavam po sluhu.	1	2	3	4	5
28.	Učim na vlastitim gramatičkim pogreškama.	1	2	3	4	5
29.	Gramatički oblik prevodim na materinski jezik da bih shvatio/la što znači.	1	2	3	4	5
30.	Kada ne razumijem gramatiku, tražim pomoć prijatelja.	1	2	3	4	5
31.	Lakše pamtim glagole koji su međusobno slični.	1	2	3	4	5
32.	U učenju gramatike najviše mi pomažu primjeri.	1	2	3	4	5
33.	Na satu pišem gramatičke bilješke u bilježnicu.	1	2	3	4	5
34.	Pamtim čitajući upute iz udžbenika o upotrebi određenog vremena.	1	2	3	4	5
35.	Gramatiku pamtim tako da je povezujem s prethodnim gradivom.	1	2	3	4	5
36.	Za vježbu rješavam gramatičke zadatke na internetu.	1	2	3	4	5

1 = Uopće se ne slažem    2 = Uglavnom se ne slažem    3 = Niti se slažem, niti se ne slažem  
4 = Slažem se    5 = U potpunosti se slažem

1.	Volim učiti gramatiku.	1	2	3	4	5
2.	Smatram da posjedujem dobro znanje gramatike engleskog jezika.	1	2	3	4	5
3.	Mogao/la bih uspješno razgovarati s izvornim govornikom engleskog jezika.	1	2	3	4	5

### Socio-demografski podaci

škola:

razred:

dob:

spol (zaokruži):    m    ž

prvi strani jezik:

drugi strani jezik:

godina učenja engleskog jezika:

zaključna ocjena iz engleskog jezika prošle školske godine: