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The impact of strategy training on the effectiveness of EFL grammar learning for primary school students with special educational needs

Wpływ treningu strategicznego na efektywność uczenia się gramatyki języka angielskiego jako obcego u uczniów szkół podstawowych ze specjalnymi potrzebami edukacyjnymi

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SUMMARY

The increasing number of students diagnosed with special educational needs in Polish primary schools presents a significant challenge for modern foreign language education. These learners often face considerable difficulties in mastering English grammar, which is a fundamental component of communicative competence and a key element of the high-stakes eighth-grade examination. This situation underscores the need to develop and implement pedagogical practices that can effectively support this diverse group of students, moving beyond traditional instruction to foster the skills required for autonomous learning.

The primary aim of the present study was to investigate the impact of a targeted grammar strategy training programme on the English grammar learning outcomes of primary school students with SEN. The research was conducted among 72 seventh- and eighth-grade students, including both learners with and without diagnosed learning difficulties. A central objective was to determine whether explicit strategy-based instruction could enhance students' grammatical proficiency and to identify which specific strategies were associated with greater learning gains.

The dissertation consists of five chapters. The first two chapters provide the theoretical background concerning the key factors in second language acquisition, the role of grammar in language learning, and the specific challenges faced by learners with SEN. The remaining three chapters are dedicated to the empirical study, presenting its methodology, the analysis of the collected data, and a discussion of the findings.

Chapter One concentrates on the theoretical foundations of second language acquisition and individual differences. It outlines seminal linguistic theories, models of first and second language acquisition, and explores key learner variables, including cognitive and affective factors. A significant portion of the chapter is devoted to the topic of special educational needs, detailing the diagnostic process in the Polish educational system and describing the cognitive, emotional, and social profiles of students with learning difficulties.

Chapter Two elucidates the role of grammar in second language learning and teaching. It traces the place of grammar within various language teaching tools and introduces the concepts of grammar learning strategies and strategy-based instruction, presenting key taxonomies and training models in this respect. The chapter concludes by

specifying the practical context of teaching grammar to SEN learners within Polish primary schools, referencing curriculum requirements and pedagogical recommendations.

Chapter Three is aimed at describing the research project. It details the mixed-methods approach, which combined a quasi-experimental design with action research. This chapter presents the research questions and hypothesis, the research context and participants, and the data collection instruments, including the grammar learning strategy questionnaire and the pre- and post-intervention tests. Finally, it outlines the procedures for quantitative and qualitative data analysis.

Chapter Four presents the results of the empirical study. It begins with a quantitative analysis of the baseline questionnaire data to establish the learners' initial strategic profiles. Subsequently, it provides a qualitative analysis of the strategy training sessions, documenting the intervention process. The core of the chapter is the statistical analysis of pre- and post-test scores to assess learning gains, followed by a qualitative analysis of the relationship between SEN students' strategy preferences and their performance outcomes.

Chapter Five concentrates on the discussion of the research findings in relation to the guiding research questions. It interprets the effects of the intervention, comparing the outcomes for SEN and non-SEN learners, and analyses the connection between specific strategy use and grammatical development. The chapter concludes with an overview of the study limitations, its pedagogical implications for teaching grammar in inclusive classrooms, and suggestions for future research.

STRESZCZENIE

Rosnąca liczba uczniów ze specjalnymi potrzebami edukacyjnymi (SPE) w polskich szkołach podstawowych stanowi istotne wyzwanie dla współczesnej edukacji językowej. Uczniowie ci często napotykają na znaczne trudności w opanowaniu gramatyki języka angielskiego, która jest fundamentalnym składnikiem kompetencji komunikacyjnej oraz kluczowym elementem egzaminu ósmoklasisty. Sytuacja ta podkreśla potrzebę opracowania i wdrożenia praktyk pedagogicznych, które mogą skutecznie wspierać tę zróżnicowaną grupę uczniów, wykraczając poza tradycyjne nauczanie w celu kształtowania umiejętności niezbędnych do samodzielnej nauki.

Głównym celem niniejszej pracy było zbadanie wpływu celowego treningu strategii na efekty nauki gramatyki języka angielskiego przez uczniów szkół podstawowych ze SPE. Badanie zostało przeprowadzone wśród 72 uczniów klas siódmych i ósmych, obejmując zarówno uczniów ze zdiagnozowanymi trudnościami w uczeniu się, jak i bez nich. Kluczowym celem było ustalenie, czy bezpośrednie nauczanie oparte na strategiach może poprawić biegłość gramatyczną uczniów oraz zidentyfikowanie, które konkretne strategie wiążą się z większymi postępami w nauce.

Rozprawa składa się z pięciu rozdziałów. Pierwsze dwa rozdziały stanowią podłoże teoretyczne dotyczące kluczowych czynników w akwizycji języka drugiego, roli gramatyki w nauce języka oraz specyficznych wyzwań, z jakimi borykają się uczniowie ze SPE. Pozostałe trzy rozdziały poświęcone są badaniu empirycznemu, przedstawiając jego metodologię, analizę zebranych danych oraz dyskusję wyników.

Rozdział pierwszy koncentruje się na teoretycznych podstawach akwizycji języka drugiego i różnicach indywidualnych. Przedstawia fundamentalne teorie lingwistyczne, modele akwizycji języka pierwszego i drugiego oraz analizuje kluczowe zmienne ucznia, w tym czynniki kognitywne i afektywne. Znacząca część rozdziału poświęcona jest zagadnieniu specjalnych potrzeb edukacyjnych, szczegółowo opisując proces diagnostyczny w polskim systemie oświaty oraz charakteryzując profile poznawcze, emocjonalne i społeczne uczniów z trudnościami w uczeniu się.

Rozdział drugi wyjaśnia rolę gramatyki w nauczaniu i uczeniu się języka drugiego. Śledzi on miejsce gramatyki w szeroko pojętej dydaktyce języków obcych oraz wprowadza

pojęcia strategii uczenia się gramatyki (GLS) i nauczania opartego na strategiach (SBI), prezentując kluczowe taksonomie i modele treningu. Rozdział kończy się analizą praktycznego kontekstu nauczania gramatyki uczniów z SPE w polskich szkołach podstawowych, odnosząc się do wymogów podstawy programowej i zaleceń pedagogicznych.

Rozdział trzeci ma na celu opisanie projektu badawczego. Szczegółowo przedstawia wykorzystane tu podejście łączące schemat quasi-eksperymentalny z badaniem w działaniu. W rozdziale tym zaprezentowano pytania i hipotezę badawczą, kontekst i uczestników badania oraz narzędzia gromadzenia danych, w tym kwestionariusz strategii uczenia się gramatyki oraz testy pre- i post-interwencyjne. Na koniec opisano procedury analizy danych ilościowych i jakościowych.

Rozdział czwarty prezentuje wyniki badania empirycznego. Rozpoczyna się od analizy ilościowej danych z kwestionariusza bazowego w celu ustalenia początkowych profili strategicznych uczniów. Następnie przedstawiono analizę jakościową sesji treningu strategii, dokumentującą proces interwencji. Trzon rozdziału stanowi analiza statystyczna wyników testów pre-testu i post-testu przeprowadzonych w celu oceny postępów w nauce, a całość zamyka analiza jakościowa związku między preferencjami strategicznymi uczniów ze SPE a ich wynikami w nauce.

Rozdział piąty koncentruje się na dyskusji wyników badania w odniesieniu do postawionych pytań badawczych. Interpretuje on efekty interwencji, porównując wyniki uczniów ze SPE i bez SPE, oraz analizuje związek między stosowaniem określonych strategii a rozwojem znajomości gramatyki. Rozdział kończy się omówieniem ograniczeń badania, jego implikacji pedagogicznych dla nauczania gramatyki w klasach integracyjnych oraz sugestiami dotyczącymi przyszłych badań.

Magdalena Paluch **Zielona Góra, dnia 22.09.2025 r.**

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Zielona Góra 22.09.2025 r. Magdalena Paluch

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Introduction

English holds an undisputed position as the primary foreign language in the Polish educational system, being taught to a vast majority of learners from the first grade of primary school. While the primary goal of second language education is to develop communicative competence in learners, many of them encounter significant challenges on this journey. The increasing number of students diagnosed with special educational needs in Polish schools presents a profound challenge for educators, particularly in the domain of grammar acquisition. Grammar, with its abstract rules and significant demands on memory and processing, often becomes a major source of difficulty and anxiety for these learners; yet, it remains a critical component of the national curriculum and a key focus of high-stakes assessments, such as the eighth-grade exam.

The present dissertation was inspired by the practical need to find more effective ways of supporting these students. The researcher's own experience as a teacher in a mixed-ability primary school classroom has repeatedly shown that traditional, one-size-fits-all approaches to grammar instruction are often insufficient for learners with SEN. Numerous SEN students with remarkable potential struggle not because of a lack of effort, but because of a lack of effective tools to manage their learning. They often face a cycle of misunderstanding, error making, and resultant frustration, which can negatively impact their motivation and self-esteem. This experience led to an investigation of pedagogical approaches that move beyond simply teaching grammatical rules and instead focus on empowering students to become more effective learners themselves. The central belief behind the present study was that equipping learners with the right strategies could help them navigate their specific difficulties and take responsibility for their own progress.

Strategy-based instruction (SBI) is not merely a remedial technique; it is a means of fostering learner autonomy and self-regulation. By explicitly teaching students how to learn: how to plan, monitor, and evaluate their own efforts and how to utilise specific cognitive tools to process information more effectively, teachers can equip them with skills that extend far beyond the grammar lesson. For learners whose cognitive or affective profiles make language acquisition more challenging, these strategies become essential tools for managing cognitive load, reducing anxiety, and building the resilience needed for long-term success.

This dissertation, therefore, investigates the impact of a targeted grammar strategy training programme on the learning outcomes of primary school students with SEN. It is composed of five chapters structured to build a comprehensive theoretical (chapters 1, 2) and empirical (chapters 3, 4, 5) case for this pedagogical intervention. Chapter One provides the key theoretical foundations of second language acquisition (SLA). It begins by outlining seminal linguistic theories to establish a core definition of language, then moves to an overview of L1 acquisition models as a basis for understanding the L2 learning process. A significant part of the chapter is dedicated to exploring the crucial role of individual differences, encompassing cognitive variables such as aptitude and memory, affective factors like motivation and anxiety, and, most centrally, the profound impact of special educational needs on second language (L2) acquisition.

Chapter Two explores the multifaceted role of grammar in second language learning, with a specific focus on instruction for primary school students with learning difficulties. The discussion traces the evolution of grammar instruction within various language teaching options, from traditional form-focused approaches to more skills-based models. Subsequently, the chapter introduces the concept of grammar learning strategies (GLS), presenting key taxonomies and influential models of strategy-based instruction that form the basis for the pedagogical intervention.

Chapter Three outlines the methodological framework of the study. It details the mixed-methods approach, which combines a quasi-experimental design with an action research paradigm. This section provides a thorough description of the research context, the participants (including both SEN and non-SEN learners), the data collection instruments, such as the grammar strategy questionnaire and pre-/post-tests, and the procedures for both quantitative and qualitative data analysis.

Chapter Four presents the quantitative and qualitative results of the empirical investigation. The chapter begins with the findings from the baseline questionnaire, which identified the participants' initial strategic profiles. It then details the outcomes of the intervention sessions and presents the statistical analysis of the pre- and post-test results to measure learning gains. The final section is devoted to a qualitative analysis that links the SEN students' reported strategy use to their individual learning outcomes.

Chapter Five is dedicated to a comprehensive discussion of the research findings. The results are interpreted in relation to the guiding research questions, the theoretical framework and previous studies. This chapter analyses the effects of the intervention,

discusses the relationship between strategy use and learning outcomes, and compares the findings for SEN and non-SEN students. The dissertation concludes with a summary of the study's limitations, its pedagogical implications for teaching grammar in inclusive classrooms, and suggestions for future research.

Chapter 1: The key factors in second language acquisition and students with special educational needs

Introduction

The ability to use language is one of the features that distinguishes humans from other species. People use language to communicate with others, express their emotions, and know the world. Language has been the subject of interest to philosophers and scholars since ancient times; however, a complex theory that explains its crucial aspects has yet to be proposed.

This chapter aims to present the key concepts and theories related to second language acquisition. It will discuss its relationship with first language (L1) acquisition, the neurological underpinnings of language learning, as well as individual learner differences that significantly impact the language acquisition process. These theoretical perspectives will be considered in terms of their relevance and applicability to the L2 classroom with a particular focus on learners with special educational needs, who constitute the primary target group of the present dissertation. The presented theory aspects will provide a solid foundation for understanding the specific challenges of grammar instruction for students with learning difficulties.

1.1. Key aspects of language

Several major linguistic theories have shaped the modern understanding of language. This section outlines the foundational perspectives, beginning with Ferdinand de Saussure's structuralist view of language as a system of signs. Following this, it will explore the principle of linguistic relativity, as formulated by Edward Sapir and Benjamin Lee Whorf. The focus will then shift to Noam Chomsky's theory of language as an innate human faculty. The discussion will subsequently broaden to cover the core design features of language, as identified by Charles Hockett, before concluding with Roman Jakobson's model of language as a multifaceted tool of communication. When justifiable, the place of these theories in the understanding of SEN students' concerns will be indicated.

1.1.1. De Saussure's perspective

The most general definition of language reads: "language is a rule-based system of signs (Amberg & Vause, 2010, p. 5). The concept of language, as seen in the aforementioned definition, was first proposed by Ferdinand de Saussure (1857-1913). De Saussure is commonly perceived as the founder of both modern linguistics and structuralism, which, in the second half of the twentieth century, dominated or influenced many scientific disciplines, including linguistics, literary criticism, anthropology, psychology, and philosophy. Sassurian structuralism manifested itself in the belief that language should be examined from the angle of how people use it, as it is an integral part of human existence. Saussure asserted that language is a system of various units that consists of the internal sign system (Sanders, 2004). For that reason, Saussure's definition of language is: "a socially shared, psychologically real system of signs, each consisting of the arbitrary conjunction of an abstract concept and acoustic image" (de Saussure, 1966, as cited in Joseph, 2004, p. 59)

In his concept of language, de Saussure introduced the linguistic sign, which is a two-sided psychological entity composed of a concept - the signified - and a sound-image - the signifier (de Saussure, 1966).

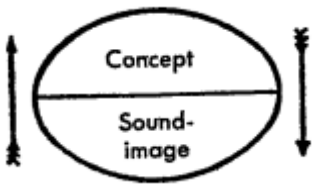


Figure 1. De Saussure's linguistic sign (de Saussure, 1966, p. 66)

De Saussure emphasised that the association of both elements is crucial for forming linguistic entities. When one of the elements is missing, the linguistic entity vanishes and only pure abstraction remains (de Saussure, 1966). In this approach, the signified is not a thing but a concept, and the signifier is not a name but a sound-image, which is not a purely physical thing but the psychological imprint of the sound, the impression that it makes on our senses. For de Saussure, language is the social product deposited in the brain of each human (Hussein & Abushihab, 2014).

Furthermore, in his *Course in General Linguistics* (*Cours de Linguistique Générale*), de Saussure distinguished between: le langage (language), la langue (speech), and *la parole* (speaking). Le langage is seen as a system - a set of rules, usages, meanings and structures that constitute the human capacity to produce messages in a certain language.

It is an unconscious competence shared by all members of a linguistic community. According to Saussure, language is not complete in any speaker, it exists perfectly only within a collectivity (de Saussure, 1966). La langue is an anatomical ability and psychological need to create linguistic signs for expressing ideas. Using the faculty of speech is conditioned by the existence of language and includes both producing utterance and understanding it (Linde-Usiekniewicz, 2013). La parole refers to a particular realisation of a collectively internalised system, which also reflects the personality, creativity and psychological capabilities of an individual speaker. The interpretation of differences between langage and parole is visible in the example below (Gordon, 2004, p. 79):

"Le concept se symbolise par une image acoustique. (langue)
(The concept is symbolised in an acoustic image.)
Il se concretise par une image acoustique. (langue)
(The concept is made concrete in an acoustic image.)
Il se concretise par un acte de signification. (parole)
(The symbol is made concrete in an act of meaning.)
Il se concr´etise par sa valeur relative aux autre concepts. (langue)
(The symbol is made concrete by its value relative to other concepts)"

It is visible that parole can be seen as a practical realisation of language in speech or writing. It is a real activity in which humans express their feelings, will and actions (Engler, 2004).

1.1.2. Sapir and Whorf's perspective

The concepts described by de Saussure in his Course in General Linguistics inspired some of the most interesting and best-known thinkers of the first half of the twentieth century. In the United States, Franz Boas (1858 - 1942), Edward Sapir (1884 - 1939), and Leonard Bloomfield (1887- 1949) were the pioneers of American structuralism who institutionalised linguistics as an autonomous discipline in the United States, materialised by the founding of the Linguistic Society of America in 1924. In their work, American structuralists conducted linguistic analysis in which they tried to articulate systematic patterns in language data (Thomas, 2019). This research approach is called the scientific method and is characterised by several key features. The research is empirical and synchronic, which means that it derives data at a specific point in time from actual language use, including spoken language samples, field notes, and written texts. Then, the gathered data is described

and undergoes segmentation and classification. The smallest functional units of language are found and classified concerning their functions and relationships to one another. The data are further analysed using specific discovery procedures (e.g., substitution tests, minimal pairs, contrastive analysis) and mechanical and statistical techniques. The research procedure yields a theoretical framework that attempts to explain the observed data (Bloomfield, 1933).

This method was applied by Boas (1911) and his research group in an observation of American Indian languages, which investigated the form of the spoken languages and provided a thorough description of the given languages. The work was divided into several steps: first, they recorded a solid sequence of corpus data. They analysed it according to the announced method using segmentation, listing and classifying of forms of the languages. The structuralists identified their work as part of the science of language rather than as philology or a study of particular languages. (Hymes & Fought, 2017).

One of the aforementioned American structuralists, Edward Sapir describes language as a purely human and non-instinctive method of communicating ideas, emotions and desires by means of system of voluntarily produces symbols (Sapir, 1921, p. 7) Sapir outlined that speaking is a complex and ever-shifting network of adjustments - in the brain, nervous system and in the articulating and auditory organs which are aimed at desired end of the communication.

Moreover, Sapir was one of the pioneers of anthropological linguistics, which focused on the social aspects of language. He believed that language in society is not only a communication device, but it also influences the way humans in a particular community perceive the world (Naccache, 2016). Influenced by both the idea of 18th- and 19th-century German philosophers Herder and Humboldt that the language system shapes the thinking of its speakers and his own observation of American Indian languages, Sapir and Whorf formulated their linguistic relativity hypothesis (the Sapir-Whorf hypothesis) asserting that humans do not live in an objective world alone, but that the real world is, unconsciously built up on the language habits of a group (Sapir, 1929, p. 207)

Sapir believed that the existence of the various language systems implies that the people who think in these different languages must perceive the world differently. This idea was later developed by Benjamin Lee Whorf, who, as Sapir's student, also conducted a contrastive analysis of American Indian languages and English. During the prolonged study of Hopi language and culture, Whorf observed that the linguistic structures of this language

differed from those of English, which, in Whorf's view, implies that a differently structured language must influence the perception of its speakers (Hussein, 2012).

The hypothesis has numerous interpretations, most notably in the form of strong and weak versions. The strong version is known as linguistic determinism and posits that the structure of a language entirely determines the cognitive patterns and the worldview of its speakers, leaving little room for conceptualisation beyond linguistic boundaries. In contrast, the weak version, or linguistic relativity, suggests that language merely influences thought and perception. It also shapes habitual ways of interpreting reality but does not constrain cognition altogether (Boroditsky, 2001). According to Brown (1976), the principle of linguistic relativity rests on three key assumptions. First, differences in the structural patterns of languages are typically associated with differences in how speakers of those languages perceive and interpret the world around them. Second, a person's native language plays a significant role in shaping the way they understand and engage with reality, particularly during the language acquisition process. Third, the meanings and categories encoded in different languages vary considerably and are not bound by universal conceptual constraints.

These insights are particularly relevant for learners with special educational needs, who may struggle with restructuring conceptual categories shaped by their first language, not to mention how difficult it may be to acquire abstract or unfamiliar grammatical concepts in a second language.

1.1.3. Chomsky's perspective

Contrary to the view that the semantic systems of different languages vary without constraint, stands Noam Chomsky's theory of language. Chomsky's theory is divided into two parts, referring to his ideas of language itself (1.1.3) and how it is acquired (1.2.2). For Chomsky, human language is a natural object, a component of the human mind, physically represented in the brain, and part of the biological endowment of the species (Chomsky, 2002). According to Chomsky**,** language is built up of lexicon and grammar. The former is understood as the system of linguistic signs which are combined together to form structures, while the latter is a system of rules which determine the correct connections of linguistic signs in a particular language (Izert & Pachocińska, 1998)

Chomsky's theory has been formalised within his model of transformational-generative grammar, which assumes that natural language sentences are formed by transforming deep structures into surface structures in accordance with a set of transformational rules. This model explains what Chomsky referred to as linguistic creativity, namely, the human capacity to generate and understand an infinite number of novel sentences based on a finite set of grammatical rules (Chomsky, 1965; see Section 1.2.2. for details concerning Chomsky's stance on language acquisition).

Chomsky's approach to language acquisition is significant in the context of teaching grammar as it underscores the role of logically organised rules in generating a wide range of utterances, yet in the case of L2 SEN learners, this implicit knowledge may not surface naturally and therefore requires carefully structured, explicit grammar instruction.

1.1.4. Jakobson's perspective

As was established in the previous section, in the broadest sense, language is a system which enables humans to communicate and discover the world. Charles Hockett (Hockett, 1958, p. 574) enumerated seven features that are seen as design features of language: duality, productivity, arbitrariness, interchangeability, specialisation, displacement and cultural transmission. This set of features provides a functional framework that captures both the complexity and distinctiveness of human language. This typology is especially valuable in the context of language teaching, as it highlights the multiple cognitive operations involved in linguistic processing, many of which may present specific challenges for learners with special educational needs. In his later works, Hockett added five more features to this list in 1960, including vocal-auditory channel, broadcast transmission and directional reception, rapid fading, total feedback, semanticity, and discreteness. Three more features were added in 1968: prevarication, reflexiveness, and learnability (Wacewicz & Żywiczyński, 2015).

Five of these characteristics are particularly relevant to this dissertation. The first is arbitrariness, the principle that a linguistic form and its meaning are not inherently connected, which highlights the need for targeted mnemonic strategies to manage the heavy memory load for learners with SEN. The second feature is productivity, the ability to generate novel expressions from a finite set of rules; this represents the goal of grammar instruction, requiring learners to employ cognitive strategies that help them move beyond

memorisation to creative application. The third is cultural transmission, which highlights that language is passed from one generation to the next within a culture (Yule, 2006), thus emphasising the role of social and affective strategies in the L2 classroom. The fourth is reflexiveness, the ability to use language to think and talk about language itself, a feature that forms the basis of the metalinguistic awareness necessary for strategy training. The final, fifth feature is learnability - the capacity for speakers of one language to learn another (Wacewicz & Żywiczyński, 2015) - which provides the foundational premise for L2 teaching and is made attainable for learners with difficulties through the scaffolding that strategy instruction provides.

1.1.5. Basic properties of language

Although human language has a number of features that distinguish it from animal communication codes, one of the main functions of language is to enable humans to communicate. The Russian linguist, Roman Jakobson proposed his communication model (see Figure 2) in 1956 in the article "Metalanguage as a Linguistic Problem (Jakobson, 1985 [1956]).

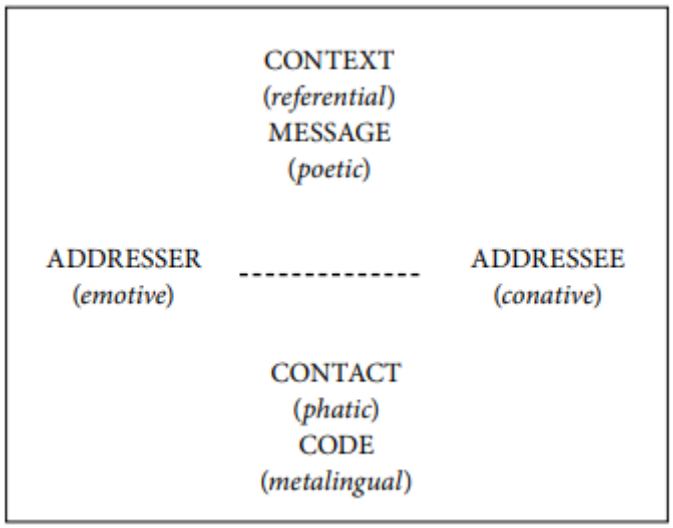


Figure 2. Jakobson's communication model (Pärl, 2011, p. 194)

According to Jakobson, each communication act takes place in a given context with the use of a particular code (language, gestures, facial expressions, etc.). It involves two subjects and the message itself: an addresser (sender), who initiates a communication, and

the addressee (receiver) of the message. The addresser chooses the mode of contact by which the message is delivered, which can, for example, occur face-to-face, through the Internet, or by telephone (Danesi, 2013). The constituents of the communication model, which determine the functions that any message serves in a communicative situation, are as follows (Tribus, 2017):

1. Emotive - also called an expressive function; serves the addresser to show his attitude, status and emotional state;
2. Conative - focuses on influencing the behaviour of the addressee;
3. Referential - refers to designating objects, providing descriptions or contextual information;
4. Poetic - concentrates on the message and its beauty, which becomes a goal of communication;
5. Phatic - aims at establishing the connection between speakers;
6. Metalingual - is concerned with utterances that deal with language itself.

The multiple functions of language in Jakobson's model are relevant for teaching grammar to students with special educational needs, as modern L2 teaching methodology emphasises the integration of structural language elements with their communicative purposes.. The model underscores the need to teach grammar not in isolation, but as a tool for fulfilling communicative functions, which can support more meaningful and accessible grammar instruction.

1.2. First language acquisition theories

Having established the key definitions of language and its properties, awareness of the main theories regarding first language acquisition, such as behaviourism, innatism, and functional theory, is crucial for a proper understanding of second language acquisition and learning. Although the fundamental theories concerning first language acquisition differ in terms of whether the language is an innately predetermined mechanism or shaped by environmental input, they are to some extent complementary to each other, addressing different types of language learning.

1.2.1. Behaviourism

The basic behaviourist theory relies on John B.Watson's (1925) *habit formation hypothesis*. Watson believed that a particular stimulus produces a particular response, with a regular link between the two of them forming a habit. This hypothesis aligns with other behaviourists' theories, such as those of Ivan Pavlov (1927) and Edward Thorndike (1905). Both researchers conducted a set of studies of animal behaviour in laboratory experiments. Pavlov established the concept of classical conditioning by demonstrating that dogs learnt to associate the sound of the bell with food and subsequently triggered salivation by the sound of the bell (Pavlov, 1927). Thorndike experimented on cats, using puzzle boxes; as a result, he formulated the *Law of Effect.* The law states that any behaviour that brings pleasant consequences is likely to be repeated, and consequently, any behaviour followed by unpleasant consequences is likely to be stopped. This way, the concept of reinforcement and operant conditioning in learning was established. (Thorndike, 1905). The results of both studies show that all animals are born with a set of instinctive responses to external stimuli. Learning new things is a process of habit formation (Islam, 2013).

Burrhus Frederic Skinner (1957) applied the theories formulated on animals, proposing that operant conditioning is also used in human language acquisition and learning. In his view, language learning is a process of habit formation shaped by the sequence of stimulus-response-reinforcement. A caretaker's or teacher's utterance acts as a stimulus, prompting a response from the child or learner, typically an imitation of what they hear. If the response is correct or appropriate, it is followed by positive reinforcement (e.g., praise, approval, success); this way, it is more likely that the behaviour will be repeated. On the other hand, incorrect responses may be met with negative reinforcement (e.g., correction or lack of reward), encouraging learners to avoid such errors in the future. This basic sequence: stimulus, response, and reinforcement is seen as the cornerstone of behaviourist language learning theory (Skinner, 1957).

The implications of Skinner's theory for L2 instruction, especially in relation to learners with special educational needs, are significant. Such learners often benefit from frequent, structured exposure to language models, clear positive reinforcement, and repetitive drills, which help to enhance the use of correct grammatical patterns and foster automatization. In this context, the Audiolingual Method (ALM) (see Section 2.2.3.), rooted in behaviourist principles, is particularly relevant. It emphasises overlearning, pattern repetition, and lockstep drills, all of which provide a predictable and supportive

environment for grammar acquisition (Richards & Rodgers, 2001). These techniques are likely to help SEN students to internalise grammatical structures through habitual practice rather than abstract rule learning, which may be cognitively demanding.

In the behaviourist approach, the Contrastive Analysis Hypothesis (CAH) also plays a significant role. While its strong version, which claimed to predict learning difficulties simply by comparing L1 and L2 structures, has been largely discredited, its more convincing weak version remains relevant (Lado, 1957; Wardhaugh, 1970). As Wardhaugh (1970) explained, this version of the CAH does not seek to predict errors a priori but rather aims to identify and explain observed difficulties, assuming that interference from the first language is a major, though not the only, source of L2 errors. For learners with SEN, this approach is particularly useful as explicit comparisons between, for example, English and Polish verb patterns or word order can offer concrete reference points, reduce confusion, and help to address challenges arising from negative transfer.

The behaviourist theory of first language acquisition relies on the assumption that language is a type of behaviour that can be empirically studied and learned through habit formation, as any other habit, based on a stimulus-response-reinforcement approach. This premise, however, does not explain numerous central aspects of language learning, such as productivity and grammatical competence, as children are able to create grammatically correct sentences that they have never heard before (Ellis, 1994). Accordingly, Osgood (1957) who is believed to be a neo-behaviourist, tried to expand the core theory by adding the internal response which occurs after stimuli. The internal response is not physically visible and takes the form of a thought or a mental process in which a human mediates the response to the stimuli (Mehrpour & Forutan, 2015)

Despite existing drawbacks of the behaviourist's theory, there is no doubt that language learning is a behaviouristic process. This theory is a cornerstone of foreign language teaching methods, which employ some of its elements in second language teaching and learning. The Audio-lingual Method, Total Physical Response and the Silent Way to a high extent rely on the behaviouristic belief that language is formed by imitation, reinforcement and rewarding (Mehrpour & Forutan, 2015).

1.2.2. Innatism

Drawing on the belief that humans are biologically endowed with some language skills, Noam Chomsky suggested that infants are born with the fundamental linguistic sense that underlies all languages. This property, called the *language acquisition device* (LAD), enables children to acquire any given language from their surroundings. Chomsky claimed that LAD consists of Universal Grammar rules, which enable children to select and construct the grammar of their native language through a process of hypothesis testing. This reflects the broader distinction in Chomsky's theory between linguistic competence, seen as the internalised knowledge of grammar, and performance understood as the actual use of language in real-life communication (Chomsky, 2006).

This distinction has important pedagogical implications, as it suggests that L2 grammar teaching should go beyond surface correctness and aim to strengthen learners' underlying competence through repeated exposure, structured input, and meaningful use. (Chomsky, 2002a). Chomsky's theory was further developed by McNeill (1967), who described the process of formulating proper grammar rules on the basis of input from the environment. McNeill suggested that LAD must be universally applicable to any first language, so it consists of four internal linguistic properties. The first one is the ability to distinguish speech sounds from other sounds in the environment, and the second one is the ability to organise linguistic events into various categories that can be refined. The third is the ability to recognise that only certain types of linguistic structures are possible and others are not; the fourth property is the ability to evaluate language production to determine its accuracy (McNeill, 1967, as cited in Lavadenz, 2011). For second language teachers, particularly those working with students with special educational needs, these capacities offer a helpful framework. For example, learners with auditory processing or categorisation deficits may require explicit support in distinguishing and classifying language input. Moreover, developing learners' ability to assess correctness supports metalinguistic awareness, which is essential for grammar learning in inclusive classrooms.

Innatist theory also differs from behaviourist approaches in its treatment of learner error. While behaviourism tends to suppress incorrect utterances through negative reinforcement, innatism views errors as a natural and necessary part of language development, often resulting from the learner's attempts to formulate and test internal hypotheses about language rules. This phenomenon, known as linguistic creativity, manifests in children's spontaneous production of novel, and sometimes grammatically

incorrect, utterances that have never been modelled to them, demonstrating their active engagement in rule formation (Chomsky, 1965). For L2 learners, especially those with SEN, such an approach fosters a supportive environment for risk-taking, experimentation, and the gradual refinement of grammatical competence.

The *Critical Period Hypothesis* (CPH), proposed by Penfield and Roberts' (1959), refined Lenneberg (1967), supports the view that language acquisition needs to take place between age two and puberty. Lenneberg (1967) shared Chomsky's view that there is a latent structure in the brain, which is activated when a person attempts to learn a new language. This latent language structure, according to Lennberg, is a formulated arrangement in the brain that the infant transforms into a realised structure of particular grammar as a result of maturation stages. Lenneberg claims that this system is a biological counterpart of Universal Grammar. The critical period coincides with the lateralisation process of the brain, after which the brain matures and the ability to acquire a first language disappears. (Vanhove, 2013).

Although the time frames proposed by Lennberg are contested by numerous researchers (Friedmann & Rusou, 2015), the existence of a critical period in first language acquisition was confirmed by the cases of children who experienced drastic deprivation of language input during the first years of their lives. Those children encountered significant challenges in acquiring morphosyntactic structures and failed to fully acquire language, even though they were exposed to language input and formal teaching in later life. Further neurobiological research into children with lack of crucial micronutrients which support brain development during the first year of their lives affected their later language comprehension and production. All those findings proved that both language input and a neurologically prepared mind are crucial elements for complex development of syntax in the first language (Friedmann & Rusou, 2015).

These findings are particularly important for educators of SEN learners as they emphasise the need to ensure rich and structured input during sensitive periods of development and to respond to learners' biological and cognitive profiles when planning grammar instruction.

1.2.3. The Sociocultural Theory

The Sociocultural Theory (SCT) was originally developed by Lev Vygotsky (1978) and has had a profound influence on modern English language pedagogy. SCT does not focus exclusively on individual cognition, but it also emphasises the role of social interaction, mediation, and guided participation in the development of higher-order thinking and language skills. One of its most influential concepts is the Zone of Proximal Development (ZPD), defined as the gap between what a learner can achieve independently and what they can achieve with assistance from a more knowledgeable other.

In the context of L2 grammar teaching, the ZPD underscores the importance of providing learners with cognitive challenge, which is often an inherent part of the grammar learning process. Learning occurs when the teacher offers scaffolded support that enables the student to reach beyond their current level of competence. This notion has been extended by scholars such as Gallimore and Tharp (1990), who described assisted performance as a structured and interactive process that helps to internalise complex concepts through guided practice. Similarly, Lantolf and Frawley (1985) interpreted ZPD as a stage-like process, wherein learners move from other-regulation to self-regulation, gradually assuming control over their grammatical development which may also include learning grammar structures. At this juncture, it is worth mentioning the notion of cognitive structuring, which, introduced by Gallimore and Tharp (1990), refers to the teacher's role in organising and sequencing instructional input in a way that aligns with the learner's developmental stage. SCT has significant implications for grammar instruction as it supports gradual conceptual understanding, particularly for SEN students who may need more explicit cues, repetition, and interactive feedback to master syntactic rules. By shifting focus from isolated knowledge to socially mediated learning, SCT provides a robust foundation for designing inclusive, interactive, and developmentally appropriate grammar instruction in the L2 classroom.

1.2.4. The Functional Theory

Michael Halliday's (1975) theory draws upon the claim that social interaction and cultural practices are fundamental factors of language learning. Halliday's views on first language learning were based on the observation of his son Nigel's language development and later

studies of English and Chinese. Systemic Functional Linguistics became a framework for second language teaching, especially for those methodologies focused on communicative and functional approaches (Steiner, 1997). In Haliday's view, language is actively learned by children rather than passively acquired from their surroundings. Children start interacting with their parents and caregivers from the first days of their lives, using the earliest forms of communication, such as smiling, crying, and gestures. Through this interaction children acquire language and assimilate the cultural nuances embedded in it. The process of language development progresses in three main phases. Phase I - children learn and use language for basic purposes through micro functions, Phase II - children start creating multifunctional utterances and their linguistic system is organised into macro functions, Phase III - adult language, characterised by meta functions. Halliday's (1975) distinction of language functions in first language learning is often a point of reference in second language learning. The seven micro functions presented in Table 1 are also the key elements of developing second language use.

Table 1. Halliday's micro functions (adapted from Halliday, 1975, p. 18)

Function	**Use**
personal function	expressing personal feelings and awareness of oneself
heuristic function	explore the world around and learning
imaginative function	creating imaginary worlds and telling stories
instrumental	expressing needs or desires
regulatory	controlling the behaviour of others
interactional	creating and maintaining social relationships
representational	conveying information and describing.

The transition from children's first language system (Phase I) to adult language (Phase III) leads through Phase II in which children rapidly increase their vocabulary and grammar skills. At this stage, their utterances become multifunctional, integrating several earlier microfunctions into broader communicative goals. As a result, two macrofunctions emerge: the Mathetic function, which enables children to use language as a tool for exploring and learning about the world, and the Pragmatic function, which allows them to interact with others and influence their environment through language (Thwaite, 2019). These macrofunctions serve as a conceptual bridge between the microfunctions of early communication and the metafunctions that characterise Phase III, typically beginning around age two. By the age of three, children are generally capable of producing speech that reflects the ideational, interpersonal, and textual metafunctions, the hallmarks of adult

linguistic competence in Halliday's model. Importantly for the current thesis, this approach highlights the relevance of connecting discourse with grammatical structures to provide effective language use in different contexts.

1.3. Second language acquisition revisited

The process of first language acquisition is a key point to understand the phenomenon of second and/or foreign language learning. The mental processes engaged in first language acquisition create a foundation of language skills that are developed in the L2. Second language learning does not occur naturally, but is the result of conscious and intentional effort, which has made it a central focus of linguistic and educational research. Researchers have examined a wide range of complex cognitive, affective, and contextual factors to develop theories that explain how learners internalise a new language. This section takes a fresh look at several influential perspectives, including Selinker's Interlanguage Theory, Ausubel's Theory of Meaningful Learning, the Humanistic Approach to L2 learning, and Krashen's Monitor Model. Understanding these frameworks is essential as they inform the development of effective English Language Teaching (ELT) tools and strategies used in contemporary language classrooms, also by SEN students.

1.3.1. Selinker's interlanguage theory

Larry Selinker was one of the first researchers to examine how learners acquire and learn a second language. His work laid the foundation for the next decades of research on SLA (Vanpatten & Benati, 2015). Selinker (1972) introduced the term interlanguage to refer to the independent linguistic system developed by second language learners. This system is characterised by idiosyncratic features related to the learner's mother tongue and their target language. Selinker's interlanguage concept refers to Chomsky's theory of language acquisition device and Lenneberg's latent language structure (see Section 1.2.2.). The innate system of rules present in one's brain allows L2 learners to construct linguistic knowledge regarding the target language on the basis of rules derived from universal grammar:

Following Selinker's (1972) theory, a person who learns a second language develops interlanguage by five processes:

1. Language transfer - the influence of the phonological, morphosyntactic, lexical and semantical aspects of the mother tongue on target language.
2. Overgeneralization - extending the target language grammatical rules beyond their proper use and regularising them - e.g. treating all English verbs as regular ones.
3. Transfer of training - teachers themselves and their teaching methods and materials, such as learning aids, course book influence second language acquisition process in a positive or negative way.
4. Strategies of second language learning - learning devices used by students to overcome the linguistic incompetence while learning the target language.
5. Strategies of second language communication - consciously and unconsciously used tools which facilitate communication when learners face gaps in their linguistic knowledge.

According to Selinker (1972), interlanguage is a dynamic, constantly evolving system shaped by the interaction of several processes. While language transfer from the first language often determines the initial form of the learner's interlanguage, the system gradually incorporates new elements through overgeneralization of L2 rules, the influence of instructional methods and materials (transfer of training), and the use of both learning and communication strategies to compensate for linguistic gaps. These processes interact in complex ways, and as learners are exposed to increasing amounts of target language input, their interlanguage undergoes frequent fluctuations, moving forward through successful generalizations or corrected errors, but also regressing when faulty forms are reinforced or overused. The inclusion of learner-generated constructions and strategies makes interlanguage not only a product of linguistic systems, but also of individual cognitive effort. This perspective is particularly useful for identifying the sources of learner errors and understanding the variability of L2 grammar development, especially in students with special educational needs.

Interlanguage can be characterised by features such as systematicity and simplification, and fossilization. (Niestorowicz, 2015). Interlanguage is systematic which means that learners use their L1 knowledge and on the basis of their L2 exposure construct a new rule-governed language system which reflects their current hypotheses about the target language. During the process of L2 development learners tend to reduce the complexity of the target language in order to match it to their current level of proficiency. Simplification may manifest itself by omitting certain grammatical structures and generalising rules in language production. The aim of it is to enable communication in the

target language despite gaps in knowledge (Sellinker, 1972). Fossilisation occurs when the acquisition of a second language stops before learners reach the level of native proficiency. Even though some learners continuously learn and practice second language, certain mistakes or incorrect use of language become a permanent feature of their language competence The fossilizable structures remain in the learner's interlanguage and reemerge in the production of target language when the learner's attention is focused upon some difficult subject matter or when the learner is under the influence of a strong emotion. The source of fossilisation is believed to be connected to access to universal grammar (see Sections 1.1.3. and 1.2.2.) in the human mind; thus, age and other individual differences may have an impact on the process. Children, apart from those who suffer from various disorders, are usually able to reach a native-like competence, whereas adults are more prone to experience difficulties in this respect (Selinker, 1972). Research findings cited by Selinker (1993) suggest a possible link between fossilisation and simplification. Simplification is a process where learners reduce the complexity of the target language system to make it more manageable. For example, a learner might consistently omit the third-person -s in the Present Simple tense, not because the rule is unknown, but because applying it consistently requires too much cognitive effort. This simplified, albeit incorrect, form can become fossilised over time if it proves to be communicatively sufficient. Fossilisation affects various aspects of language knowledge, including phonological units, grammatical structures, vocabulary usage, pragmatic features, and syntactic patterns. Learners' individual preferences to prioritise certain aspects of the language over others may lead to those less attended areas being neglected and, often (over)simplified, and, hence, more prone to fossilisation. These dynamics underscore the critical role of individual differences (see Section 1.4.) in the risk of fossilisation in second language acquisition.

In sum, Selinker's (1972) concept of interlanguage provides a valuable framework for understanding the non-linear and often fluctuating nature of second language development.. It highlights how learners actively construct their own linguistic systems, which reflect not only the influence of their first language but also individual learning and communication strategies. These self-constructed systems often involve simplification, enabling learners to reduce grammatical complexity and communicate effectively despite limited proficiency. This perspective is especially relevant in the context of teaching grammar to students with special educational needs, as it draws attention to the need for targeted support that acknowledges the learner's developmental stage. Teachers should recognise the variability and instability of interlanguage to diagnose learner errors more

effectively and respond with appropriate scaffolding, particularly in areas of morphosyntax and rule generalisation. As such, the theory underpins the importance of grammar instruction that is both form-focused and responsive to the learner's evolving interlanguage system.

1.3.2. Meaningful learning theory and its application to L2 learning

While behaviourists perceived learning as a process of habit formation, Ausubel (1963) emphasised its cognitive aspects and drew attention to the active role of learners in acquiring knowledge. The key point behind Ausubel's theory was a belief that people learn innovative ideas by building them on their own current knowledge. Learners try assimilating and integrating new concepts with their cognitive structures (Bryce & Blown, 2023). Ausubel distinguished two types of learning: rote and meaningful. The former refers to mechanical memorisation through repetition and conditioning. The content learned this way is not assimilated into one's framework of understanding and is usually stored in isolation. Learnt information is effective on a short-term basis and more difficult to retrieve and apply in different contexts. The latter relates to the aforementioned active process of subsuming new knowledge within existing cognitive structures, hence, ascertaining the current level of students' knowledge should be the first phase of teaching. Information acquired through the process of meaningful learning fits into cognitive structures that utilise symbolic representation, abstraction, categorisation, and generalisation. The deeper understanding of the learnt issues makes them more retainable and applicable to different contexts and situations (Ausubel, 1968).

As meaningful learning is a complex process requiring students' engagement, Ausubel introduced the concept of advance organisers, which are pedagogical tools teachers use to facilitate it. Teachers use various tools, such as expository, narrative, skimming, or graphic techniques, to highlight the key aspects of the material ahead of the lesson. The teacher applies pre-teaching techniques, preparing learners to process new material by drawing their attention to its key features. For example, before introducing the Simple Present Tense**,** students may be asked to list various verbs, identify those they use most frequently in daily life, and explain why these particular verbs are important. On the other hand, learners themselves develop the ability to organise and activate prior knowledge when performing specific tasks. For instance, before writing a narrative, they may engage

in brainstorming, consult a dictionary, ask questions, create a mind map, or revise relevant vocabulary and grammatical structures. The organisers aim to prime learners' cognitive systems to be prepared to receive latest information. Literature review conducted by Bryce and Blown (2023), has shown that advance organisers can be applied to diverse educational fields but their efficiency is difficult to measure due to the high complexity of implementing organisers into the teaching process. The authors emphasised that Ausubel's methodology is child-centred and underscores individual learning rather than whole-class instruction. Nevertheless, it can be a helpful guideline for teachers who work with students with various learning difficulties. In English language teaching, advance organisers are often used as metacognitive strategies in pre-teaching, helping learners notice patterns and prepare for new grammatical input (O'Malley & Chamot, 1990). Such scaffolding is particularly valuable for learners with special educational needs, who benefit from structured support and explicit attention to key features of the target material.

Ausubel's theory of cognitive learning and theories of generative semantics in linguistics led Brown (1971) to formulate a new paradigm in second language acquisition based on the primacy of those two aspects. Brown's cognitive model of learning aims to be a foundation for second language teaching methodology and theory of second language acquisition. He underscored the difference between rote learning and meaningful learning in terms of retention and long-term memory. Brown outlined that meaningfully learned, subsumed knowledge has a greater potential for retention, thus, it is considered to be more useful for future purposes. Meaningful learning happens when learners are able to associate new learning tasks and the material that they address to what they already know, the learning task itself is potentially meaningful for the learner (Brown, 2007). Brown introduced the term of cognitive pruning, understood as the elimination of unnecessary items and preparing space for new knowledge in the cognitive structure (see Figure 3).

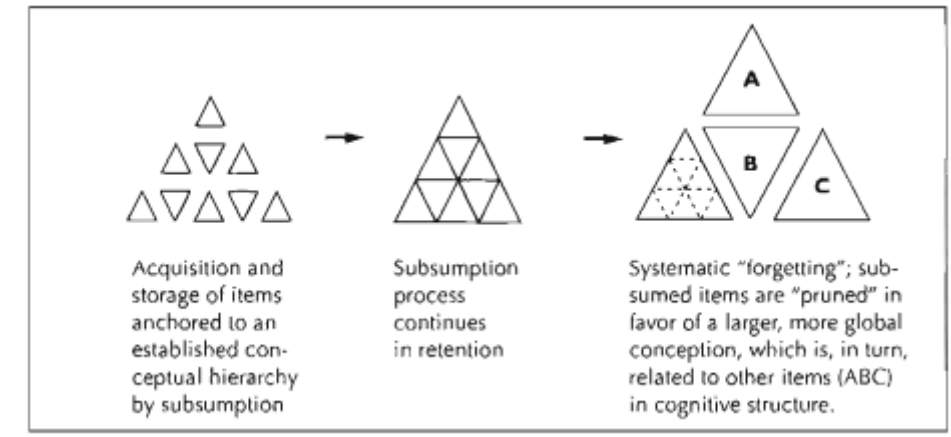


Figure 3. Schematic representation of meaningful learning and retention (subsumption)(Brown, p. 92)

Systematic forgetting, engaged in pruning, results in a generalised meaning of the larger item, which has a longer retention potential. Brown explained that mindless repetition, imitation, and other rote-oriented practices in second language learning result in producing mechanical traces of language that are easily forgettable. Second language should be developed with the help of teachers who use certain devices such as context, definitions, paradigms, illustrations, or rules, which aim to facilitate language subsumption. On the further levels of language proficiency, language becomes automatic and those introduced concepts become pruned, but linguistic structures remain and facilitate communication in the L2 (Brown, 1971).

1.3.3. Positive Psychology approach to learning L2

While the two aforementioned approaches to L2 learning and teaching primarily focus on the cognitive aspects of the process, humanistic psychology emphasises the importance of the learners' individual potential. Rogers (1951), advocates for a holistic learning experience that integrates cognitive, affective, and psychomotor domains. This perspective prioritises the learner's experiences, feelings, and the development of a sense of self, which can be crucial in language learning environments, enabling learners to engage more deeply in the learning process. Rogers also stated that the goal of education should be the facilitation of change and learning; hence, teachers should become facilitators of learning by establishing interpersonal relationships with learners. At the same time, learners should be self-aware and be able to understand themselves in order to communicate their needs to

teachers and educators. Rogers believed that if the context for learning is properly created, humans learn everything they need to (Rogers, 1983).

This legacy of humanistic psychology has been expanded in more recent years by the emergence of Positive Psychology, which provides an empirically grounded framework for supporting learner well-being and emotional engagement. Developed by Seligman (2002, 2011), Positive Psychology offers the PERMA model encompassing Positive Emotion, Engagement, Relationships, Meaning, and Accomplishment as a foundation for flourishing in educational settings. Scholars such as MacIntyre and Mercer (2014) and MacIntyre et al. (2019) have applied this model to second language acquisition, highlighting its relevance for enhancing learner motivation, resilience, and classroom interaction. These aspects are particularly pertinent for students with special educational needs, for whom emotional support, positive reinforcement, and a sense of agency can significantly influence the success of grammar instruction and broader language development.

1.3.4. Krashen's Monitor Model

Building on the learner-centred foundation laid down by the humanistic psychology, and the innatists' view that language capability is an inborn feature of humans, Stephen Krashen proposed a theoretical perspective on Second language acquisition and learning based on the five hypotheses, namely: Acquisition-Learning hypothesis, Natural Order Hypothesis, Input Hypothesis, Monitor Hypothesis, and Affective filter hypothesis. These hypotheses collectively emphasise the natural and intuitive process of second language acquisition, while also providing a distinction between subconscious acquisition and learning, and underscoring the role of the learner's emotional state.

1.3.4.1. The acquisition-learning hypothesis

While examining the process of second language development, Krashen (1981, 1982, 1985) emphasised that there are two distinct and independent ways of developing second language competence in learners: acquisition and learning. The former - language acquisition- is a subconscious process that resembles the natural process of acquiring a first language by children. The acquisition occurs through communication and interaction, and

the learners are often unaware of the rules they have mastered. Therefore, the correctness of their utterances is based on intuition rather than formal knowledge of grammatical structures. The latter process, learning, refers to developing conscious knowledge about language. The process typically takes place in a formal educational setting and involves memorising and practising language units. Learners become aware of the language system itself and possess explicit knowledge about the rules; hence, they can discuss them and understand the structures they use.

Krashen positioned acquisition at the centre of second language development, downplaying the role of explicit instruction. He argued that formal teaching is beneficial for beginners, as it can provide initial access to comprehensible input that would otherwise be unavailable in informal settings (Krashen, 1982, p. 33). However, this sharp distinction between acquisition and learning has been increasingly questioned. Reflecting a shift in contemporary SLA research, influential scholars such as Ellis (2008) argued for the distinction between implicit and explicit knowledge. These are understood not as entirely separate systems, but as components of language knowledge that can interact and support one another. Ellis (2001) noted that optimal L2 development involves a combination of both types of knowledge. While implicit learning is primarily driven by repeated exposure to input, explicit learning can facilitate deeper processing by directing learners' attention to specific grammatical features and accelerating the acquisition process. Ellis referred to MacWhinney (1997) to emphasise that learners who receive both explicit instructions and frequent exposure to the proper language input achieve better proficiency levels. This view is particularly relevant in the context of grammar learning strategies and special educational needs, as learners may require both structured instruction and multiple exposures to internalise grammatical forms. Hence, the rigid separation proposed by Krashen can be too narrow for the diverse profiles of L2 learners in inclusive classrooms.

1.3.4.2. The natural order hypothesis

The research findings of scholars examining the development of children's first language (Brown, 1973; de Villiers & de Villiers, 1973) led to the discovery of the "natural order" for grammatical structures, which means that some language features are acquired earlier than others. Krashen stated that this natural order has also been confirmed by numerous researchers to be present in children learning English as a second language regardless their

mother tongue. Therefore, Krashen suggested the average order of acquisition of grammatical morphemes for English as a second language (children and adults) as follows:

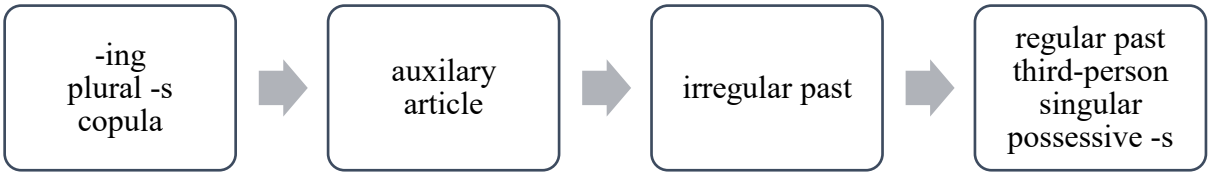


Figure 4. Natural order proposed by Krashen (adapted from Krashen, 1982, p. 13)

Krashen created this order based on an analysis of empirical studies of second language acquisition. According to the study, some morphemes appear in the same order as during first language acquisition, but others develop later than in L1. Krashen claims that the natural order should not be treated as a foundation for L2 teaching syllabi, but it is one of the core elements of another hypothesis - the input hypothesis.

Ellis (2008) noted that the existence of a predictable order does not imply that it is fixed or universal; learner-internal and contextual factors, such as aptitude, age, motivation, and instructional method, can significantly shape acquisition patterns. This view is supported by Lightbown and Spada (2013), who caution that relying on natural orders may overlook the pedagogical needs of learners, especially those with cognitive or language processing difficulties.

Learners with special educational needs challenge Krashen's presupposition that there is a universal developmental sequence of language acquisition. These learners often require tailored instructional support that revisits earlier forms more frequently or introduces certain structures explicitly and earlier than the "natural" order would suggest. Therefore, from the perspective of this dissertation, Krashen's Natural Order Hypothesis serves more as a reference point for understanding the sequence in which grammatical features may emerge rather than as a rigid guide for structuring grammar instruction in inclusive classrooms.

1.3.4.3. The input hypothesis

This hypothesis aims to explain how learners progress in their language acquisition. Krashen (1982) explained that when learners are at their "*i*" stage of language proficiency, they should be able to understand the input a stage a little beyond their current stage, namely "i + 1", with a focus on the meaning rather than the form of the message. According to Krashen, understanding is possible thanks to the use of context, knowledge of the world, or extra-linguistic information that helps learners comprehend the input. Krashen outlined that a sufficient amount of "I + 1" is provided automatically when input is understood and communication is successful. Finally, learners cannot be directly taught to speak fluently; their ability to produce language emerges over time. Some learners experience a "silent period" in which they can understand new information but are not yet ready to use it in their utterances. Another key aspect of the input hypothesis is the provision of a proper amount of comprehensible input in language classrooms by teachers through receptive skills (listening and reading) teaching materials, which are believed to be the foundation of productive skills (speaking and writing) (Luo, 2024).

The assumptions behind the input hypothesis can be beneficial for teaching SEN learners, as the focus on comprehensible input helps to reduce pressure on learners to produce language before they are ready. The silent period validates the idea that learners may understand before they are ready to speak, which underscores the individual aspects of L2 acquisition. Furthermore, the concept of "i+1" supports the idea of scaffolded progression, which aligns with inclusive teaching. By providing input that is supported by context, visuals, and real-world knowledge, teachers can enhance SEN learners' understanding and progress.

1.3.4.4. The monitor hypothesis

The input hypothesis emphasises the importance of comprehensible input, focusing on meaning rather than form. The monitor hypothesis, on the other hand, explores the role of the learned system in second language development. Krashen (1982) explained that acquisition and learning are two separate processes that coexist in language learners. This view is widely criticised by researchers, including Ellis (2005), DeKeyser (2001), Norris and Ortega (2000), and Lightbown and Spada (2013), who argued that acquisition and

learning are not entirely separate processes and that explicit instruction can play a crucial role in facilitating second language development, especially in formal educational contexts. The acquired system is responsible for the initiation and fluency of learners' utterances in a second language. Learned system is responsible for *Monitoring* language production in terms of making changes in the form of the utterances only when three conditions are met:

1. Time - Performer needs to have sufficient time to think and use conscious rules effectively.
2. Focus on the form- The performer must focus on and think about correctness
3. Know the rule - The performer must have previously learned the rule.

The use of *Monitor* allows learners to use the structures that they have not yet acquired through the natural order. Krashen (1982) introduced the term "*the optimal Monitor user,*" referring to those performers who use the Monitor when it is appropriate and when it does not interfere with communication. The optimal use of the Monitor enables learners to apply conscious competence as a supplement to their acquired competence, thereby filling part of the gap in their proficiency.

These three conditions, outlined by Krashen, time, focus on form, and prior rule knowledge, are particularly relevant to grammar instruction for learners with special educational needs, as such students often require extended processing time, explicit guidance on form, and repeated exposure to rules in order to internalise and apply grammatical structures effectively.

1.3.4.5. The affective filter hypothesis

The affective filter hypothesis highlights the significance of individual factors that impact the second language development process. According to Krashen (1982), research has shown that affective variables, such as motivation, self-confidence, and anxiety, relate to success in second language acquisition. Students with low motivation, low self-esteem and high levels of anxiety have a high affective filter, which means that the input they get is not properly processed by the learning acquisition device, thus their progress is slower. Such students often do not look for additional opportunities to practice a foreign language, which adds to the poor effects of their acquisition process. On the other hand, students with high intrinsic motivation, high self-esteem, and low levels of anxiety are more enthusiastic about their acquisition process and encounter fewer difficulties in handling obstacles that arise

while developing their language skills (Mehmood, 2018). Later research on affective variables by Horwitz (2010) showed that a high affective filter does not necessarily slow down students' progress, provided that learners receive appropriate support and employ effective coping strategies. Therefore, this is another aspect that confirms that learning a foreign language is a highly individualised process that depends on numerous variables.

1.4.The brain and language learning

To fully comprehend the complexities of second language acquisition, particularly in the context of learners with special educational needs, it is essential first to look into the underlying biological system, that is, the human brain. The difficulties that SEN learners experience are usually rooted in neurobiological differences in how their brains process language, manage attention, and consolidate memory, which may in turn translate into various behavioural and/or psychological consequences. Understanding these processes is fundamental to realising the role of strategy training, the focus of this dissertation, in providing learners with tools to support and compensate for these neurobiological challenges. This section, therefore, provides that crucial foundation, outlining the anatomical and functional aspects of the brain that govern language acquisition.

1.4.1. Anatomical details

According to Brice and Carson (2009), the brain is the most complex organ in the human body. Accompanied by the spinal cord and the nerves, the brain is responsible for thought, language, emotions, memory, and perception of the world through all the senses: hearing, vision, touch, movement, taste, and smell. The basic building blocks of the brain are nerve cells, each of which is made up of a cell body, an axon, a presynaptic terminal and a number of dendrites, which form a "dendrite tree"(see Figure 5).

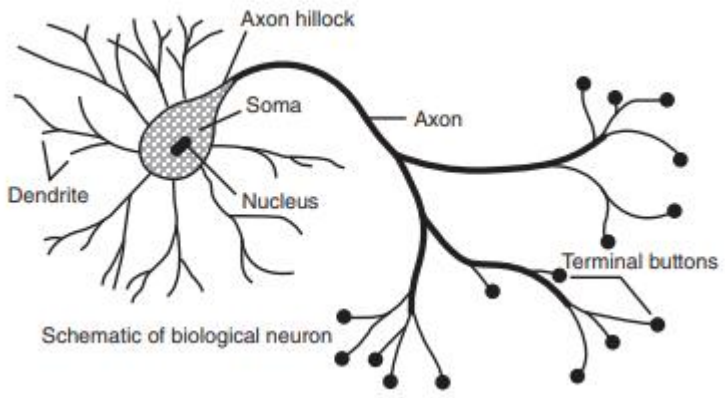


Figure 5. Model of neuron (Bryce & Carson, 2009, p. 8)

Dendrites receive electrical impulses from other neurons and transmit them along the axon. The axon is surrounded by a myelin sheath, which insulates it from other cells, preventing the electric charge from leaking into the environment; hence, transmission occurs faster. The impulse travels along the neurons through an electrochemical process and can move the length of approximately 183cm in two-tenths of a second. Each neuron can transmit between 250 and 2500 impulses per second.

The impulse sent by the neuron travels through the axon to reach the presynaptic terminal, triggering the release of chemicals stored in synaptic vesicles at the end of the axon. These chemicals, called neurotransmitters, travel across the synaptic gap and connect with the neighbouring neuron (Sousa, 2016). An individual neuron forms and receives between 1000 and 10000 synaptic connections; the human brain contains 10”11 neurons which means that there are approximately 10”14 connections (Kandel et al., 2013, p. 226). This process of new connection creation is called synaptogenesis and it is a way in which the brain develops and learns new things. Synaptogenesis is a significant element of the brain’s ability to reorganise itself in response to experiences and environmental changes. The aforementioned neurotransmitters are responsible for memory, cognition, and language; they consist of chemicals that relay, modulate, and amplify electrical signals between neurons and other cells. Although there are approximately one hundred different neurotransmitters, mainly acetylcholine, glutamate, and dopamine affect the learning process (Sousa, 2017).

1.4.2. The processing of spoken and written language

Language processing in the brain involves a network of regions that work together to decode, comprehend, and produce language. The network consists of: primary visual cortex, primary auditory cortex, Broca's area, Wernicke's area, arcuate fasciculus, angular gyrus, and motor cortex (see Figure 6).

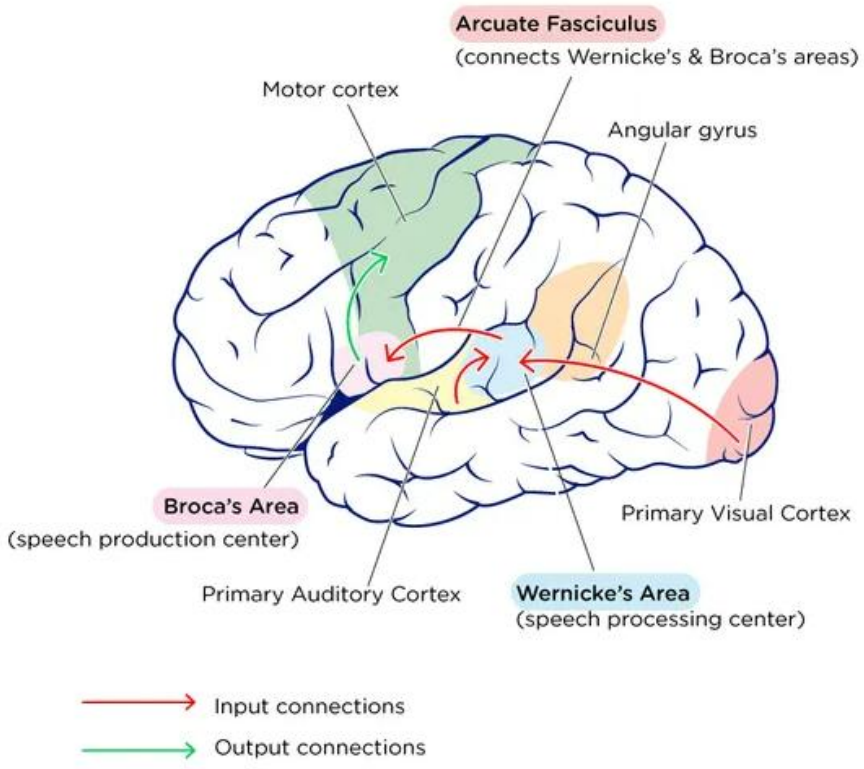


Figure 6. Speech pathways in the brain https://jackwestin.com/, retrieved 01.12.2023).

The primary auditory cortex is located in the temporal lobe in the superior temporal cortex and receives auditory stimuli. Before auditory stimuli from the environment reach the brain, they travel to the brainstem, where sound signals pass through a relay system. The auditory centres in the brain receive countless auditory stimuli, analysing, comparing, and then ordering them so that speech can be properly understood (Szupica-Pyrzanowska, 2018). The sound stimuli coming through ears are meaningless until they get to the Wernicke's area. The area situated in the left hemisphere, is situated in the posterior part of the superior temporal gyrus, near the junction of the temporal and parietal lobes. The left hemisphere is crucial for language comprehension. It is responsible for initiating and controlling the processes of recognising sounds, words, and sentences.

Furthermore, the contemporary neuroimaging studies (Price, 2012; Binder & Desai, 2011) have proven that this area of the brain becomes activated under various linguistic conditions, such as semantic processing, selective attention to speech, repeating words, processing complex sounds. The pathology in this area results in the Wernicke aphasia which causes difficulties in language understanding, verbal memory impairments, word-finding defects, and language output errors (Ardila & Bernal, 2016). Broca's area situated in the left hemisphere in the posterior part of the middle and lower curve of the frontal lobe, is responsible for combining sounds into words, words into sentences and for formulating fluent utterances. The two areas (Wernicke's and Broca's) are connected by a linguistic bundle that enables the processing and fusion of linguistic data obtained through reception and expression. People who suffer from lesions in Broca's area experience effortful, nonfluent, monotonous, and often agrammatic speech with phonemic paraphasia and articulatory deficits. Although language comprehension remains reasonably good, speech production is notably impaired (Berko & Bernstein, 2005).

The processing of the written language begins when the eyes scan the letters of the printed word, and then the visual signals travel to the visual cortex located in the occipital lobes at the rear of the brain. The area on the left side of the brain called the angular gyrus is responsible for decoding words' signals and separating them into basic sounds of phonemes. Subsequently, the brain's language areas located in the left hemisphere near and in the temporal lobe get activated. This is the place where auditory processing also occurs, so the auditory processing system sounds out the phonemes in the head, Broca's and Wernicke's areas supply information about the word from their mental dictionaries, and the frontal lobe integrates all the information to provide meaning (Sousa, 2017).

Although the most important language processing networks are situated in the left hemisphere, making it the superior language processor, the right hemisphere also plays a significant role in human language processing. Lindell (2006) analysed research focused on the role of the right hemisphere in language processing, and she found that the right hemisphere has significant receptive language capacity and comprehension skills. The right hemisphere supports the processing of the prosodic, pragmatic, and paralinguistic aspects of spoken language. It processes the intonation, stress, and rhythm of speech, as well as its non-verbal elements, to generate and interpret the emotional tone of the speech. Thus, it helps to produce and interpret coherent and cohesive narrative discourse which is one of the most often used language functions. Moreover, the right hemisphere supports visual word recognition and preserves specific information related to the visual details of words,

thereby demonstrating sensitivity to the orthographic factors of the language (Lindell, 2006).

The classic model of language processing emphasises the role of the central regions of the brain responsible for speech reception and production, as has been shown in Figure 6 above. However, neuroimaging studies of language processing reveal that numerous other brain areas are involved in the process, suggesting that the model may be oversimplified (Smits et al., 2006). For the purposes of this thesis, it is important to be aware of the key neurological processes that underlie language processing and acquisition.

1.4.3. Positive and negative emotions

The interaction with a foreign language induces brain changes that are highly specific to the particular person because they are sensitive to the various individual factors. When the language learning process is overt and explicit, it is processed in the brain as shown in Figure 7.

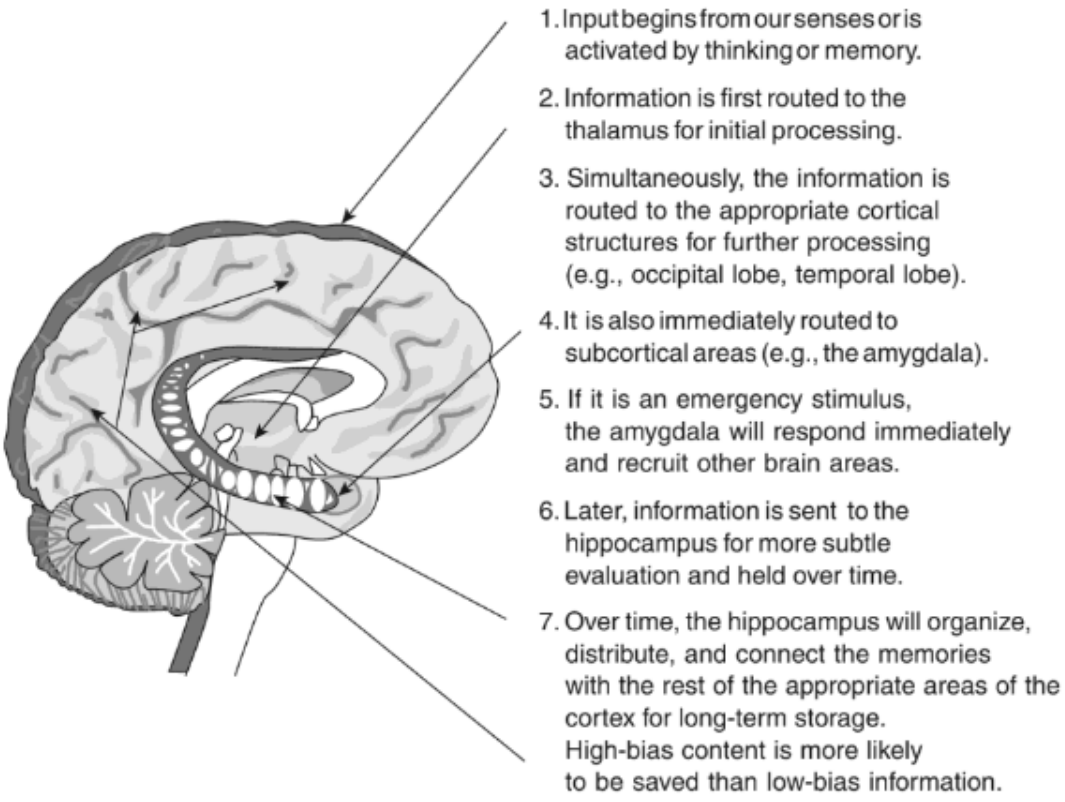


Figure 7. How the brain learns new content. (Jensen, 2008, p. 11)

In the context of L2 learning, sensory input is initially processed by the thalamus and then routed to the cortical areas for detailed processing. Emotions play a crucial role in language acquisition processes, and their neurological basis lies within the limbic system, a network of brain structures involved in emotional regulation, motivation, and memory. Two key components of this system are the amygdala, responsible for processing emotional reactions, and the hippocampus, which is essential for consolidating long-term memory and integrating emotional states with cognitive experience (LeDoux, 1996; Immordino-Yang & Damasio, 2007). The amygdala is activated when the input is emotionally charged. Positive emotions trigger memory formation, and negative emotions such as anxiety or stress can impede the learning process by redirecting the cognitive processes from L2 learning to coping with stress (Tyng et al., 2017). Finally, the hippocampus organises and stores the information over time. Li et al. (2014) reviewed and described brain studies using neuroimaging methods, such as functional magnetic resonance imaging (fMRI), positron emission tomography (PET), and electroencephalography (EEG).

The research findings confirm that L2 learning changes the brain structures and challenge the Lennenberg (1967) view that an adult brain loses its plasticity in acquiring a foreign language (see Section 1.2.2.). Furthermore, they outlined that L2 learning at any age leads to behavioural and neural changes that may approximate the patterns of the native language. The study by Tagarelli and Ullman (2014) confirmed that late L2 learners were able to access and modify their L1 regions in the brain, but also new areas of the brain, such as the hippocampus and basal ganglia, were engaged during their L2 learning. This proves that there is a continued neuroplasticity for language learning in the adult brain and that L2 proficiency leads to functional changes in the brain. Those changes are often accompanied by anatomical changes in brain structures in the form of increased grey matter (GM) density, increased cortical thickness (CT), and enhanced white matter (WM) integrity. Increased GM density can be noticed in several brain regions associated with language processing and cognitive control, such as the left inferior frontal gyrus (IFG), left anterior temporal lobe (ATL), caudate nucleus (CN), and cerebellum (CB). Although the brain does not lose its plasticity in adulthood, language skills acquired by younger learners are associated with greater GM density increases, and higher L2 proficiency also manifests greater GM density increases (Li et al., 2014). Jensen (2008) outlined that learning changes the physical structure of the brain and forms new synaptic connections. He also underscored that activating and modulating the process of learning the neural networks requires complex

biochemical interaction between human genes and the environment, hence, the process of L2 learning is highly individual.

1.5. Selected individual differences in SLA

The decades of research into second language acquisition have seen a significant growth in interest in the individual factors that affect one's learning. With the advent of positive psychology in language education (see Section 1.3.3.), cognitive and affective variables began to be treated as important regarding their impact on learners. Carroll and Sapon (1959) created the *Modern Language Aptitude Test (MLAT)* to measure individuals' potential for learning foreign languages. This device laid the groundwork for understanding how individual differences impact people's language learning capacity. In the following years, different factors such as motivation, personality, and anxiety were closely examined, widening the scope of variables affecting language learners. Dörnyei (2005) described Individual Differences (IDs) as characteristics or traits in in which individuals may be shown to differ stably and systematically. Dörnyei emphasised that IDs are meaningfully linked to the most crucial processes underlying second language acquisition as they are related to some of the core issues in applied linguistics. Individual differences will be discussed in separate sections dedicated to cognitive variables, affective variables, personality traits, and learning strategies.

1.5.1. Cognitive variables

Learning a foreign language is a complex process that employs multiple cognitive functions such as: use and understanding of phonetic structures, correct use of articulatory devices, proper selection of words that best convey the meaning of the utterance, use of paraphrase to supplement the unknown words, proper application of syntactic rules, adjusting communication to the context and situation, observance of pragmatic rules. As it was shown (see Section 1.4), the human brain and its structures are responsible for coordinating these processes in real-time. Although human cognitive systems are built in the same way, their operation is highly individual and depends on numerous variables.

1.5.1.1. Language aptitude and intelligence

The cognitive factors, such as language aptitude and intelligence, influence learners' ability to understand, retain and apply grammatical rules which are central to L2 performance, also for students with learning difficulties. Language aptitude has been perceived as a specific talent for foreign language learning, and it encompasses specific cognitive abilities. Carroll (1965) distinguished four components underlying one's capacity for language learning: phonemic coding ability, inductive language learning ability, grammatical sensitivity, and associative memory capacity. Phonemic coding ability enables people to process auditory input into segments which can be stored and retrieved. Inductive language learning ability and grammatical sensitivity account for the central processing of the segmented auditory input. They help the brain to deduce structure, identify patterns, make generalisations, recognise the grammatical function of elements, and formulate rules. Associative memory capacity determines the storage of linguistic items and their appropriate selection in performing language tasks (Saville-Troike, 2006).

Building on previous theories, Biedroń (2015) conducted a review of research on the neurology of foreign language aptitude. The described studies using neuroimaging methods confirm that individuals with higher phonetic abilities have greater grey and white matter in the left hemisphere of the brain. What is more, several studies asserted that phonetic abilities are inborn, so there are high similarities between L1 and L2 phonetic processing. Regarding syntax, research has shown that enhanced white matter integrity in the vicinity of Broca's area may predict successful grammar learning. Working memory (WM), a core component of language aptitude, is also highlighted in the research. Both functional and anatomical studies have confirmed that the prefrontal cortex, basal ganglia, and thalamus are involved in attentional control and working memory in the parietal cortex (Biedroń, 2015). The working memory is an inherently dynamic and complex system that links storage and processing components, influences outcomes, and is shaped by time and experience (Jackson, 2020).

1.5.1.2. Working memory models

Baddeley (2007), who created a multi-componential model of WM, describes it as a system, comprised of central, executive and two storage systems: the phonological loop and the visuospatial sketchpad. The two fluid systems, accompanied by the episodic buffer, interact with visual semantics, episodic long-term memory, and language. Each of these components serves distinct functions in the model. The phonological loop helps to retain speech for long-term learning through storage and rehearsal. The visuospatial sketchpad facilitates the rehearsal of visual and spatial information, and the episodic buffer integrates chunks by binding information from various sources into episodes. Working memory has also been described as one of the elements of language aptitude in Peter Sekhan's (2002) model. Skehan divided the language learning process into nine stages and connected each stage of SLA proficiency with corresponding aptitude components (see Table 2).

Table 2. Skehan's proposal of SLA stages and aptitude constructs (adapted from Skehan, 2002, pp. 31-32)

	SLA Stage	**Corresponding Apptitude Constructs**
1	noticing	auditory segmentation attention management working memory phonetic coding
2	pattern identification	fast analysis/ working memory grammatical sensitivity
3	extending	inductive language learning ability
4	complexifying	gramatical sensitivity inductive language learning ability
5	integrating	restructuring capacity
6	becoming accurate, avoiding error	automatization proceduralisation
7	creating a repertoire, achieving salience	retrieval processes
8	automatising rule-based language, achieving fluency	automatization proceduralisation
9	lexicalising, dual coding	memory chunking retrieval processes

At the initial stage of noticing, learners direct their attention to certain aspects of L2 system. Following this, on the basis of observed patterns or regularities, learners form hypotheses or generalisations about target language structure during the pattern identification stage. Subsequently, in the extending stage, learners extend the identified patterns without changing them fundamentally. During the complexifying stage, learners begin to recognise the limitations of the identified pattern, they become aware of new aspects of the target language, and they restructure the patterns. As the learners progress to

the integrating stage, they incorporate newly restructured patterns into a broader interlanguage framework. In the next stage of becoming accurate, learners become able to use the interlanguage without making errors. At the seventh stage, interlanguage becomes salient and learners are able to use L2 forms appropriately without errors. As learners progress to the stage of automatising, they use the target language not only without errors but also with reasonable speed, and the L2 role has become proceduralised. At the final stage of lexicalising, learners can produce the interlanguage form as a lexicalised element. At the same time, they can choose between using lexicalised representations of L2 forms or creating them based on the rules, depending on what is most appropriate in the given context (Skehan, 2002). The language aptitude level in a traditional Carroll and Sapon's model (1959) was used to predict how much effort and motivation a particular student would need to invest in language learning to reach their desired level of language proficiency. Sekhan's attempt to formulate an aptitude model that relates to SLA proficiency stages may lead to a deeper understanding of the nature of learners' abilities, which can be useful in improving L2 learning and teaching practice (Dörnyei, 2005).

Grundy and Timmer (2017, as cited in Jackson, 2020, p. 7) conducted a meta-analysis of 27 independent studies that examined working memory performance among monolingual versus bilingual groups. They found that bilinguals had greater working memory, indicating that second language experience has a positive effect on working memory. Another meta-analysis, prepared by Linck et al. (2014, cited by Jackson, 2020, p. 6), proved that there is a positive relationship between working memory and both L2 comprehension and production. These findings are particularly relevant for the present dissertation, as they suggest that effective L2 instruction, especially when supported by well-targeted grammar learning strategies, may not only enhance language performance but also foster cognitive development in learners with special educational needs, who often struggle with working memory limitations.

1.5.1.3. Tools for measuring language aptitude and intelligence

Language aptitude shares definite commonalities with a person's general intelligence. Precisely, language aptitude tests include an L1 vocabulary test, which is a vital component of the measurement of intelligence in general. To assess language aptitude, researchers have developed specialised diagnostic tools that focus on learners' ability to perceive, process, and retain novel linguistic material. The most widely used and empirically validated instrument is the *Modern Language Aptitude Test,* developed by Carroll and Sapon (1959). It evaluates four subcomponents: phonetic coding ability, grammatical sensitivity, rote memory for foreign language materials, and inductive language learning ability. Another well-known tool is the *Pimsleur Language Aptitude Battery* (PLAB) (Pimsleur, 1966), which is designed primarily for younger learners and assesses verbal ability, motivation, and auditory skills. More recent models include the *CANAL-FT (Cognitive Ability for Novelty in Acquisition of Language - Foreign Test)*, developed by Grigorenko et al. (2000), which adopts a more dynamic approach to language aptitude by incorporating novelty and memory in unfamiliar linguistic contexts. These instruments demonstrate that language aptitude is a multidimensional construct, distinct from general intelligence, and may include components such as working memory and auditory discrimination, which are crucial for successful second language development, particularly among learners with special educational needs.

The general intelligence tests measure cognitive skills in ten broad concepts, including fluid intelligence, crystallised intelligence, quantitative reasoning, reading and writing ability, short-term memory, long-term storage and retrieval, visual processing, auditory processing, processing speed, and decision and reaction time and speed (de Judicibus, 2015). Although some of the aforementioned intelligence components play a role in language learning, others are irrelevant; therefore, language aptitude and intelligence should be treated separately (Dörnyei, 2005).

At the beginning of the twentieth century, Alfred Binet and Théodore Simon (1916) developed the first practical intelligence test, which was later expanded into a series of tests to diagnose the degree of intelligence in children. These tests were designed to measure native ability, not scholastic attainment. They aimed to provide investigators with a trustworthy instrument that enables them to estimate a child's capacity for adapting to their social environment, with special reference to evaluating their judgment, good sense,

initiative, and adaptability. Their work laid a foundation for the development of the concept of *Intelligence Quotient (IQ).* Stern (1949) used the intelligence score, measured by the Binet-Simon scale and divided it by the chronological age to produce a quotient, which was then multiplied by 100. IQ scale has been widely used since then to measure and compare the intellectual development of children. An American developmental psychologist Howard Gardner was against IQ testing. He found that traditional intelligence tests are too narrow and capture a limited aspect of human cognitive abilities, focusing predominantly on linguistic and logical-mathematical skills (Gardner, 1995). For Gardner (1983, p. 83), intelligence is the ability to solve problems or to create fashion products that are valued within one or more cultural settings. He argued that people vary in terms of eight types of intelligence (see Table 3). This approach is significant for the context of second language teaching and learning because it highlights that each person can have an individual combination of intelligences which affects their strengths and weaknesses while learning a foreign language. It can also be used as an indicator of tasks and activities which will positively improve the student's language learning skills.

Table 3. Gardner's Multi Intelligence Types and their characteristics, (adapted from Maftoon & Sarem, 2012, pp. 1235-1236)

Type of Intelligence	**Characteristics**	**How to Improve This Type of Intelligence (with a use of L2)**
Verbal/Linguistic	Sensitivity to spoken and written language, ability to use language to accomplish goals, learn new languages	browse the library or bookstores regularly; keep a diary; play word games; memorise favourite songs, poems, or stories; read parts of a play with friends;
Logical/Mathematical	Ability to study problems, carry out mathematical operations logically and analytically, conduct scientific investigations	watch science tv shows; visit science museums; sequence events into a story; use technology calculators and games; read about famous scientists or detectives;
Spatial/Visual	Sensitivity to colour, line, shape, form, space, and relationships between these elements	work on jigsaw puzzles involving language; take a filmmaking class; make a collage from magazine pictures; watch tv ads, films, and videos closely;

Musical	Ability to sing, recognise musical patterns, and pitch, and hear music internally	attend concerts; keep a music diary; sing English songs;
Bodily-Kinesthetic	Ability to use the body to express feelings and desires	play sports; enroll in dance, drama, or poetry classes mime or act out stories; learn cooking, gardening, woodworking, or car mechanics;
Interpersonal	Ability to understand and interact effectively with others	join clubs; have parties and invite new people; interact with at least one person daily; watch people interact in busy places;
Intrapersonal	Awareness of one's own desires, fears, and abilities, and ability to make sound decisions	think about goals and hopes for the future; keep a daily journal; engage in self-confidence activities; list strengths and areas needing assistance;
Naturalistic	Ability to recognise and classify objects, understand nature	engage in hobbies involving nature; study the environment, nature, plants, and animals; read or watch shows about nature; talk about favourite pets or natural places;
Existential	Capacity to tackle deep questions about human existence and see one's role in the larger context	summarise and synthesise ideas across broad; studies connect learning to real-world contexts and bigger picture views;

Cognitive factors undoubtedly underpin learning processes, but their complexity cannot be fully understood without considering the influence of personality and affective factors on second language development. Personality and affective variables, described in the following section, highlight the interplay between cognitive and emotional aspects that lead to success in L2 acquisition.,

1.5.2. Personality

Personality has been a central concept in the field of psychology; however, its complexity makes it challenging to define. Personality is often described as a unique set of characteristics that leads to certain patterns of thinking, feeling, and behaving (John & Pervin, 2001). Those characteristics, commonly referred to as personality traits, have been subject to various classifications and models. Personality psychologists McCrae and Costa (2003) defined traits as "dimensions of individual differences in tendencies to show consistent patterns of thoughts, feelings, and actions" (p. 25). According to the definition, personality traits are dimensional as opposed to categorical, which means that people can be ranked according to how much they exhibit certain features.

The first personality classification was created by the Swiss psychiatrist Carl Jung (1923), who distinguished three bipolar personality types: extraversion -introversion, sensing -intuiting, and thinking -feeling. Jung's taxonomy forms a basis for the "*Myers-Briggs Type Indicator*" (MBTI), whose authors Isabel Myers and Katharine Briggs (1962) added the fourth dimension of judging-perceiving and created an inventory widely used to determine one's personality type (Myers et al.,1985).

The first dimension of extraversion-introversion determines which world is attractive and energising for a person. For extraverts, pleasure and stimulation come from interactions with the outer world, while introverts focus more attention on the inner world of ideas and experiences (Dörnyei, 2005). Leaver et al. (2005), point out that introversion is connected to a higher level of internal neural arousal and activity; hence introverts easily get too much stimulation from the outside world and need to withdraw from it to restore the balance. Extraverts, on the other hand, tend to bring less neural arousal to their interactions with the outer world and may seek external stimulation. As a result, extraverts and introverts tend to behave differently (Leaver et al., 2005). Extraverts are sociable, risk-taking, lively, and active, while introverts are quiet and prefer non-social activities. Research findings described by Ellis (1994) showed mixed correlation between this dimension of personality and L2 proficiency: Busch (1982) found a negative relationship between extroversion and L2, while Strong (1983) found that extrovert children learnt faster (as cited in Ellis, 1994, p. 518).

The second dimension of sensing - intuiting characterises how individuals gather and prioritise information, and whether they focus more on the present or the future. People who prefer to base their decisions on factual information and observable facts, rather than

speculation, are more interested in the present than in the future. On the other hand, people who prefer intuition choose abstract and imaginative thinking over concrete thinking. They also focus more on the meaning of facts and are more future-oriented. Not only do sensing and intuition play a significant role in the interests and choices of subjects to study, but they also affect one's learning. In the context of foreign-language classes, sensing-type learners prefer to have an explanation of the rules before applying them. Intuitive type learners prefer a synoptic approach to learning, which means that they synthesise information from various sources and perspectives to gain a comprehensive understanding of a subject (Leaver et al., 2005).

The thinking-feeling dimension describes how individuals make decisions and choices. Thinking individuals use logic and cause-and-effect procedures and try to reduce the impact of any subjective, emotional factors. Their decisions are based on rational principles and logical consequences. (Ehrman, 1996) Feeling individuals value their decisions right-wrong, good-bad, considering interpersonal harmony. Everyone uses both thinking and feeling to some extent but each person adopts a preferred and more automatic approach. In the second language classroom, thinking types prefer analysing language and tend to prioritise task achievement more than feeling types, who find themselves less comfortable with competition and value a harmonious classroom environment (Leaver et al., 2005).

The last dimension illustrates how a person relates to their outer world and takes action. Judgers are in favour of planning and making decisions early, which allows them to complete tasks efficiently. They like to have a structured and predictable life, as learners, they are typically good at managing time, meeting deadlines and organising their work systematically. Conversely, perceiving individuals prefer flexibility and spontaneity. They like to have their options open and delay decisions to gather more information. Although perceivers may struggle with time management, they are usually more tolerant of ambiguity and adaptable to unexpected situations (Leaver, et al., 2005).

There are sixteen possible combinations of the personality types, which, in *MBTI* inventory are marked with the initial letters of the preferences ("intuition" is marked with "N"). The combinations outline recognisable character types, which are equally good but show distinctive features and fit differently in various environments. Understanding personality types is crucial in the foreign language classroom because it ensures that educators can effectively work with a diverse group of students by using a wide selection of teaching methods and tools (Leaver et al., 2005).

Another approach to personality classification is McCrae and Costa's (2003) *Five-Factor Theory of Personality*. It identifies five broad dimensions that structure human personality: Openness to Experience, Conscientiousness, Extraversion, Agreeableness, and Neuroticism. These traits are considered biologically rooted and relatively stable across the lifespan. In the context of second language acquisition, research suggests that traits, such as Openness and Conscientiousness, may positively influence language learning motivation and strategy use, while high Neuroticism may hinder performance due to anxiety (Dewaele & Furnham, 1999; Ehrman et al., 2003).

In recent years, one of the personality traits that has attracted considerable attention in L2 learning research is grit composed of two facets: *Perseverance of Effort* (PE) and *Consistency of Interest* (CI) Grit can be defined as perseverance and passion for long-term goals (Duckworth et al., 2007) which, unlike aptitude or working memory, reflects a non-cognitive disposition that supports sustained effort despite setbacks. Research in second language contexts has shown that learners with higher levels of grit tend to demonstrate more consistent engagement and achievement, particularly when language development is a long-term challenge (Sudina & Plonsky, 2021). This finding is particularly relevant in the case of students with special educational needs, for whom L2 learning may involve more frequent failures and slower progress. In such cases, grit may function as a protective factor that enables learners to face up to difficulties and make strategic decisions, thus contributing to more favourable learning outcomes over time. Zawodniak et al. (2021) found significant variation in grit across different years of study among Polish EFL university students, suggesting that it may be shaped and supported by learning experiences. Fostering grit through appropriate goal-setting, feedback, and motivational strategies can therefore enhance the effectiveness of grammar learning interventions, especially among learners with SEN.

1.5.3. Affective variables

As Brown (2007) states, affect refers to emotion or feeling, while the affective domain is the emotional side of human behaviour engaged in receiving, responding and valuing new information. Among a wide range of affective variables, self-esteem and self-efficacy, anxiety, and motivation play a vital role in a learner's language achievement.

1.5.3.1. The Complex Dynamic System Theory (CDST)

The interaction of cognitive, affective and contextual variables in second language learning highlights the complexity of individual learners' profiles. These relationships were recognised in the *Complex Dynamic System Theory (*CDST), which views language development as a non-linear, unpredictable, and emergent process within a complex framework composed of multiple interacting systems (Larsen-Freeman, 1997, 2006, 2017; Larsen-Freeman & Cameron, 2008). CDST highlights that language development is not merely the accumulation of discrete rules but an emergent phenomenon resulting from self-organisation, adaptation, and dynamic interactions between a multitude of learner-internal factors (e.g., motivation, anxiety) and learner-external factors (e.g., instructional methods, peer feedback) (Larsen-Freeman & Cameron, 2008). It also emphasises intra-learner variability over time, where learners' responsiveness to grammar input may fluctuate depending on affective states, cognitive load, and environmental support (Larsen-Freeman, 2017).

This perspective challenges traditional static, form-focused grammar instruction, advocating a more fluid, contextualised, and learner-sensitive approach instead. CDST can be viewed as highly compatible with strategy-based instruction, which can be tailored to the unique learning needs of SEN students, as they often require more flexible, scaffolded, and emotionally responsive teaching methods (see Section 2.4.).

1.5.3.2. Self-esteem and self-efficacy

Language learning is a complex process that requires learners to express themselves in a language they are not proficient in. Hence, their levels of self-esteem and self-efficacy are crucial factors in the progress of language learning. Self-esteem is understood as a personal judgment of worthiness which is expressed in the attitudes that individuals hold toward themselves (Coopersmith, 1967). Brown (2007) stated that people derive their sense of self-esteem from the accumulation of experiences with themselves and with others and from assessments of the external world around them.

There are three general levels of self-esteem: global, situational and task self-esteem. Global self-esteem is a relatively stable trait in mature adults and represents the overall sense of worth that a person holds over time and across various situations.

Situational self-esteem, sometimes called specific self-esteem, pertains to one's self-assessment in particular life situations, such as social interaction, work, education or in one's relation to specific traits such as intelligence, communicative ability, empathy. The degree of specific self-esteem is not constant and may vary depending on the situation or the trait in question. Task self-esteem is concerned with how people evaluate themselves in specific tasks within certain contexts. In L2 learning, specific self-esteem encompasses second language acquisition in general, while task self-esteem refers to particular aspects of the process or even a specific kind of classroom task (Brown, 2007).

Quantitative or mixed-method studies concerning the influence of self-esteem on L2 learning have proven that there is a positive relationship between self-esteem and foreign language proficiency. In this regard, students with higher self-esteem are found to be more involved in their learning and the activities done in the language classroom (Alrabai, 2017; Pramita, 2012; Soureshjani & Naseri, 2011; Tilfarlioglu & Delbesoglugil, 2014, as cited in Guban-Caisido, 2020). Most of these studies employed standardised self-report instruments, such as the *Rosenberg Self-Esteem Scale* (1965) and the *Foreign Language Classroom Anxiety Scale* (Horwitz et al., 1986), as well as context-specific Likert-type questionnaires, to assess both self-esteem levels and perceptions of L2 proficiency. Furthermore, a high level of self-esteem tends to correlate positively with each of the four components of language proficiency: listening, reading, speaking, and writing, as it supports learners' confidence, risk-taking, and willingness to engage in communicative tasks essential for developing these skills. Wullur (2014) discovered that several oral proficiency elements are influenced by self-esteem. His research indicates that there is a high positive association between self-esteem and grammar, a moderate correlation between self-esteem and vocabulary and pronunciation, and a smaller correlation between self-esteem and fluency. The study employed the Rosenberg Self-Esteem Scale alongside performance-based oral proficiency tasks to collect data. Piran (2014) discovered a positive correlation between students' strong self-esteem and their reading comprehension grades. The data were gathered using a combination of self-esteem questionnaires and standardised reading comprehension tests. According to Hassan's (2001) research, writing anxiety and self-esteem are negatively correlated, which means that students with stronger self-esteem write better compositions. The study utilised Hassan's own *Foreign Language Self-Esteem Scale* (2001) in conjunction with writing performance assessments. Hayati & Ostadian (2008) proved that listening comprehension is positively impacted by self-esteem. When compared to students with lower self-esteem, those with higher self-esteem believe they

are more capable of understanding the audio content. The aforementioned quantitative research was conducted using a wide range of questionnaires and inventories, including: *Coopersmith's Self-Esteem Questionnaire* (1967), *Hassan's Foreign Language Self-Esteem Scale* (2001), *Marsh's Self-Esteem Questionnaire* (2007), and *Rosenberg's Self-Esteem Questionnaire* (1965). All of these tests explore different aspects of self-concept, such as its social, academic, and emotional dimensions. Their measures rely on self-reporting, where participants respond to specific items or statements based on their introspection and self-awareness to assess their feelings, attitudes, and perceptions related to self-esteem. (Guban-Caisido, 2020).

The concept of self-esteem is closely related to self-efficacy. Bandura (1986) described self-efficacy as "people's judgments of their capabilities to organise and execute courses of action required to attain designated types of performances" (p. 391). Brown (2007, p. 154), simplifies the definition by stating that self-efficacy is a belief in one's own capabilities to perform a given activity successfully. Self-efficacy is believed to regulate a learner's achievement by influencing the goals a learner sets to reach and the amount of effort dedicated to their performance (Bandura, 1986).

Bai and Wang's (2023) quantitative research results suggest that self-efficacy is one of the factors determining one's self-regulation, precisely, the level of strategy use (i.e. monitoring, effort regulation, and goal setting and planning). Among these, monitoring and effort regulation were significant contributors to the participants' English language learning achievements. Furthermore, not only does self-efficacy regulate achievement-related cognitive and metacognitive processes, but it is also connected to affective feeling states in language learning. Hiver's (2013) mixed-method and Song's (2016) qualitative research have shown that a perceived lack of competence was related to both weak self-efficacy beliefs and the presence of negative emotions, such as anxiety. Conversely, the results of Cheng and associates' (Cheng et al., 1999) action research found that perceived competence was related to strong self-efficacy beliefs and the presence of positive emotions, such as self-confidence. Hence, it is evident that the affective variables are strongly connected and interplay while influencing one's language learning progress.

1.5.3.3. Anxiety

Krashen, in his Affective Filter Hypothesis (see Section 1.3.4.), underlined the role that negative emotions play in acquiring a second language. Low self-esteem and elevated levels of anxiety are the factors that can impede progress in foreign language performance. In our brains, negative emotions activate the amygdala, which redirects cognitive processes from memorising to dealing with stress (See section 1.4.1.1.).

Anxiety can be defined as the subjective feeling of tension, apprehension, nervousness and worry associated with an arousal of the autonomic nervous system" (Spielberger, 1983, as cited in Teimouri et al., p. 2). Anxiety can be experienced on various levels. Trait anxiety is a relatively stable personality predisposition to be anxious. In SLA, learners with high trait anxiety may experience persistent nervousness, leading them to avoid speaking opportunities and a constant fear of making mistakes. State anxiety is experienced in relation to some particular event or act, in a language classroom, it can manifest as performance anxiety during exams or presentations, even if the learner generally feels comfortable using the language. Although anxiety is mainly associated with negative emotions and debilitating effects on an individual, it can also have some positive effects on learning. There are two major typologies of anxiety: facilitative vs. debilitative and state vs. trait. Debilitative anxiety can be overwhelming and may cause the learner to avoid the task, thereby inhibiting the learning process. In contrast, facilitative anxiety, when experienced at a moderate level, can motivate the learner to engage with the learning challenge (Scovel, 1978).

Over time, SLA researchers (Horwitz et al., 1986; MacIntyre & Gardner, 1994) have adopted the situational nature of state anxiety to the language learning context and formed a concept of foreign language anxiety, consisting of three components. The first component is the communication apprehension associated with learners' difficulty in expressing their thoughts and ideas properly. The second component is a fear of negative social evaluation, connected with the learner's need to make a positive social impression on others. The third, final component is test anxiety, which is a fear of academic evaluation. (Brown, 2007).

Horwitz et al. (1986, p. 128) introduced the concept of foreign language classroom anxiety (FLCA), which is understood as a distinct and complex set of self-perceptions, beliefs, feelings, and behaviours related to classroom language learning, arising from the

uniqueness of the language learning process. This definition was followed by the development of the Foreign *Language Classroom Anxiety Scale* (FLCAS), a 5-point Likert-scale questionnaire consisting of 33 statements measuring FLCA during L2 learning (Horwitz et al., 1986). This definition and inventory laid the groundwork for further research and development of a variety of ways to conceptualise and measure L2 anxiety, its characteristics, causes and effects. At the same time, the investigation of anxiety in SLA became more systematic, resulting in more consistent findings (Teimouri et al., 2019).

Deweaele and MacIntyre (2014) emphasised that the level of foreign language anxiety is associated with numerous individual factors. Lower levels of FLA are linked to early age of acquisition, authentic use of the language, frequent use of the language, high socialisation in the language, and having a large network of people to use the language with. Higher levels of anxiety are linked to harsh error correction, self-presentation concerns, competitiveness, teacher-student incompatibility, personality traits like neuroticism and perfectionism, and low tolerance for ambiguity in the second language. Sparks and Ganshow (1991,1993), shed a different light on the case of anxiety in second language learning. They stated that anxiety may be a consequence of learners' foreign language learning difficulties. Moreover, these difficulties may result from first language deficits, namely, difficulties that learners have with language codes (phonological, syntactic, lexical, and semantic features). This approach has been called the *Linguistic Coding Deficit Hypothesis*, and it posits that difficulties in the first language can negatively affect the process of learning a foreign language, thereby contributing to increased anxiety levels.

The meta-analysis of 97 quantitative studies conducted between 1985 and 2017 in 23 countries and focused on examining the relationship between levels of anxiety and second language acquisition has proven that anxiety has a moderate, negative association with achievement (Teimouri et al., 2019). Steinberg and Horwitz's (1986) research indicated that anxious students may be kept away from trying novel structures in their oral utterances for fear of being negatively assessed by their peers. Furthermore, MacIntyre & Gardner (1994) found that anxiety negatively affects input processing and the output stages of learning. The case study conducted by Gregersen & Horwitz (2002) showed that elevated levels of FLA can also lead to avoidance of eager use of the L2. Research carried out by Papi (2010), Papi & Teimouri (2014), and Tahmouresi & Papi (2021) demonstrate that there is a positive association between L2 anxiety and motivation for students motivated by obligations. This means that specific learners are motivated only through the anxiety

that such duties and obligations produce anxiety, which may not harm the quality of their L2 learning and performance (Papi & Khajavy, 2023).

1.5.3.4. Motivation

Motivation is one of the key affective factors in second language learning. Not only does it trigger the initiation of L2 learning, but it is also a driving force that sustains the process and helps learners to make an effort to learn and progress. A lack of sufficient motivation may impede L2 learning even for students with remarkably high cognitive abilities. Conversely, high motivation can facilitate this process among individuals with language learning difficulties stemming from low cognitive abilities or poor learning conditions, thus helping them overcome existing and/or potential obstacles (Dörnyei, 2005).

The understanding of this concept has evolved significantly over the decades, shifting from a view of motivation as a relatively static variable to its conceptualisation as a dynamic and complex system (Dörnyei, 2005; Larsen-Freeman, 2017). This section will trace this theoretical development by outlining three influential frameworks. It will begin with the foundational socio-psychological model proposed by Gardner and Lambert (1959), which introduced the concepts of instrumental and integrative motivation. The discussion will then move to the process-oriented model of Dörnyei and Ottó (1998), before concluding with Dörnyei's (2005) L2 Motivational Self System.

Interest in motivation in the context of second language learning originated in social psychology. The most influential early work in this area comes from Robert Gardner, who situated motivation within his broader socio-educational model of second language acquisition (Gardner, 1985). This model conceptualises L2 learning as a process influenced by a modular framework of interconnected variables, including the learner's integrativeness, attitudes toward the learning situation, and language aptitude. Within this framework, Gardner (1985, p. 10) defined L2 motivation as: "the extent to which an individual works or strives to learn the language because of a desire to do so and the satisfaction experienced in this activity."

In this view, motivation is not an isolated trait but a central component that mediates the relationship between a learner's social attitudes and their linguistic outcomes. Gardner's theory is based on extensive research conducted over more than a decade with Wallace Lambert (Gardner & Lambert, 1959). The researchers extensively studied foreign language

learners during that period to determine how attitudinal and motivational factors influenced their language learning success (Brown, 2007). Gardner and Lambert (1959) identified two types of orientation related to second language learning motivation: instrumental and integrative orientations. The former, instrumental orientation, refers to pragmatic reasons for learning a second language, such as earning good grades in school or gaining better job prospect. The latter, integrative orientation, is characterised by one's desire to learn about the second language, communicate with the second language group, or even become a member of the second language community. This integrative orientation, characterised by an attitude toward the target language group and an interest in foreign languages, contributes to language learning outcomes, with motivation acting as a mediating variable. Building on this notion, Gardner (1985) distinguished three components of L2 motivation: motivational intensity, desire to learn the language, and attitude towards the act of learning the language. The aforementioned factors interact, influencing learners' linguistic outcomes (see Figure 8).

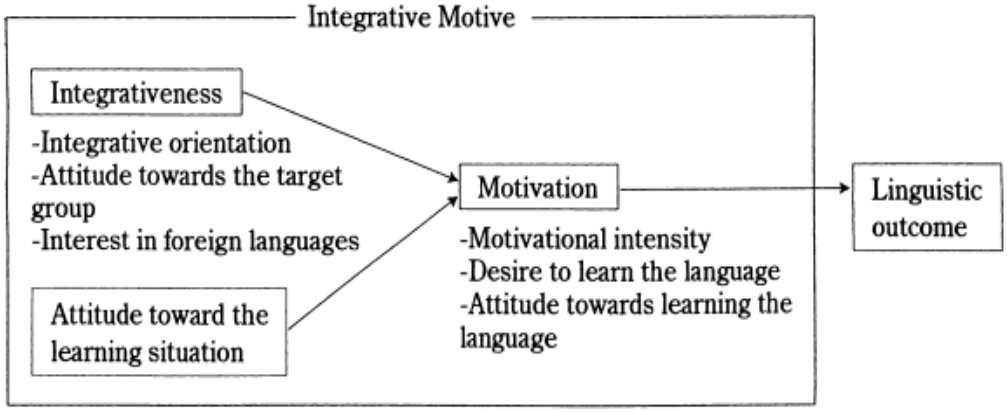


Figure 8. Gardner's integrativeness (Yashima, 2000, p. 122)

Gardner stated that a motivated individual is characterised by a powerful desire to achieve a goal and a favourable attitude toward it, accompanied by effort and drive. Gardner and Lambert's study resulted in the development and validation of *The Attitude/Motivation Test Battery (AMTB)* (Gardner, 1985), a self-report questionnaire which lists motivational factors that have been found to significantly affect the language learning progress (Dörnyei, 1998).

While Gardner and Lambert's model concentrated on the initial stimuli triggering the language learning process, future research on motivation has paid more attention to the dynamic aspects of motivation. The cognitive and constructivist turn is exemplified in

frameworks such as Williams and Burden's (1997) model of *motivation in learning*, which emphasises the interplay between internal and external factors, and Ushioda's (2009) *person-in-context relational view*, which frames motivation as an emergent property of the complex relationship between the learner and their environment. Building on this dynamic perspective, Dörnyei and Ottó (1998) developed *the process model of L2 motivation*, suggesting that motivation is a temporal, evolving process divided into three main phases: pre-actional, actional, and post-actional

In the pre-actional phase, abstract motivation becomes concrete plans and actions. There is an interplay of learners' desires, wishes, hopes and opportunities to form a goal, which is the foundation for the later stages of motivation. The learners' motivation in this stage depends on the broad scope of motivational influences, such as subjective values and norms, the goal's instrumentality, perceived potency, environmental stimuli and integrativeness. As in the language learning process, goals may be internal or external, and a personal commitment and action plan are required to transform the goal into a firm intention to act. The action plan must contain the set of necessary tasks and strategies that enable the learner to achieve the goal. The factors that affect intention formation include the expectancy of success, relevance, need for achievement, fear of failure, degree of self-determination, goal properties, availability of task opportunities and options, learners' beliefs about L2 learning and their knowledge of learning strategies, urgency, and external demands. When the operationalised intention is formed, it launches action, supposing that both the right conditions and available resources are provided. This process is also influenced by one's motivational factors, such as action vs state orientation, perceived behavioural control, distracting influences and obstacles, and perceived consequences for not acting (Dörnyei & Ottó, 1998).

Once the action is triggered, the actional phase of motivation begins. During this phase, motivation influences the learner's engagement and adaptation of their practices to sustain the action, protect against distractions, and pursue the original goal. The mixture of the individual motivational factors, shown in Table 4, forms executive motivation, manifesting through subtask generation and implementation, appraisal and action control.

Table 4. Executive motivational influences (adapted from Dörnyei & Ottó, 1998, p. 57)

1. Selective sensitivity to aspects of the environment. 2. Quality of the internal model of reference • action schemata • performance standards. 3. Quality of learning experience • novelty • pleasantness • goal/need significance • coping potential • self and social image. 4. Perceived contingent relationship between action and outcome; perceived progress • success • "flow". 4. Sense of self-determination/autonomy. 6. Teacher's and parents' motivational influence • autonomy supporting vs. controlling • affiliative motive • direct socialisation of motivation • modelling • task presentation • feedback.	7. Performance appraisal, reward structure, classroom goal structure (competitive, individualistic, cooperative). 8. Influence of learner group (goal-orientedness, cohesiveness, norm and role system, peer role modelling), classroom climate, and school environment. 9. Task conflict; competing action tendencies; other distracting influences; availability of action alternatives. 10. Costs involved and natural tendency to lose sight of goal and get bored/tired of the activity. 11. Knowledge of and skills in using self-regulatory strategies. • language learning strategies • goal setting strategies • action maintenance strategies. 12. Perceived consequences of action abandonment.

Ongoing appraisal plays an important role in evaluating one's progress toward their goals. This knowledge allows students to generate and implement strategies and tasks, adjusting them to the changing learning process. The process is accompanied by a self-regulatory process of action control, which maintains learners' focus on their current intention, protecting them from distractions. Learners' strategies, such as action maintenance, goal setting, and implementation of language learning strategies, support them in sustaining their effort over time when the level of their intrinsic motivation may decrease. The outcome of this stage may be either an achieved goal or a terminated action (Dörnyei & Ottó, 1998).

In the final, post-actional stage, learners assess their success in relation to the initial goals, reflecting on their strengths and weaknesses. This stage is influenced by individual variables, such as attributional factors, self-concept beliefs, evaluational cues, feedback, and action versus state orientation. At this stage, students also reflect on the factors that contributed to their success or failure, which in turn influences their self-esteem and future

motivation. All of these factors prepare learners for future action, helping them develop more precise internal standards, refine their strategies, and set new goals, potentially initiating a new motivational cycle (Dörnyei & Ottó, 1998).

In their model, Dörnyei & Ottó (1998) emphasised the importance of individual factors influencing the motivation level at each stage of second language learning. That being said, in 2005, Dörnyei (2005, 2009) introduced the *L2 Motivational Self System* (L2MSS) model to highlight how individuals differ in terms of language learning motivation. His theory emerged from both a large-scale, longitudinal survey administered to over 10000 participants conducted in Hungary (Csizér and Dörnyei, 2005) (Dörnyei, et al., 2006) and theoretical developments in applied linguistics and psychology (Dörnyei, 2019). The findings from empirical research, juxtaposed with the insights from possible selves theory (Markus & Nurius, 1986), self-discrepancy theory (Higgins, 1987) and Gardner's concept of integrativeness (1985), allowed Dörnyei to develop a new theoretical construct of motivation (Al-Hoorie, 2018). The system comprises three key components: the ideal L2 self, the ought-to self and the L2 learning experience. The ideal self embodies the learner's aspirations and personal goals for language mastery; it reflects an internal vision of oneself as a successful language learner. The ought-to self refers to external expectations and responsibilities that learners must meet while learning L2 to fulfil their parents' or educators' desires or avoid possible adverse outcomes. Dörnyei outlined that this concept can motivate, but it is often less potent than the ideal L2 because external forces, rather than personal aspirations, drive it. The final component, the learning experience, focuses on the motives related to the immediate learning environment and experience, such as the curriculum, the impact of the teacher, the peer group or the experience of success (Dörnyei, 2010). Crucially, the Ideal L2 Self component reinterprets and expands Gardner's (1985) concept of integrativeness. While Gardner's notion was primarily external, referring to a desire to integrate with the L2-speaking community, Dörnyei's Ideal L2 Self internalises this goal. It represents the learner's vision of themselves as a competent and successful L2 user, a future self they wish to become. In the context of a globalised world where English is often a lingua franca, this internalised, personal vision can be a more powerful motivator than the desire to connect with a specific native-speaker group (Dörnyei & Ushioda, 2009). A central premise of L2MSS is that when learners identify a discrepancy between their current state and their envisioned future self-guide, this perceived gap can serve as a motivational force, encouraging learners to close the distance and achieve the desired outcome (Al-Hoorie, 2018).

Although Dörnyei & Ottó's (1998) model and Dörnyei's (2005) L2 Motivational Self System model are based on Gardner's (1985) theory, they significantly expand the concept of integrativeness and underscored the dynamic character of motivation. They also emphasise the role of self-regulation, including strategy implementation. These factors play a vital role in understanding how students with learning difficulties behave while learning L2 grammar.

1.5.4. Language learning strategies

Students with learning difficulties often face a range of deficiencies and obstacles that can hinder their success in foreign language learning. Strategy awareness and a skilful application of necessary learning strategies can allow these learners to improve the effectiveness of their L2 acquisition process. This section provides an overview of the key concepts related to language learning strategies. To establish the historical context, the discussion will begin with an exploration of Rubin's (1975) seminal work on the "Good Language Learner," which first brought the concept of strategic learning to the forefront. Following this, the section will provide formal definitions of language learning strategies, present the most influential taxonomies, and conclude by outlining their key characteristics.

1.5.4.1. How it all started: Rubin's idea of Good Language Learner

The interest in language learning strategies (LLS) began in the 1970s, when Rubin (1975) published the results of her investigation into the strategies and features of good language learners. Rubin believed that the strategies used by successful learners should be acknowledged by teachers and used to help their less successful students improve their language performance. According to Rubin, success in language learning relies on three main factors: aptitude, motivation, and opportunities. Simultaneously, students who suffer from some difficulties and want to improve their skills should be able to follow the actions of more successful learners. To enable this process, teachers and researchers are expected to isolate good learner strategies. By strategies, Rubin (1975) understood techniques or devices a learner may use to acquire knowledge. In her research, she distinguished seven main strategies used by successful learners:

1. Willing and accurate guessing: leveraging context to infer meaning.

2. Strong drive to communicate: taking every opportunity to use language for interaction.
3. Uninhibited learning: risk-taking in learning without fear of errors.
4. Attention to form: noticing grammar and structure in language input.
5. Practice: engaging in regular use of the language.
6. Self-monitoring: reflecting on one's use of language and making adjustments.
7. Focus on meaning: prioritising comprehension and conveying messages effectively.

Although the use of particular strategies varies even among successful learners and depends on several factors such as the task, age, and context, Rubin (1975) argued that analysing the behaviours of "good language learners" provides valuable insights into theories of linguistic information processing. The central premise is that if the conscious processes and strategies employed by successful learners can be identified and understood, they can then be explicitly taught to less successful students. In the L2 classroom, this means that teachers should encourage struggling students to practise these identified strategies, thereby helping them to incorporate more effective language learning practices into their routines.

1.5.4.2. The definitions of language learning strategies

Scholars and researchers have broadly discussed the term language learning strategies since its first use in the 1970s. Building on her original work, Rubin refined her definition of language learning strategies to include additional aspects, such as learners' self-regulation processes, highlighting the dynamic nature of strategic behaviour in language learning by stating that: "Learner strategies include any set of operations, steps, plans, routines used by the learner to facilitate the obtaining, storage, retrieval, and use of information, that is what learners do to learn and do to regulate their learning" (Rubin, 1987, p. 19). Similar to Rubin's, Bialystok's (1981) definition emphasises that learning strategies are the activities learners use, whether consciously or not, to promote their ability to control their learning process.

In the 1980s, strategies were defined as a set of mental operations used by learners to accomplish language learning tasks (Cohen, 1984; Wenden, 1986). Later, researchers emphasised that language learning strategies are intentional and goal-directed actions that

support learners in mastering a second language (Cohen, 1998; MacIntyre, 1994; O'Malley & Chamot, 1990). Oxford (1989, p. 235) added that language learning strategies are actions and behaviours that learners use to make language learning more successful, self-directed and enjoyable. In recent years, researchers have increasingly linked learning strategies to the broader concept of self-regulation and social context. Cohen (2011) distinguished between learning strategies as conscious and intentional actions that form automatic processes, which learners use to acquire new knowledge. Griffits (2008) also underlined the conscious choice of behaviours and actions. Gao (2010) adopted a sociocultural perspective, adding that strategies are contextualised and socially mediated activities shaped by interaction and cultural context. Tseng et al. (2006) viewed learning strategies as part of a self-regulatory process that involves managing learners' motivation, effort, and actions toward the goal.

While each of these perspectives offers valuable insights, for the purpose of this dissertation, a working definition must be established that aligns with the context of strategy training for primary school learners with SEN. Therefore, language learning strategies will be understood here as conscious, teachable, and goal-directed actions that learners deliberately employ to regulate their own cognitive, affective, and social processes in order to enhance the effectiveness of their L2 grammar acquisition. This synthesised definition underscores three elements central to this study: the intentionality of strategy use, which can be fostered through explicit training; self-regulation, which is a key objective for empowering learners with SEN; and the focus on enhancing the effectiveness of grammar learning, the primary outcome under investigation.

Although all the definitions agree that the primary aim of using learning strategies is to enhance learning, Cohen (2007) pointed out that students apply them for various purposes. First, strategies help students to deal with problems encountered during language learning. They serve as tools that students can use to overcome challenges in language acquisition, such as understanding complex grammar or unfamiliar vocabulary. Moreover, strategies can be employed to compensate for deficits in learning when performing language tasks and L2 communication. Their effective use facilitates the successful completion of tasks despite linguistic shortcomings.

Additionally, different strategies should be used to perform specific tasks. For instance, listening comprehension requires measures different from memorising vocabulary. When students apply appropriate strategies, they can solve given tasks more efficiently. In addition to enhancing and improving task performance, strategies aim to

make learning easier, faster and more enjoyable. Managing motivation and reducing anxiety in the language classroom are important aspects of L2 education. Therefore, a deliberate use of strategies allows learners to develop a deeper understanding of themselves as learners and become more aware of their own unique learning processes. This metacognitive self-awareness, in turn, empowers them to take control of their learning, which can lead to a more satisfying and enriching educational experience (Cohen, 2007).

The use of language learning strategies is crucial for students with learning difficulties. As a result of raising self-awareness and adjusting strategies to meet learners' unique needs, they become more prepared to overcome obstacles and develop compensatory mechanisms. Such support enables learners to navigate challenges and succeed in language acquisition despite their deficits.

1.5.4.3. The taxonomies of language learning strategies

The timeline of definitions illustrates how language learning strategies evolved from focusing on cognitive techniques to understanding them as complex, adaptable processes that involve not only mental operations but also motivation, emotion, and social interaction. These phenomena are reflected in the change in LLS taxonomies, which subsequently influences how language learning strategies are diagnosed and taught in a school environment.

1.5.4.3.1 Bialystok's Taxonomy (1978)

The first categorisation was proposed by Bialystok (1978) who distinguished four types of strategies: formal, functional, monitoring and inferencing. While formal strategies focus on explicit learning, functional strategies emphasise the practical application of language. To be more precise, the former are used to study grammar rules or practise specific language forms, and the latter apply to conversations and real-life language use. As for monitoring strategies, they refer to self-checking for correctness and accuracy. Thanks to them, learners can evaluate and adjust their language learning process to make it more effective. Finally, inferencing strategies are comprehension strategies through which learners discover new meaning. This process involves drawing upon multiple knowledge sources, including their existing linguistic knowledge (both explicit and implicit) and their schematic knowledge

of the world, and integrating them with clues from the immediate context of the task at hand (Park, 1997).

1.5.4.3.2. Caver's Taxonomy (1984)

Carver's (1984) taxonomy identifies four categories of language learning strategies, each focusing on a different aspect of language acquisition. The first group, strategies for coping with target language (TL) rules, involves understanding and applying grammatical and structural rules. The process is supported by generalisation, transfer form L1, simplification, reinterpretation, hypercorrection, and elimination of register differences. The second group, strategies for receiving performance, focuses on developing practical comprehension skills using inferring, predicting, checking, and identifying key terms. In the third group, strategies for producing performance refer to tools used to develop correct and accurate speech and writing by repeating, labelling, lifting, monitoring the reception of messages, and using routines. In the final, fourth group, strategies for organising learning comprise actions involved in learning planning and managing to optimise one's progress. They include repetition, cognition, whole or part learning, spaced learning, peer group contact, contact with the teacher, revision, using reference material, and trying out and practising (Carver, 1984).

1.5.4.3.3. O'Malley and Chamot's Taxonomy (1990)

O'Malley and Chamot's (1990) classification divides language learning strategies into three main groups: metacognitive, cognitive and socio-affective strategies. Metacognitive strategies refer to students' actions to plan, monitor and evaluate their learning. Cognitive strategies are those that learners use to process language directly, for instance, through repetition, translation, summarisation, and note-taking, which enhance retention and understanding. Finally, the socio-affective strategies include interacting with others to support learning or to manage emotional factors such as anxiety and motivation.

1.5.4.3.4. Oxford's Taxonomy (1990)

In 1990, Oxford introduced her classification system, distinguishing two broad categories of direct and indirect strategies, which are further divided into subcategories (see Table 5)

Table 5. Oxford's direct and indirect strategies (adapted from Oxford, 1990)

Direct strategies	**Indirect strategies**
Memory strategies	Metacognitive strategies
Cognitive strategies	Affective Strategies
Compensation strategies	Social Strategies

Direct strategies involve actions that have an immediate impact on language learning. To begin with, memory strategies help learners to store and retrieve information. Cognitive strategies aim to support the direct processing and understanding of the target language. Compensation strategies enable learners to overcome gaps in their L2 knowledge when speaking or writing.

The second category, indirect strategies, comprises activities intended to organise and manage language learning. Metacognitive strategies help learners to control their learning by planning, evaluating, arranging or centring. Affective strategies aim to support learners in managing their emotions, motivation, and attitudes. Finally, social strategies involve interactions with others to enhance language learning, such as seeking clarification, collaborating, or practising with peers (Oxford, 1990).

It is worth adding that Oxford's taxonomy is considered one of the most comprehensive frameworks for language learning strategies, encompassing 64 distinct strategies assigned to the categories described above. Notably, Oxford's primary classification, first introduced in 1985, served as the foundation for the questionnaire - *Strategy Inventory for Language Learning (SILL)* (Oxford, 1989). The SILL has been widely used until now to evaluate learning strategies in SLA (Trendak, 2015).

Significantly for the present dissertation, Oxford emphasised that learning strategies are teachable and should be taught in the classroom to encourage learners' independence and enable them to continue improving their language skills outside formal instruction. She highlights that learning strategies may provide a basis for addressing difficulties in second language learning, empowering students to take responsibility for their progress by enhancing learner autonomy and self-direction.

1.5.4.3.5. Post-Oxford strategy classifications

Although Oxford's classification has become central to foreign language learning, teaching and research on language learning, other researchers have introduced alternative approaches to strategy classification. Stern (1992), proposed a taxonomy that divides strategies into five main groups: management and planning strategies, cognitive strategies, communicative-experiential strategies, interpersonal strategies and affective strategies. While management and planning, cognitive and affective strategies align closely with categories described by Oxford (1990) or O'Malley and Chamot (1990), Stern introduced communicative-experiential strategies, which emphasise the use of language in real-life communication. Those practices involve engaging in authentic language use, using language in practical situations and focusing on conveying meaning effectively. The tools that students may resort to include circumlocution, gesturing or paraphrasing, and asking for explanation or repetition. Stern (1992) distinguished between communicative-experiential strategies and interpersonal strategies, which aim to help learners overcome the social obstacles they encounter when learning the language by interacting with native speakers, seeking feedback, and developing cultural understanding. Stern emphasised that learning a foreign language combines formal study and the practice of cognitive and communicative-experiential strategies, which should be perceived as complementary; learners benefit most when they employ both types of strategies (Stern, 1992).

In 2002, Hsiao and Oxford (2002) compared different classification theories of language learning strategies. They demonstrated that, despite some drawbacks, Oxford's six-factor model of learning strategies is the most consistent with learners' actual strategy use. Vlčková et al. (2013) challenged this view in the Czech Republic learning context of upper secondary comprehensive schools in Brno in 2004. The researchers examined 606 students from 14 schools who were asked to report learning strategies for a foreign language of their choice using the Czech version of SILL. Based on the results of the study, the authors introduced a new classification, sharing language learning strategies into three main groups:

1. elaboration strategies, organisation strategies and self-control - referring to activities connected with planning, structuring and regulating learning;
2. strategies of cooperative learning - actions that involve interaction with others to enhance learning;

3. motivational-emotional strategies - techniques used to regulate one's motivation, attitude and emotions during language learning.

Notably, the study revealed that individual subcategories of metacognitive and cognitive strategies are often more interconnected than initially suggested, which is why they are often classified into a broader category.

Recent research on language learning strategies has shifted away from categorising strategies into separate groups, instead viewing them as an integral component of a complex system of L2 education. Based on Larsen-Freeman's (1997) theory (see Section 1.5.3.1.), the L2 learner is viewed as a complex system, and a set of learning strategies can be seen as a complex system within the learner. This complexity underscores the dynamic, interconnected and unpredictable nature of language learning strategies, which adapt to learners' needs and the multifaceted contexts in which learning occurs. (Oxford et al., 2018)

1.5.4.3.6. Goal and skill-based classification of language learning strategies

Even though most taxonomies of language learning strategies classify them according to their function, it is also possible to classify them by goal or skill. Cohen (2011) distinguishes three groups of strategies in goal classification. The first category is strategies for learning, including identifying, distinguishing, grouping and memorising strategies. The second group comprises strategies for performing knowledge, such as retrieval, rehearsal, communication and cover strategies. The third group of strategies involves activities that help overcome difficulties when facing a lack of knowledge, similar to those described by Oxford (1990) as compensation strategies.

Classification by skill is crucial for the present dissertation as the subject of interest for the empirical study is grammar learning strategies (further described in Section 2.3.). Cohen (2011) categorised language learning skills based on six skills: listening strategies, reading strategy use, speaking strategy use, writing strategy use, vocabulary strategies, grammar strategies and strategic use of translation. They subdivided strategies into more detailed categories according to each skill, aiming to capture the essence of activities that support progress in a given aspect. Such an approach creates a foundation for future research and the development of language learning strategies for specific skills.

1.5.4.4. Key characteristics of language learning strategies

Moving beyond the classification of language learning strategies, it is essential to consider their functional characteristics and how they operate within the language learning process. First, language learning strategies are purposeful mental actions that learners implement to achieve their learning-related needs. The strategies help learners to develop self-regulation to complete L2 tasks and move toward L2 proficiency. Moreover, language learning strategies are complex, dynamic, and fluidly employed in specific sociocultural contexts. They can be used consciously or partially, serving various functions, including metastrategic, cognitive, affective, and social, and, crucially for this dissertation, they can be taught (Oxford et al., 2018; see Section 2.4. for a detailed discussion on strategy training). The complexity of language learning strategies makes them a highly individual concept that depends on many variables. According to Cohen and Henry (2020), it is not possible to determine unequivocally what factors determine the use of particular strategies, but the most influential are considered to be:

1. language proficiency;
2. learning style preferences;
3. the selection of the right strategies for dealing with the task;
4. the learners' aptitude configuration;
5. the learners' motivational configuration;
6. the learners' personality;
7. the impact of home life;
8. the learners' subjectivity regarding the use or non-use of strategies from their repertoire.

These factors demonstrate the inherent complexity and variability of strategy use, emphasising that no single set of strategies can be universally prescribed. However, the broader the repertoire of strategies the learner possesses, the easier it becomes for them to adapt strategies to their individual needs, which is particularly crucial for students with learning difficulties.

1.5.5. Special educational needs

Although Special Educational Needs are not traditionally treated as an individual difference, in the context of foreign language classrooms, they are a feature that significantly impacts learners' performance and progress in language learning. This notion is fundamental in the Polish primary school system, where the number of students diagnosed with SEN has grown significantly over the last decades (MEiN, 2023a). The concept of SEN is inherently complex, encompassing a range of other individual differences, from cognitive variables to affective factors that shape the individual needs of a particular learner.

This section will provide a detailed overview of this complex issue. It will begin by outlining the legal and practical framework for supporting students with SEN within the Polish educational system. Subsequently, the diagnostic process will be described, followed by a detailed discussion of both non-specific and specific learning difficulties.
A particular focus will be placed on developmental dyslexia. While the participants in the present study were diagnosed with a range of non-specific learning difficulties, dyslexia serves as the most thoroughly researched and documented specific learning disability. Many of the underlying cognitive challenges characteristic of dyslexia, such as deficits in phonological processing, working memory, and automatization, are also common in learners with other, less clearly defined difficulties. Therefore, an in-depth analysis of dyslexia provides a valuable and representative theoretical model for understanding the types of obstacles that many SEN learners face in the L2 classroom

1.5.5.1. Students with special educational needs in the Polish educational system

Inclusive education is a vital component of education policy worldwide. In Poland, the legal acts regulating work with students with special educational needs are the regulations of the Ministry of National Education (MEN, 2017: 2). According to the above-mentioned regulation, psychological and pedagogical assistance is provided to students with difficulties resulting in particular from:

1) a disability;
2) social maladjustment;

3) the risk of social maladjustment;
4) behavioural or emotional disorders;
5) special abilities;
6) specific learning difficulties;
7) competence deficits and language skills disorders;
8) a chronic disease;
9) crisis or traumatic situations;
10) educational failures;
11) environmental neglect related to the student's and his or her family's living situation, the way of spending free time and social contacts;
12) adaptation difficulties related to cultural differences or a change in the educational environment, including those related to previous education abroad.

In educational practice, students who are noticed to have educational difficulties are referred to a Psychological and Pedagogical Counselling Centre, which diagnoses their deficiencies. Subsequently, the Centre issues an opinion or a decision on adapting the educational requirements resulting from the curriculum to the individual developmental and educational needs of students.

1.4.5.2. Pedagogical diagnosis process

Diagnosing children with special educational needs is a complex task that necessitates a transdisciplinary approach integrating clinical, speech therapy, social, and psychological-pedagogical assessments. Due to the topic of the present thesis, the main emphasis will be placed on a section discussing psychological-pedagogical assessment as it describes students' particular learning difficulties. These evaluations form the basis for a functional diagnosis, guiding the development of tailored therapeutic interventions and educational strategies (Panasiuk, 2017).

1.5.5.3. Clinical, speech therapy and social assessment

Clinical assessment gathers information on genetic, prenatal, and medical factors affecting a child's development. It examines neurological and physical development using specialised consultations and diagnostic tools (e.g., MRI, EEG), emphasising interactions between biological, psychological, and social influences.

Speech therapy assessment evaluates verbal and non-verbal communication, focusing on phonological, syntactic, and pragmatic abilities. It also examines social language use and narrative skills, which are critical for academic success.

Social characterisation contextualises diagnosis by analysing family structure, living conditions, and peer interactions. Factors such as bilingualism and socialisation patterns provide insights into the child's environment and developmental context.

Integrating these diverse assessments with psychological-pedagogical evaluations into a functional diagnosis enables professionals to identify a child's strengths and limitations and design tailored educational and therapeutic interventions. This holistic approach ensures that each child receives the support they need to overcome developmental challenges and achieve their full potential (Panasiuk, 2017)..

1.5.5.4. Psychological-pedagogical assessment

Psychological-pedagogical assessment complements the aforementioned processes by examining the child's behaviour, family dynamics, and developmental history, with a focus on both verbal and non-verbal communication. The evaluation includes:

1. The child's behaviour.
2. Information about the child, including family background and data on the child's development, encompassing physical, psychological, and social development, as well as non-verbal and verbal communication.
3. Motor skills, including gross and fine motor abilities, the structure and function of the speech apparatus, muscle tone, coordination, and work pace.
4. Receptive functions, such as hearing, vision, and sensation.
5. Cognitive functions, encompassing auditory, visual, and sensory perception, spatial orientation, attention and concentration, memory, thinking, and speech.

6. The child's methods of communication with their environment, including non-verbal, verbal, and alternative forms of communication.
7. Social-emotional development (manifestations of emotional responses).
8. Lateralisation of the ear, eye, hand, and foot.
9. Learning processes.
10. The specific nature of school difficulties.

This evaluation identifies developmental deficits, distinguishing between partial disorders that affect specific areas and global disorders that disrupt overall development. In psychological-pedagogical evaluation, a critical aspect involves determining the scope and depth of developmental deficits to categorise them as either partial or global. Partial disorders occur when a child's development in one area is impaired, while functioning in other aspects remains within typical developmental norms. Global disorders, on the other hand, indicate pervasive difficulties affecting both physical and psychological development. This distinction is crucial for diagnosing the underlying issues and tailoring appropriate interventions (Panasiuk, 2017).

Some students, even those with normal, slightly reduced, or exceptionally high intelligence levels and no apparent physical symptoms, may experience varying-severity behavioural problems or learning difficulties. These challenges are often linked to *Minimal Brain Dysfunction* (MBD), according to Schmitt (1975), a diagnostic term also referred to as minimal cerebral dysfunction or brain damage. It suggests the presence of an identifiable organic cause. When a symptom is linked to MBD, it is believed to stem from structural abnormalities in the brain due to factors like trauma, infections, oxygen deprivation, or other *central nervous system* (CNS) conditions. There are over 100 symptoms associated with MBD, including dyslexia, dysgraphia, dyscalculia, visual perception issues, dysarthria, hyperactivity, short attention span, temper outbursts, aggression, clumsiness, and episodes of vague spells. By definition, children diagnosed with MBD must have normal intelligence. It is considered more prevalent than any other chronic condition, with estimates suggesting it affects between 10% and 20% of the population. These children may experience peer conflicts, disrupt classroom activities, and struggle academically. Specific learning difficulties, such as dyslexia, dysgraphia, and, less commonly, dyscalculia, often co-occur with otherwise strong intellectual abilities but significantly hinder educational progress.

1.5.5.5. Students with learning difficulties in foreign language classrooms in poland

Once the pedagogical diagnosis is complete, the Local Pedagogical Counselling Centre issues a document that thoroughly describes the case of a particular student, including their strengths and weaknesses, as well as guidance for the school, teachers, and parents. The Ministry of Education, in its regulation on Psychological and Educational Assistance (MEN, 2017), specifies that psychological and pedagogical assistance provided at school consists of supporting parents and teachers in solving educational and teaching problems, and developing their educational skills to increase the effectiveness of the assistance provided to pupils. At school, psychological and pedagogical assistance is provided in the course of current work with pupils and through integrated activities of teachers and specialists, as well as in the form of:

1) therapeutic classes;
2) classes developing talents;
3) classes developing learning skills;
4) didactic-compensatory classes;
5) specialist classes: corrective-compensatory, speech therapy, developing emotional and social competencies and other classes of a therapeutic character;
6) classes connected with the choice of education and profession - in the case of primary school pupils and secondary school pupils;
7) individualised education path;
8) counselling and consultation;
9) workshops.

Noteworthy, counselling centres do not address foreign language learning difficulties in their diagnoses. Hence, language teachers are responsible for supervising and adapting the teaching conditions. According to the Ministry, teachers are responsible for identifying students' developmental and educational needs, as well as their psychophysical capabilities. Therefore, they should recognise students' strengths, abilities, interests, and talents while diagnosing the underlying causes of academic challenges or functional difficulties. Moreover, teachers must address barriers and limitations that hinder students' participation and engagement within the educational setting. Their role also involves implementing strategies to foster students' skills and potential, improving their learning outcomes and overall functioning.

Additionally, teachers collaborate with counselling centres throughout diagnostic and post-diagnostic processes, focusing on assessing students' functioning, identifying environmental obstacles that impede their participation, and evaluating the effectiveness of interventions to enhance their engagement within the school(MEN, 2017). Teachers are expected to adjust their working methods, knowledge and competency test formats, and assessment rules to meet the students' needs. The pedagogical approach adopted by the teacher is contingent upon the particular learning challenges the pupils encounter. Depending on their nature, these challenges can be categorised as either specific or non-specific.

1.5.5.6. Non-specific learning difficulties

Non-specific learning difficulties are a diverse category encompassing difficulties resulting from pupils' physical and intellectual disabilities, as well as difficulties connected with environmental neglect, social maladjustment, or cultural differences. In educational practice in Poland, students without disabilities but with non-specific learning difficulties receive an opinion from a psychological-educational counselling centre on the need to adapt educational requirements. Often, their educational difficulties resemble those of dyslexic students, but they are below the intellectual norm and may not have specific learning difficulties recognised. Pupils with below-average intelligence (scores of 70-84 on the Wechsler scale), according to the Gaussian curve distribution (also known as the normal distribution), represent approximately 14% of the population. Hence, in an average primary school class, three children are seen to have below-average intelligence (Jankowska & Bogdanowicz, 2012).

Kostrzewski and Wald (1981, as cited in Domagała-Zyśk, 2012, p. 16) distinguished five subgroups of pupils in this group:

- educationally neglected children and adolescents: their learning difficulties are most often due to a lack of knowledge that they would have had if they had been brought up in a more favourable educational environment.
- children and young people with mild intellectual disabilities who, as a result of careful stimulation at home, due to high results in some subtests of the intelligence test (e.g., in vocabulary), achieve a global result placing them in the intellectual norm;

- children and adolescents with coupled parental deficits who achieve low scores in several categories of intelligence tests (e.g. visual or auditory perception), with high scores in other categories;
- children and adolescents with slow progression of intellectual functions, who achieve low scores in those subtests where time spent on individual tasks is measured;
- children and adolescents with below-average intelligence, who, in the strict sense, achieve low results in most subtests, and none of the previously mentioned conditions explain such a result.

As a rule, these pupils perform below expectations and struggle to meet the objectives of the general education core curriculum. These children experience difficulties learning and improving their literacy and numeracy skills in their everyday school reality. The difficulties may appear despite their high motivation to learn and great effort during intellectual work. The peer relationships of pupils with non-specific learning difficulties are often accompanied by emotional difficulties due to experiencing frustration, anxiety and school anxiety, which, in a complex form, can lead to the development of school phobia. It is also challenging for these pupils to understand social norms, which are often based on the understanding of linguistic messages (Domagała-Zyśk, 2012)

The cognitive functioning characteristics of students with non-specific learning difficulties include high concreteness, reduced abstract thinking, and an underdeveloped ability to distinguish between relevant and irrelevant features. Moreover, such students face difficulties in generalising, abstracting, and categorising. They have low self-reliance, low levels of criticism, and low ability to plan and organise activities. They work more slowly than their peers and have difficulty acquiring and recalling knowledge. Significantly for this thesis, they indiscriminately employ ineffective learning strategies due to their low cognitive self-efficacy. Apart from cognitive difficulties, these learners also experience difficulties in psychosocial functioning, including a gradual decline in motivation to learn, a loss of sense of responsibility for learning at school, and challenges in social adaptation. Their negative self-image as students results in low resistance to frustration and stress and inappropriate coping strategies in difficult situations (truancy, reacting with laughter or aggression to ignorance) (Jankowska & Bogdanowicz, 2012).

Given the complexity and multidimensionality of the educational, emotional and social difficulties of pupils with non-specific learning difficulties, it is important to provide them with special attention in the educational process, both in overcoming their learning difficulties and in creating a positive self-image as a learner, strengthening their sense of

competence and responsibility for learning. Such measures will help to minimise the risks of experiencing long-term school and social disadvantage (Jankowska & Bogdanowicz, 2012). Similar measures, based on individualisation and the introduction of a multi-sensory teaching approach, can support the learning process of students with as well as without specific learning difficulties.

1.5.5.7. Dyslexia as a specific learning difficulty

Dyslexia, also known as developmental dyslexia, is a specific learning difficulty in reading and writing, first described in 1896 by the British ophthalmologist Pringle Morgan (Bogdanowicz, 1997). The term was initially described as a condition characterised by significant challenges in learning to read despite receiving standard instruction, adequate intelligence, and access to appropriate sociocultural resources. It is attributed to underlying cognitive impairments often rooted in inherent constitutional factors. (Critchley, 1970). Reid (2016) provided a definition of dyslexia that emphasises the associated learning difficulties and their broader impact on the overall learning process. He defines dyslexia as a processing difference often characterised by difficulties in literacy acquisition, affecting reading, writing, and spelling. It can also impact cognitive processes, such as memory, processing speed, time management, coordination, and automaticity. There may be visual and/or phonological difficulties and usually some discrepancies in educational performance (Reid, 2016). The diagnosis of dyslexia requires cooperation between doctors, educationalists, speech therapists and psychologists who, once the diagnosis has been established, jointly formulate and implement a therapy programme.

In second language learning and teaching, Nijakowska (2010) emphasised that dyslexia is a lifelong neurological condition characterised by reading, writing and spelling difficulties. She states that literacy problems can be accompanied by difficulties in other areas of cognitive functioning, such as poor concentration, short attention span, difficulty in internalising knowledge and automating skills, and poor fine and gross motor skills. Significantly, persistent word decoding and encoding issues may evolve with age and can be treated with education, therapy, and compensation strategies, although they will never entirely disappear. Several factors may increase the risk of dyslexia, including biological predispositions, such as a family history of dyslexia, premature birth or complicated

pregnancy and developmental delays of speech, ambidexterity or motor coordination (Snowling et al., 2007).

1.5.5.7.1. Causes of dyslexia

In response to the complexity of dyslexia, various theories have been proposed to explain its underlying causes, encompassing genetic, neurobiological, cognitive, and environmental factors.

Research consistently indicates that genetic factors are a primary contributor, suggesting that certain inherited anatomical and functional features of the central nervous system predispose individuals to difficulties with literacy skills (Bogdanowicz & Adryjanek, 2004; Ramus, 2006). These genetic predispositions are often linked to observable brain structural anomalies. Studies have identified structural differences in the brains of individuals with dyslexia, including an altered corpus callosum or planum temporale, as well as issues with neuronal migration, which may affect key areas of language processing (Galaburda et al., 1994; Stein, 2001).

At the cognitive level, the most widely accepted explanation is the Phonological Deficit Hypothesis. It posits that weak phonological processing, including poor phoneme awareness, deficits in phonological short-term memory, and difficulties in creating stable phonological representations, underpins the challenges in acquiring literacy (Hulme & Snowling, 2009, Snowling, 2001a;). Building on this, the Double-Deficit Hypothesis proposes that dyslexia can stem from two distinct core deficits: one in phonological processing and another in rapid automatised naming (RAN), or processing speed. When these deficits co-occur, they can lead to severe and persistent literacy-related difficulties (Wolf & Bowers, 1999).

Other theories point to different underlying systems. The Magnocellular Dysfunction Hypothesis proposes that impairment in the brain's visual magnocellular pathway impacts visual motion sensitivity and stable binocular fixation, contributing to challenges in processing written text (Stein et al., 2000, 2001). Finally, the Cerebellar Deficit Hypothesis suggests that structural and functional abnormalities in the cerebellum disrupt the motor learning and automatisation of skills that are crucial for fluent literacy acquisition (Fawcett & Nicolson, 2004).

Hulme and Snowling (2009, p. 30) argued that causality in dyslexia should be understood in terms of probability, emphasising that "causes are things that increase the likelihood of an outcome." Dyslexia has neurobiological origins linked to genetic composition and the functional aspects of the central nervous system (Knight & Hynd, 2002). These genetic factors influence the development of specific language systems in the left hemisphere of the brain and often contribute to the cognitive impairments that are the more immediate causes of literacy difficulties. However, brain development is a dynamic process shaped by both genetic and environmental influences. Hulme and Snowling (2009) highlighted that learning, as an environmental influence, modifies brain structures formed under genetic control, affecting subsequent learning. Therefore, while genetic risk factors strongly influence dyslexia, the environmental context is critical as it interacts with the underlying cognitive deficits in phonological processing, working memory, and automatization that affect all aspects of language learning, not just reading and writing.
Table 6 below outlines the aforementioned theories, associating the key researchers associated with each.

Table 6. Main theories on the causes of dyslexia

Cause	Author(s)
Genetic Factors	Bogdanowicz & Adryjanek (2004); DeFries et al. (1987); Ramus (2006); Stein et al. (2001)
Brain Structural Anomalies	Galaburda et al. (1994); Stein (2001); Hugdahl et al. (2003)
Phonological Deficit	Snowling (2001a); Hulme & Snowling (2009); Vellutino et al. (2004)
Double-Deficit Hypothesis	Wolf & Bowers (1999); Katzir et al. (2008)
Magnocellular Dysfunction	Stein et al. (2000, 2001); Talcott et al. (2000)
Cerebellar Deficit	Nicolson et al. (1999); Fawcett & Nicolson (2004)

1.5.5.7.2. Signs of dyslexia in the language classroom

Spelling is one of the most visible areas where the challenges of dyslexia manifest in L2 learning. As Reid (2016) explains, due to the strong link between phonological awareness and spelling, pupils with dyslexia often produce spellings that bear little phonetic resemblance to the target words. He suggests this may indicate that instead of creating a proper phonological representation, these students resort to letter-naming strategies. The most common mistakes resulting from this disconnect between spelling and speech often

involve distinguishing between voiced and voiceless sounds, such as the distinction between ‘b’ and ‘p’ or ‘g’ and ‘k’.

These specific difficulties in orthography, however, are symptomatic of a wider range of challenges that dyslexia presents in an educational context. As Jaworska (2018) outlined, dyslexia presents various challenges in an educational context, particularly when learning a second language. First, reduced phonological processing causes difficulties in learning, remembering, and distinguishing the sounds of L2, especially those that do not exist in the learner’s L1. Furthermore, learners face difficulties breaking down words into sounds and repeating sounds, words, phrases, or sentences in their second language. Subsequently, weak phonological processing and short-term memory can impair the ability to process spoken information quickly and accurately, affecting both speech understanding and the production of clear, fluent utterances. Learners may also have trouble connecting sounds to written letters or recognising spoken words in written form. This impacts listening comprehension, especially when speech is rapid, resulting in delays in understanding and responding. Word retrieval may be slow, learners often have a smaller vocabulary range, and grasping grammatical rules, organising thoughts, and writing longer texts can be challenging, along with memorising words or distinguishing similar-sounding ones (Jaworska, 2018). Moreover, inaccurate word recognition due to difficulties in segmenting words into sounds and linking letters to sounds hinders reading. Dyslexic learners may read slowly, inaccurately, or both. Spelling errors are common, resulting from struggles to convert sounds into letters and recognise common spelling patterns (Firnhaber, 2000; Bogdanowicz, 2009; Olechowska, 2016, as cited in Jaworska, 2018, p.38).

Additional challenges include a reduced attention span, difficulty sustaining focus, and slow processing speed, which makes keeping up with peers difficult. Sequential processing, internalising new knowledge, and automatising skills may also be impaired. Dyslexic learners often have limited working memory and face difficulties with implicit learning. Time management, organisation, and motor skills, fine (e.g., handwriting) and gross (e.g., riding a bike)may also be affected. Mathematical difficulties (dyscalculia), such as problems with arithmetic and memorising multiplication tables, are often observed (Nijakowska, 2020).

Some of the difficulties are closely related to the specificity of the English language. Jaworska-Biskup (2008) referred to them as:

1. Difficulties in remembering:
    a. language rules and exceptions to them,

b. data arranged in series (days of the week, months, seasons),
c. irregular verbs
d. phraseological and idiomatic expressions
e. words with irregular plurals.

2. Problems with writing essays that are often too short, lack substance, and contain incorrect statements.
3. Difficulties in understanding and applying grammatical constructions, e.g., sentence formation and tense aspects.
4. Difficulties with the use of the *there is* construction.
5. Problems with converting sentences from the active into the passive voice and vice versa
6. Difficulties in understanding aspects that do not exist in Polish and do not refer to real existing objects, e.g. prepositions *a, an, the.*

As regards the age factor, Rejnowska-Wawryn (2008), in her study of junior high school students, showed that dyslexic adolescents use fewer words in a sentence in their L1 written discourse than their peers without difficulties, and the semantic structure of their sentences has lower information content. In addition, pupils have difficulty reproducing the background information in the test they read. Although the research concerned the mother tongue, the results indicate that students may experience similar difficulties in producing and comprehending speech in a foreign language.

It is not only Polish students who face difficulties while learning foreign languages. Kormos and Smith (2012) outlined that the challenges faced by learners with specific learning difficulties often transcend national boundaries. The researchers identified a set of difficulties that are universal for dyslexic learners, regardless of their nationality, many of which also apply to students with other special educational needs. These include:

- problems with sustained attention, which can hinder the noticing of new linguistic information;
- deficits in phonological processing, which complicate the development of reading and writing skills;
- difficulties with word memorization, requiring repeated encounters and conscious effort to encode new vocabulary;
- challenges in understanding and applying abstract grammatical concepts;

- slower reading speeds and word recognition problems, which contribute to text comprehension issues;
- difficulties in organising ideas and applying word order rules in written production.

Students with dyslexia face educational challenges and tend to have difficulties in the emotional and social dimensions of the learning process. Dąbrowska (2008) stated that the tensions resulting from learning difficulties can cause emotional problems, increased sensitivity, anxiety, and lack of self-confidence. An adolescent with dyslexia who feels 'different' may become closed off, isolated, sometimes feeling unnoticed, even ignored. Failure to meet typical teenage needs for belonging, acceptance, recognition, and success sometimes leads to angry outbursts. These emotions can lead to withdrawal, avoidance behaviours, or, in some cases, compensatory mechanisms like aggression or excessive striving for recognition (Krasowicz-Kupis & Pietras, 2008)

Emotional factors play a crucial role in foreign language learning as fear, anxiety, and stress can hinder progress, while positive experiences like confidence and empathy can accelerate it (Arnold & Brown, 1999). Furthermore, the self-perception of students with dyslexia is often negatively affected; they experience feelings of inferiority, poor self-image, and lowered motivation to participate in both academic and social contexts. In their research, Krasowicz-Kupis and Pietras (2008) showed that a lack of self-confidence among these students often results in their withdrawal from peer groups and reluctance to engage in classroom activities. Additionally, repeated academic failures may lead to "learned helplessness," a state where students begin to believe they are incapable of success and thus avoid challenges altogether, a concept originally identified in the work of Seligman (1975)

1.5.5.7.2. Strengths of dyslexic students

Despite facing numerous difficulties, students with dyslexia have the strengths and abilities that challenge common stereotypes and emphasise their potential. Research by Łockiewicz and Bogdanowicz (2015) highlights attributes of dyslexic students, such as:

1. visualisation abilities;
2. holistic perception;
3. practical problem-solving skills;

4. simultaneous and spatial-holistic processing;
5. creativity: rich vocabulary and declarative knowledge;
6. non-verbal understanding;
7. awareness of their challenges;
8. interpersonal skills;
9. ambition and perseverance.

West (1991) analysed the biographies of successful people with dyslexia symptoms. It showed that the right-hemisphere style of thinking, characterised by spatial, holistic, and nonverbal approaches to understanding and problem-solving, enabled them to succeed. Dyslexic individuals often have a higher sensitivity to patterns and creativity, which often makes them generate alternative and original solutions to problems. Furthermore, Geschwind and Galaburda's (1985) study showed that dyslexic students have heightened spatial abilities and creativity. The researchers attribute these abilities to hemispheric asymmetry and compensatory neural development. Dyslexic students can rearrange visual patterns and integrate information uniquely, fostering innovative problem-solving and creativity. Highly developed spatial and visual thinking suits them well and is conducive to architecture, design, and computer graphics professions.

Learners with specific difficulties in reading, writing and arithmetic have the intellectual potential to acquire and consolidate knowledge and school skills. However, they experience more specific, fragmented difficulties than other pupils. Early diagnosis and analysis of the results of these examinations, as well as the early commencement of therapy, makes it possible, in many cases, to eliminate or significantly minimise the difficulties experienced by those pupils, thus enabling them to make full use of their intellectual predispositions and achieve educational success (Domagała-Zyśk, 2012).

Summary

This chapter provided insights into the key theoretical foundations of second language acquisition in relation to SEN students. It began by outlining seminal linguistic theories to provide a theoretical context for the concept of language, then moved to an overview of first language acquisition models, which serve as a basis for understanding the L2 learning process. The discussion subsequently focused on key SLA theories, including Interlanguage Theory and Krashen's Monitor Model. A significant part of the chapter was

dedicated to exploring the crucial role of individual differences in language learning. The analysis covered cognitive variables like aptitude and memory, affective factors such as motivation and anxiety, and the profound impact of special educational needs on the L2 acquisition process. The theories and concepts presented here establish a framework for understanding the unique challenges faced by learners with SEN, particularly in the context of grammar acquisition.

Chapter 2: The role of grammar in second language learning

Introduction

Interest in grammar has always been central to second language education. However, its role in language teaching has shifted significantly over the years, reflecting changing pedagogical priorities and theoretical perspectives. Understanding this evolution is likely to provide critical insights into tools for teaching grammar effectively, particularly to learners with diverse educational needs. The main aim of this chapter is to offer theoretical grounds for and practical insights into the effective teaching of grammar to students with learning difficulties.

Due to the expectations of national curricula and high-stakes assessments, such as the eighth-grade exam, grammar remains central to language teaching in the Polish educational system. Many students find this language subsystem difficult to master, especially those with diagnosed learning difficulties. As the previous chapter established, these learners often require individualised support to overcome learning barriers and build the skills needed for effective communication. Support from the teacher through form-focused instruction and enhancement of learners' autonomy through raising self-awareness and encouraging the use of grammar learning strategies may foster their progress and optimise the second language learning process.

This chapter elaborates on the key theoretical issues in teaching grammar to students with learning difficulties in primary school. It starts by discussing the foundational importance of grammar in linguistic competence and communicative ability, then moves on to the place of grammar in English language teaching (ELT) methodology. After that, it discusses the challenges and methods of grammar instruction in Polish primary schools, followed by a discussion of the role of grammar learning strategies and strategy training in empowering learners.

2.1. On why grammar is important in the L2 classroom

Grammar is a multifaceted concept. At its core, it describes the structural rules that govern word formation (morphology) and sentence construction (syntax), hence its integral role in meaning-making and communication (DeCarrico & Larsen-Freeman, 2002). There are two main approaches to defining its rules: prescriptive and descriptive. The prescriptive approach to grammar focuses on codifying "correct" language use by establishing rules and norms, often aiming to standardise linguistic forms for clear communication across contexts. This approach, which prioritises adherence to formal structures, is evident in traditional teaching practices that emphasise avoiding "errors," such as, for example, using double negatives (DeCarrico & Larsen-Freeman, 2002; Odlin, 1994). On the other hand, descriptive grammar observes and documents how language is naturally used by native speakers, focusing on authentic forms of expression without judgement of correctness. Descriptive grammar is broader in scope, analysing syntax, morphology, lexis, semantics, and variations across dialects and social contexts (Carter & McCarthy, 1995).

Beyond its definition, the goal of grammar instruction is to develop grammatical competence. This concept is central to Chomsky's theories, where language is understood as a system consisting of a lexicon and a set of rules governing its use (see Section 1.1.3.). The notion of grammatical competence was later expanded and situated within a broader framework: Communicative Competence (CC), the primary goal of modern language education. For Hymes (1972), communicative competence includes speakers' knowledge of linguistic and sociolinguistic rules and their ability to use this knowledge in interaction. Hymes' view was further developed by Canale and Swain (1980), who proposed four dimensions of communicative competence, comprising grammatical, sociolinguistic, discourse, and strategic competence (see Figure 9).

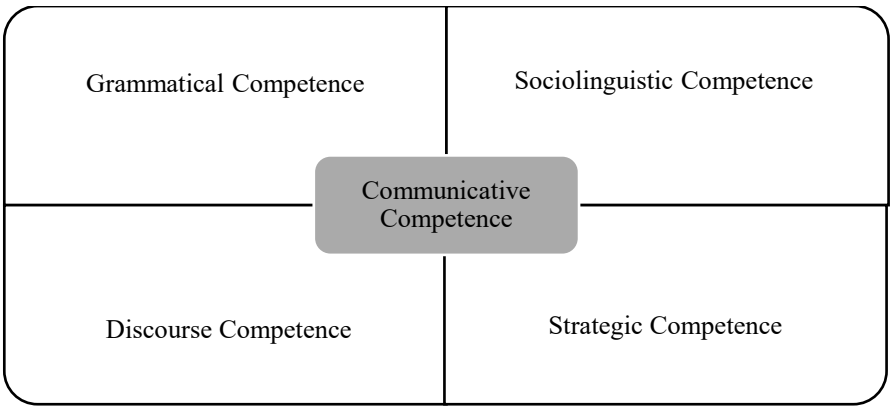


Figure 9. Four Dimensions of Communicative Competence. (adapted from: Canale & Swain, 1980, p. 160)

As the model illustrates, grammatical competence includes the knowledge of lexical items and the rules of morphology, syntax, sentence-grammar semantics, and phonology. It is complemented by sociolinguistic competence, which relates to the appropriate use of language in a given context; strategic competence, which is the ability to overcome language gaps with the help of various strategies; and discourse competence, which is the ability to produce cohesive and coherent utterances (Jeong, 2005).

The importance of grammar in the L2 acquisition process was also highlighted by Krashen in his Monitor Hypothesis, which describes how a learner's conscious knowledge of grammatical rules can be used to edit and self-correct utterances (see Section 1.3.4.) These theoretical perspectives have led to the emergence of pedagogical grammar. In line with this approach, Ur (2009, p. 3) defines grammar as:

> "the way a language manipulates and combines words (or bits of words) so as to express certain kinds of meaning, some of which cannot be conveyed adequately by vocabulary alone. These include the way ideas are grouped and related and the purposes of utterances (statement, question, request, etc). Grammar may also serve to express time relations, singular/plural distinctions and many other aspects of meaning. There are rules which govern how words have to be manipulated and organised so as to express these meanings: a competent speaker of the language will be able to apply these rules so as to convey his or her chosen meaning effectively and acceptably."

This definition indicates the key issues of pedagogical grammar, combining both prescriptive and descriptive grammar elements to meet learners' practical needs, especially in second language acquisition. It aims to simplify complex rules while addressing authentic language use, often drawing insights from corpus linguistics, pragmatics, and discourse analysis to enhance their relevance to learners (Odlin, 1994). Pedagogical

grammar focuses primarily on lexico-grammar and explores the close relationship between grammar and vocabulary. Research has highlighted the role of prefabricated lexical units or "chunks" in language learning, such as fixed expressions ("I would not do it if I were you"), which function as stored units of meaning rather than being constructed afresh each time. These units exemplify how grammar and vocabulary often operate together, forming patterns essential for fluency and ease of communication (Nattinger & DeCarrico, 1992). As Pawlak (2017) points out, in the modern foreign language classroom, learners are no longer expected to describe language using formal grammatical terminology; instead, they are expected to produce grammatically accurate utterances that convey the intended meaning. As previously discussed, the role of grammar in foreign language pedagogy has evolved considerably over time. The following section will outline the chronological development of primary language teaching methods, highlighting the role and conceptualisation of grammar within each.

2.2. The place of grammar in language teaching methodology

The decades of foreign language teaching have witnessed many changes in the role that grammar teaching plays in language classrooms. At the heart of this evolution lies a fundamental distinction between two approaches to grammar instruction: deductive and inductive. The deductive approach involves presenting a rule which learners then practise, while the inductive approach encourages learners to discover rules from examples of language in use. These two approaches are present, in varying degrees, in most of the teaching methods discussed below.

This section will outline the chronological development of primary language teaching methods to highlight the changing conceptualisation of grammar. The selection will focus on several historically significant approaches whose principles continue to influence modern language pedagogy, including the Grammar-Translation Method, the Direct Method, the Audiolingual Method, Cognitive Code Learning, and Community Language Learning. The discussion will also cover two concepts that deal specifically with grammar instruction: focus on form vs. focus on forms, and the notion of grammaring. Understanding the basic assumptions of each language teaching method is crucial for modern foreign language pedagogy because each has left its mark and is currently used to some extent in teaching grammar. In a similar vein, combining a range of carefully selected

and adjusted teaching tools is fundamental when addressing students with special educational needs, who require variety in SLA to make this process as effective as possible (Tomlinson, 2001).

2.2.1. Grammar-Translation Method (GTM)

The Grammar-Translation Method (GTM) is one of the earliest and most enduring language teaching tools. It has its roots in the traditions of classical language instruction, particularly in the teaching of Latin and Greek. Originally, Latin was used for communication in various domains of life, such as religion, trade, education, and government. Over time, it lost its communicative role, and Latin instruction shifted its focus from active language use to grammatical analysis and textual translation. This way, a model that could later be applied to teaching modern foreign languages, such as French, German, and English, was established (Hinkel & Fotos, 2002). This shift laid the foundation for the GTM, which became dominant throughout the nineteenth century and remains influential in many educational systems even today (Nassaji & Fotos, 2011).

The Grammar-Translation Method is characterised by its strong emphasis on explicit and deductive grammar instruction, where grammatical rules are first presented and then applied in translation and manipulation exercises. Language is divided into distinct units, usually parts of speech, such as nouns, verbs, articles, and conjunctions. In order to learn the language, learners memorise rules and paradigms, often through mechanical drills, and apply them in translating sentences and passages from the target language into their native language (Hinkel & Fotos, 2002). The tasks focus on written language and put little or no emphasis on speaking or listening skills. Furthermore, language exercises are typically decontextualised and lack communicative purpose. Instead, it is believed that studying the grammatical system of a foreign language could serve many educational purposes: facilitating access to literature, enhancing awareness of grammatical structures in one's native language, and fostering intellectual growth and discipline (Larsen-Freeman, 2011).

From a theoretical perspective, GTM is a paradigmatic example of what Long (1991) terms a "focus on forms" approach. Language instruction is organised around explicitly teaching grammatical features, usually presented in a synthetic syllabus where linguistic elements are introduced in a predetermined, linear order. It reflects what Stern

(1992) describes as an analytic teaching strategy, assuming that learners accumulate grammatical knowledge item by item and that such knowledge will eventually support communicative performance. Larsen-Freeman (2011) outlined that the role of the teacher within the method is very traditional; the teacher is the authority in the classroom, and the students follow their instructions. The GTM results in highly structured lessons where accuracy and rule mastery are prioritised over fluency or interaction (Pawlak, 2006)

Even though GTM was widely criticised for failing to foster oral proficiency or meaningful communication, its elements are still found in modern classrooms. Translation exercises, deductive grammar explanations, and a heavy focus on form-based accuracy are still commonly used, often explicitly, in curricula and textbooks (Nassaji & Fotos, 2011).

As abstract grammatical rules taught out of context and without meaningful engagement may be problematic for students with special educational needs, who may experience significant cognitive overload, it is suggested that for such learners, attention should be paid to the frequent change of activities and forms of practice. It is, therefore, important not to limit learners' activities to passive listening and mechanical repetition but to involve other options, including visual, auditory, and movement stimuli, allowing learners to learn on a multisensory basis (Jaworska, 2018).

2.2.2. The Direct Method

The opposition to the formal grammar-translation method brought a new approach to language teaching. The Direct method arrived at the end of the nineteenth century to promote teachers and students interacting during classes through speaking exercises. Importantly, the core focus of the method is to avoid the mother tongue during language lessons - translation is abandoned, and objects and pictures are used to establish the meaning (Harmer, 2007).

The method relies on the assumption that language learning should mirror how children learn their mother tongue through immersion, imitation and context. The learners are encouraged to associate meaning directly with the target language rather than resorting to their first language (Richards & Rodgers, 2001). The primary goal of the method is to teach learners to communicate and think in the target language. The syllabuses used within the Direct Method are often based on situations or topics. New words or phrases are demonstrated during the classes through realia, pictures or pantomime. Students speak in

the target language and communicate, taking on the role of the exercised situation (Larsen-Freeman, 2011).

Grammar is taught inductively, meaning learners are exposed to grammatical patterns in use and have to infer rules themselves. There is no place for explicit rule explanation, and it is believed that when learners repeatedly hear correct grammar patterns, they internalise them (Harmer, 2007). All four skills (reading, writing, speaking and listening) are practised during the classes; however, oral communication is the foundation, so correct pronunciation is also critical. To avoid the mother tongue, classroom practice involves various tasks in the target language repetitively. Reading aloud, question-and-answer exercises, and conversation practice allow learners to use new words nd grammar structures actively. Fill-in-the-blank exercises, dictation, and paragraph writing enable them to practice what they have learnt and pay attention to crucial elements (Larsen-Freeman, 2011).

Different elements of the Direct Method are still present in foreign language syllabuses in Polish primary schools. The focus on text processing in the target language without reference to the mother tongue is one of the key elements of reading practice in various coursebooks. The method can support learners with dyslexia and working memory deficits. Learning grammar in context with an emphasis on its communicative functions, without complex metalinguistic terminology, supports their language progress. However, Nijakowska (2020) underscored that the rules, sentence frames, and models should be explained explicitly and directly to facilitate the learners' understanding of new structures.

2.2.3. The Audiolingual Method

The advent of World War II brought an urgent need for oral proficiency in foreign languages among military personnel. The “Audiolingual Method,” then known as the “Army Method,” was shaped by the convergence of American structural linguistics and behaviourist psychology. Bloomfield (1942) and Fries (1945) were pioneering structuralists who promoted a view of language as a rule-governed system, emphasising phonology, morphology, and syntax. In contrast, behaviourist theorists like Skinner (1957) conceptualised language learning as a process of habit formation reinforced by a stimulus-response pattern. Combining these two theoretical perspectives led to the development of a teaching model in which language was presented as speech rather than writing. In order

to achieve language proficiency, students had to use oral drills, mimicry, and memorisation. Learning a language meant developing automatic responses through repetition and reinforcement, with minimal tolerance for errors, which were seen as a threat to correct habit formation (Richards & Rodgers, 2001).

Although at its core, the Audio-Lingual Method is similar to the Direct Method in its focus on oral tasks, the two approaches differ in their treatment of grammar. The Direct Method emphasises vocabulary acquisition through situational practice, while the Audio-Lingual Method drills students using grammatical sentence patterns (Larsen-Freeman, 2011). The syllabuses within ALM are primarily linguistic, consisting of key elements of phonology, morphology, and syntax, with vocabulary items also being specified in advance. Based on the assumption that differences between the mother tongue and the target language are the main source of L2 learning difficulties, the teacher uses contrastive analysis to identify problematic structures that require more intensive drilling and practice. Learners are then expected to infer grammatical rules inductively through pattern drills and structured examples. Grammar is embedded in sentence-level patterns and practised using substitution tables, transformation exercises, and repetition without any metalinguistic explanation. According to Harmer (2007), teaching in line with the Audiolingual Method lacks real-life context, and a premium is placed on accuracy. The learning tasks centre around dialogues and drills, which contextualise grammar, offer cultural insight, and support memorisation. The teacher is the controller, model, and evaluator of students' performances. Students are expected to imitate and internalise patterns; their language skills are expected to improve through successful modelling and practice.

Due to its reliance on rote memorisation, mimicry and pattern drills, the Audiolingual Method can cause a high cognitive load, especially for students with dyslexia, processing difficulties or working memory deficits. Such students may find it difficult to internalise, retain and manipulate language chunks presented without context (Swanson & Siegel, 2001). Children with dyslexia need a visual scaffold or semantic anchoring to learn new items more effectively. Furthermore, it is multisensory structured language education that is considered one of the most effective approaches for learners with dyslexia. (Birsh, 2011, Nijakowska, 2010,). Ganschow and Sparks (2001) also pointed out that audiolingual practices may be inaccessible for students who need visual-spatial support and contextual learning environments. Therefore, ALM can be beneficial in the initial stages of language acquisition, especially given its use of positive reinforcement and lockstep drills. These techniques can be valuable for SEN students, as whole-class repetition often makes learners

feel more at ease and is conducive to the low-pressure automatization of L2 structures. However, for all students, including those with learning difficulties, a sustained reliance on decontextualised drills is not optimal. In the further stages of education, differentiated, multisensory, and contextual learning are often deemed as more appropriate and effective options.

2.2.4. Cognitive Code Learning

The shortcomings of behaviourism and the Audiolingual Method were addressed in the late 1960s and 1970s with the emergence of Cognitive Code Learning, also known as the Cognitive Approach. Two major shifts influenced this new approach in thinking. The first was Chomsky's (1965) theory of Universal Grammar, which reframed language learning as a process involving internal rule formation and hypothesis testing, not just rote repetition (see Sections 1.1.3. and 1.2.2.). The second was a broader shift in psychology from behaviourism to a more cognitive, meaning-driven model of learning (Ausubel, 1968).

In line with this approach, learners were no longer seen as passive imitators but as active thinkers, capable of figuring out how the language works. This approach was transferred to classroom practice, with language seen as a rule-governed system that learners can understand consciously. Thus, deductive rule learning was introduced in language lessons. The cognitive approach drew on Audiolingual and Grammar Translation techniques, retaining drilling and repetition, but added rule explanations and reliance on grammatical sequencing of material to language syllabuses. This approach aimed to connect rote material with conscious attention to form. Although the method did not gain much popularity, it drew attention to the cognitive processing of a foreign language, which shed new light on language pedagogy, showing that learners can reflect on the language and become its more aware users. (Harmer, 2007). The cognitive code approach may have a two-faced effect on SEN learners. On the one hand, they may benefit from it, as they are provided with a direct explanation of the rules. On the other hand, similarly to the Audiolingual method, memorising those rules and a conscious analysis of formal aspects such as paradigms, intricacies, and exceptions could lead to cognitive overload.

2.2.5. Community Language Learning (CLL)

As Cognitive Code Learning saw students as active thinkers, Community Language Learning extends this perspective by foregrounding the emotional dimension of learning. Curran's (1976) *"Counselling-Learning*" model, connected to Rogers' humanistic psychology (see Section 1.3.3.), laid the foundation for the method. Within CLL, learners are viewed not as a class but as a group of individuals who need emotional support and guided autonomy while learning in a safe, non-defensive environment.

The main aim of CLL is to lower the affective filter of learners by focusing on interpersonal relationships and whole-person learning. Learners' linguistic and emotional needs are an essential aspect of the teaching process as teachers take on the role of "counsellors" responsible for adjusting their techniques to facilitate language acquisition (Brown, 2001). In a typical CLL classroom, at the very beginning of the course students can decide what they want to learn in the target language. When they become more secure, teachers provide materials to cover particular grammar points, pronunciation, and vocabulary that learners need. Learners are invited to express their feelings and worries during the lessons; in return, the teacher understands and supports them (Larsen-Freeman, 2011).

This focus on a non-defensive classroom creates a safe environment that is crucial for learners with learning difficulties, as they often feel insecure in the second language classroom. Adapting elements of this approach may help them to manage their emotions and thus facilitate their learning process. From the perspective of students with learning difficulties, CLL is important because Curran(1972) opted for non-defensive learning, focusing on six main elements:

1. Security - students must feel safe and supported in the learning environment so that they can take risks, make mistakes and engage without fear;
2. Aggression - in a positive sense, referring to active learner involvement when learners participate in lessons and invest effort in their learning;
3. Attention -language learning requires the ability to focus on multiple elements simultaneously. The role of a teacher is to help to narrow the learner's focus to manageable aspects;
4. Reflection - learners are encouraged to think about the language, the content and the way they are learning;

5. Retention learning must be internalised and integrated with the learner's self as it supports long-term, meaningful education;
6. Discrimination - learners need to recognise and distinguish between different target forms, especially in pronunciation, grammar or vocabulary.

A CLL-promoted non-defensive classroom creates a safe environment crucial for learners with learning difficulties, as they often feel insecure and their affective filter is high in the L2 classroom. Moreover, a key advantage of CLL for SEN students is the role of the teacher as a "human computer." In this function, the teacher provides the precise language forms that learners wish to be familiarised with, but only when requested. This on-demand support removes the pressure of immediate production and reduces cognitive load, allowing learners to focus on meaning without the fear of making grammatical errors.

2.2.6. Focus on forms and focus on form in second language learning

The timeline of the aforementioned language learning methods reveals that the role of grammar instruction in foreign language learning has shifted from form-based to more meaning-oriented approaches. This distinction is reflected in the distinction between focus on forms (FonFs) and focus on form (FonF), introduced by Long (1991). The former represents a traditional, often decontextualised grammar instruction, while the latter tries to connect structure-based and purely communicative methodologies.

Focus on forms assumes that language consists of discrete grammatical units which can be preselected, sequenced by complexity or frequency, and mastered through controlled practice. The classroom instruction follows the PPP model (presentation, practice, production), and learners are expected to internalise the rules through repetition and explicit explanations (Trendak, 2015). Although this model offers structure and clarity, especially beneficial for learners who require strong scaffolding, such as those with working memory deficits, it has been widely criticised for its failure to promote communicative competence. As Pawlak (2006) emphasised, learners often achieve accuracy on grammar tests but struggle to transfer this knowledge to spontaneous speech. The fundamental weakness of traditional form-focused instruction is that knowing about language does not directly mean being able to use it effectively (Ellis 1994).

Focus on form, on the other hand, integrates grammar instruction into meaningful communication. The approach draws learners' attention to linguistic features as they

naturally emerge during interaction. This approach is not based on pre-set structural syllabi but on analytic syllabi, which organise content around communicative goals rather than grammar points (Long & Robinson, 1998). Attention to form may be planned through input enhancement, task design, or enriched texts, or it may be incidental, arising spontaneously during problem-solving or the negotiation of meaning. The main goal is not to interrupt communication but to embed grammar instruction, allowing learners to notice and process linguistic forms in a meaningful context (Doughty & Williams, 1998).

This distinction also ties into the long-standing debate over the interface between explicit and implicit knowledge. Krashen's (1982) non-interface position argues that explicit knowledge cannot become implicit, and thus, grammar instruction is largely ineffective. In response to Krashen's non-interface position, two main counter-arguments emerged: the strong and weak interface positions. The strong interface hypothesis, advanced by proponents such as DeKeyser (2001), claims that explicit knowledge of rules can be proceduralised and transformed into implicit knowledge with sufficient meaningful practice. A more moderate stance is the weak interface position, supported by researchers like Ellis (1997) and Schmidt and Frota (1986). They suggest that while explicit knowledge does not directly convert into implicit knowledge, it can support and facilitate the acquisition process, especially when learners are cognitively and developmentally ready to notice and process grammatical forms in the input.The weak position is essential for SEN learners, as it validates explicit instruction for the more automated use of language, provided that adequate support and opportunities for communicative use are also provided.

Pawlak (2006) noted that traditional methodologies still dominate in many foreign language contexts, such as Poland. In such a case, the main challenge is not to adopt fully communicative models but to shift the focus from forms to form by adapting instruction to allow grammar to emerge from interaction. In this sense, explicit and communicative strategies have their place, especially when tailored to learners' diverse cognitive and emotional needs. A blended approach, combining form-focused techniques with meaning-based interaction, offers the most pedagogically sound solution for developing accuracy and fluency in a way that supports all learners, including those with learning difficulties.

2.2.7. Grammaring

Larsen Freeman (1997, 2001) addressed the shortcomings of previous methodologies in her conception of grammar as a fifth language skill. The author believed that teaching grammar is not simply a matter of knowledge transmission, but rather a skill development process called grammaring. This approach underscores the importance of grammar not as a set of memorised rules but as a tool that helps learners to accurately and appropriately convey the meaning of their utterances. Grammaring aligns with the complex dynamic systems view of language development and suggests that grammar acquisition is highly connected with students' cognitive and processing abilities, hence its non-linear and adaptive qualities (de Bot et al., 2007).

In line with skill acquisition theory (Anderson & Fincham, 1994), Larsen-Freeman noted that declarative knowledge about a rule or pattern must be transformed into procedural knowledge of how to apply it in practice. This process requires meaningful practice, in which the target language is used in various tasks while declarative knowledge is maintained in working memory (DeKeyser, 1998). Larsen-Freeman (2001) distinguished three dimensions of grammar skills: form (grammatical structure), meaning (semantic content), and use (pragmatic function in context). The three dimensions are interconnected and reinforce meaningful language learning. She opposes mechanical repetition drills because they do not engage the learner in conveying meaning through language.

Furthermore, Larsen-Freeman (2001) agreed with Blaxton (1989) that rules and forms learned in isolated meaningless drills may be more complicated to retrieve in the context of communicative situations. Larsen-Freeman also underscored that students are more motivated when they interact with the language in a meaningful way. Hence, activities in language classrooms should be designed to ensure repeated, meaningful use of the structure through games, tasks, and production activities that are engaging and attractive to learners.

As active participants in language classrooms, students should be encouraged to notice grammar structures in their input. Thanks to that, they become more conscious of grammatical forms and their use in the target language. Noticing can be practised in language classrooms through various tasks, including recasting, input flooding, consciousness-raising tasks, and input enhancement (Larsen-Freeman, 2001). These techniques support scaffolding, especially for students with learning difficulties and

facilitate the internalisation of grammatical regularities through guided attention rather than abstract explanation.

Once language awareness is raised, students should progress to output production, which moves them beyond semantic processing to syntactic processing (Swain, 1985). Larsen -Freeman (2001) explained that when students attempt to produce structures, they test their hypotheses about how the structure is formed, what it means and when it is used. Learners internalise new structures more effectively, thanks to feedback from their teachers and classmates. Engaging in meaningful production enables students to develop automaticity (Segalowitz, 2003), which is crucial for learners with learning difficulties as it helps them to compensate for working memory limitations through fluency-building practice. Grammaring promotes using appropriate tasks and materials in the language classroom that scaffold noticing, monitoring and hypothesis-testing, which can be supported by introducing strategy-based instruction.

2.3. Grammar learning strategies

As established, language learning strategies are among the variables that significantly influence students' progress (see Section 1.5.4.). Building on this, the concept of grammar learning strategies emerged to specifically address the processes involved in acquiring, internalising, and applying grammar knowledge. This section provides an overview of the topic, beginning with the formal definitions of GLS as proposed by key researchers. It will then present two influential classification models: the first, developed by Oxford et al. (2007), which links strategies to different modes of grammar instruction, and the second, a more comprehensive taxonomy created by Pawlak (2018).

Various researchers have highlighted the need for a distinct conceptual framework for GLS. In their *Cognitive Academic Language Learning Approach* (CALLA) model, Chamot and O'Malley (1994) stressed that metacognitive strategies help learners to regulate their grammar learning. Subsequently, Cohen and Weaver (2006) emphasised the importance of raising awareness of strategies employed in formal grammar instruction to enhance learners' accuracy and autonomy. Grammar learning strategies have been defined in various ways, reflecting cognitive and pedagogical perspectives. Cohen and Pinilla-Herrera (2010) define GLS as "deliberate thoughts and actions that students consciously [employ] for learning and getting better control over the use of grammar structures" (p. 64).

Similarly, according to Oxford (2017), grammar learning strategies are "teachable, dynamic thoughts and behaviours 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" (p. 244). Both definitions emphasise the intentional, context-sensitive nature of strategy use and underscore the goal of their use, which is to enhance learners' grammatical accuracy and long-term language development. Importantly, Oxford's (2017) definition emphasises the teachability of crucial strategies from the perspective of strategy instruction.

2.3.1. Oxford, Lee and Park's classification

Oxford et al. (2007) classified grammar learning strategies into three main categories: strategies for implicit learning, explicit inductive learning, and explicit deductive learning. Their framework referred to the research on form-focused instruction and related GLS to modes of grammar teaching (Pawlak, 2018). Strategies for implicit learning assume that learners focus on the L2 grammar without being aware of it. During lessons, teachers do not provide students with advance notice of the structures to be taught and do not clearly explain the rules. Learning occurs incidentally through a focus on both meaning and form. Focus on meaning advocates the vast use of comprehensible input in the classroom, while focus on form involves briefly drawing learners' attention to a linguistic feature precisely when it becomes an obstacle to achieving a communicative goal. The classroom tasks within this section comprise enriched input, where the target form is visually and orally manipulated through underlining, bolding, italics, colour-coding, and intonation. One of the tools within enriched input is flooding, assuming that if learners have more opportunities to interact with a linguistic feature within the input, they are more likely to notice it. The strategies included in this class, for instance, include reading books, newspapers, and magazines, watching TV in L2, and engaging in conversations with native speakers to increase exposure to L2. Within focus on form and dealing with a linguistic unit that poses some difficulties, strategies include noticing how proficient users of TL use the language and imitating it (Trendak, 2015).

Strategies for explicit learning are further divided into explicit inductive mode and explicit deductive mode. Both modes assume that students learn new linguistic structures that the teacher chose based on the syllabus. Within the former, learners interact with the

target language and are expected to attend to specific grammatical structures that reappear; they should create their own generalisations that account for perceived regularities. There is no space for rule presentation, although students discuss the L2 with the teacher. The strategies in this mode include participating in rule-discovery discussions in class, creating hypotheses about how the TL operates, and verifying them with the help of more proficient others (Pawlak, 2006). The latter mode, the explicit-deductive one, includes presenting new grammatical rules by the teacher at the beginning of the lesson. New grammatical concepts are introduced directly, with thorough explanations of when and how they should be used. When learners become familiar with the rule, they practice it through various tasks to apply their theory in real-world situations. The strategies within this mode include creating grammar charts, paying attention to the rule, and generating new sentences using the rule (Trendak, 2015).

The division of grammar learning strategies suggested by Oxford and associates (2007) highlights the distinction between implicit and explicit modes of grammar teaching. It is especially significant for students with learning difficulties, who benefit more from structured and explicit approaches. Nijakowska (2010) emphasised that rule explanation, step-by-step practice and raising metalinguistic awareness may benefit dyslexic learners. Pawlak (2013, p.217) also asserts that: “learners differ considerably in terms of their ability and willingness to engage in discovery learning or implicit pattern recognition, which suggests the need for strategy instruction that is carefully matched to individual learner profiles and preferences.” Therefore, Pawlak's taxonomy of grammar learning strategies is more comprehensive and integrates cognitive, metacognitive, affective, and social dimensions, creating a more differentiated framework for examining how learners engage with grammar, as detailed in the following section.

2.3.2. Pawlak’s Classification

Pawlak’s (2009b) typology was based on the taxonomies provided by Cohen and Dörnyei (2002), O’Malley and Chamot (1990) and Oxford (1990). The main aim of this classification was to create a comprehensive framework based on four key assumptions: (1) it should build upon well-established LLS taxonomies; (2) it should be comprehensive, including cognitive, metacognitive, affective, and social dimensions; (3) it should be

language-independent; and (4) it should be aligned with research into form-focused instructional practices (Pawlak, 2018).

Pawlak (2009b) distinguished the following categories of strategies: cognitive, metacognitive, affective and social strategies (see Figure 10). He excluded compensation strategies which are seen as not facilitating grammar acquisition.

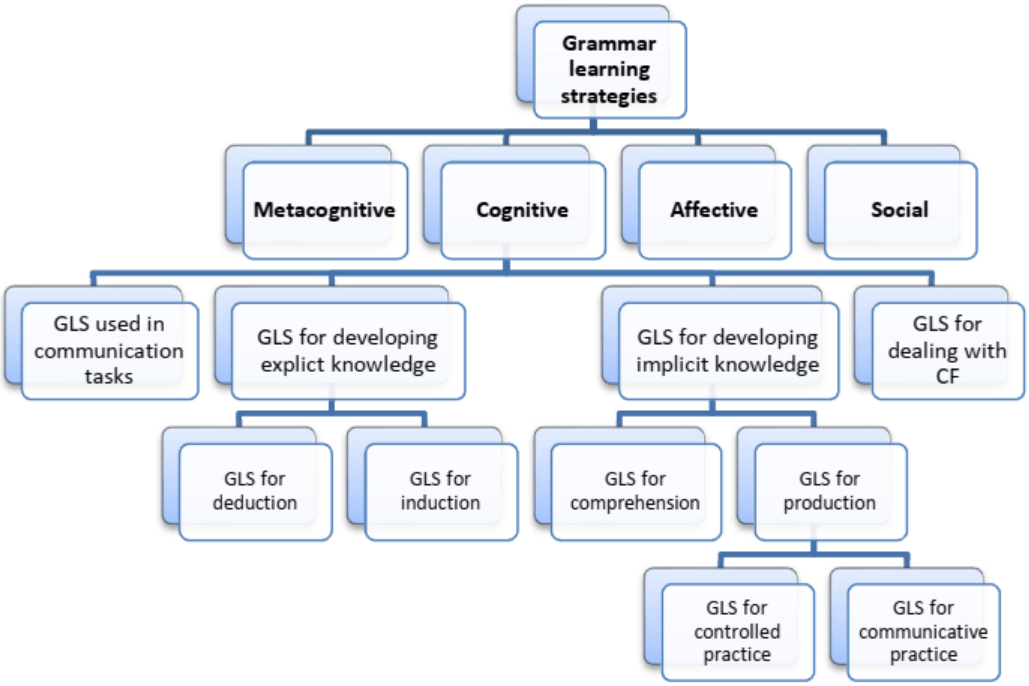


Figure 10. Pawlak's GLS classification (Pawlak, 2018, p. 360)

Metacognitive strategies are used by learners when they manage and supervise their L2 grammar learning process. They involve planning, organising, monitoring and self-evaluation. Particular actions that students undertake can be classified into this group of strategies, including attending to grammatical forms while reading or listening, actively seeking various opportunities to practice grammar, and scheduling revision sessions to consolidate knowledge.

Cognitive strategies are divided into four groups:

1. GLS used to assist the production and comprehension of grammar in communication tasks. They involve using specific grammar structures in spontaneous oral production and comparing speech and writing with the language production of more proficient TL users.
2. GLS used to develop explicit knowledge of grammar, further divided into two groups.

a. GLS employed for deductive learning - e.g., trying to understand every grammar rule, memorising rules, paraphrasing them and making charts, diagrams of drawings illustrating them.
b. GLS employed for inductive learning, e.g., discovering rules by analyzing examples.

3. GLS used to develop implicit knowledge of grammar
    a. GLS employed for comprehending grammar - paying attention to particular grammar structures while listening to and reading target language passages
    b. GLS employed for producing grammar through both controlled and communicative practice - applying new rules to create sentences and using them in meaningful contexts.
4. GLS used to deal with corrective feedback on errors in grammar production - listening to the feedback provided by a teacher, trying to notice and self-correct errors, and engaging in negotiating grammar forms with the teacher.

A crucial distinction within Pawlak's classification of cognitive strategies is between explicit and implicit knowledge. As Pawlak (2018) explains, explicit knowledge is conscious and declarative, involving knowing the grammatical rules and being able to articulate them. This type of knowledge relies on controlled processing and is typically accessed during tasks such as grammar exercises, where there is sufficient time for reflection. In contrast, implicit knowledge is subconscious and procedural. It involves the automatic processing necessary for fluent and accurate language use in spontaneous communication. Pawlak's taxonomy is built on the premise that learners require different strategies to develop these two distinct types of knowledge.

Learners use affective strategies to manage emotional and motivational aspects of grammar acquisition. Their goal is to support persistence and reduce anxiety. Examples of such strategies include consciously calming down when experiencing difficulties in understanding certain grammar units, motivating oneself to learn grammar even when it is challenging, and keeping a diary to track the process of learning grammar with comments on motivation and emotions.

The last group of social grammar learning strategies comprises strategies that are used in learning through interaction and collaboration with others. They include practising grammar with classmates or more proficient others, actively seeking clarification or explanation from the teacher in aspects that pose difficulties, and helping others who have problems understanding or using grammar (Pawlak, 2018).

Building on this taxonomy, Pawlak (2018) developed the Grammar Learning Strategy Inventory (GLSI), a specialised data collection tool designed to investigate students' reported use of grammar learning strategies. The instrument consists of 70 statements rated on a 5-point Likert scale, where respondents indicate how accurately each statement describes their learning actions and thoughts. These items are organised according to the main theoretical categories (Metacognitive, Cognitive, Affective, Social) and the four subcategories of cognitive strategies, providing a comprehensive tool for measuring strategic behaviour. As Oxford (1990) underscored that grammar learning strategies are teachable, the list created by Pawlak can be used during Strategy Training in language lessons at school.

2.4. Grammar strategy training

Teaching grammar in a mixed-ability classroom consisting of students with learning difficulties and those highly proficient in the target language is challenging for teachers. Applying strategy training, also referred to as strategy-based instruction, in the classroom may help all learners to develop their grammar learning skills. Rivera-Mills and Plonsky (2007) highlighted that strategy training contributes not only to linguistic development but also to enhancing learner autonomy and metalinguistic awareness, which are the crucial components of practical grammar and language learning.

The key purpose of SBI is to promote the development of learner self-management, which is why the explicit development of metacognitive and cognitive strategies is considered essential. Rubin et al. (2007) further argued that embedding strategy training in grammar instruction is more effective than separating it from other instruction. Contextualisation, in their opinion, fosters transfer and deeper understanding as students' specific learning concerns can foster the development of strategic knowledge and skills. Each main strategy classification outlined in Section 1.5.4.3. corresponds to a dedicated model of strategy training, each offering a distinct perspective on how learning strategies can be developed and adapted to meet the diverse needs of learners.

This section provides an overview of several influential models of strategy training, establishing a theoretical foundation for the intervention conducted in this study. More specifically, the overview will cover key frameworks: Oxford's (1990) eight-step model, Cohen's (1998) *Styles and Strategies-Based Instruction (SSBI),* the model by Grenfell and

Harris (1999), Macaro's (2001) *training cycle,* and the *Cognitive Academic Language Learning Approach (CALLA)* by O'Malley and Chamot (1990, 1994). While each model offers a unique perspective, they are described collectively because they share core principles that are fundamental to the design of the present research, namely, the importance of explicit instruction, metacognitive awareness, and scaffolded practice. Together, they provide a robust theoretical rationale for developing a strategy training programme tailored to the needs of SEN learners.

2.4.1. Oxford's Strategy Training Framework (1990)

Oxford's (1990) strategy training framework focuses on organising and implementing strategy training and does not explicate other aspects of language learning. Oxford emphasised that in its design, the model is flexible; the steps do not have to be followed rigidly, and teachers can rearrange or combine them, adjusting them to learners' needs. The strategy training is divided into eight steps. In the first step, the teacher determines learners' needs by assessing the strategies students already use and identifying the gaps between used and needed strategies. Then, considering the learner's age, level, background, and goals, the teacher evaluates how much time can be devoted to strategy training. The second step is strategy selection, where the teacher attempts to choose relevant, valuable, and transferable strategies, starting with those that are not too complex or unfamiliar to learners. In the third step, the teacher must decide whether to integrate the strategy training into regular tasks or teach them independently. Oxford (1990) emphasised that integrating strategy use with ongoing class content, such as grammar, reading or writing, ensures the efficiency of the training. The fourth step is motivation; students should be kept engaged, make suggestions and choices, and be aware of the benefits of strategy use. The fifth step is material and activity preparation, which is followed by completely informed strategy training. The teacher's task is to explain each strategy, why it works, and how to use it. Students should be provided with examples and model strategies to use. After the training, the teacher should assess whether students have gained new strategies and improved their skills. The assessment can be done by using self-report observation. The final step is revising strategy training; learners and teachers should reflect on what worked and what did not, and adjustments to the training plan should be made to respond to learners' evolving needs and progress (Trendak, 2015).

Oxford's model of training proves helpful in grammar instruction as it connects explicit focus on form-related strategies and performing real tasks in the classroom. The flexible model allows teachers to adapt the training to different learner needs, especially those with SEN. Thanks to a repetition of structured routines, SEN students' reflection and metacognitive development foster their motivation and autonomy.

2.4.2. Cohen's SSBI Model (1998)

Cohen's (1998) Styles and Strategies-Based Instruction (SSBI) model provides a flexible, learner-centered approach to integrating strategy training into language teaching. Cohen advocates that teachers should combine both explicit and implicit strategy training into the regular course flow. Teaching should be learner-focused to help learners to become more self-aware autonomous users of strategies. The teacher plays five leading roles during the training process (Liu, 2010):

1. Diagnostician -The teacher helps learners to identify their current strategies and learning styles.
2. Language learner -The teacher shares their own learning experiences and learning styles.
3. Learner trainer: The teacher models various strategies for each skill area by providing examples and explaining their rationale.
4. Coordinator - The teacher facilitates planning and reflection, helps students to integrate strategies with real classroom tasks, and also monitors learner development.
5. The coach- The teacher creates a positive, supportive classroom environment so learners feel safe exploring strategy use.

The SSBI model is designed to be adaptable and can be easily embedded into standard lessons. The particular tasks reveal students' strategy preferences or gaps during the lesson. The teacher directly instructs on one or more strategies through modelling, guided practice and independent use. Finally, learners reflect on the effectiveness of the strategy and its future application (Cohen & Weaver, 2006). As the model is task-based, it can be used while teaching grammar to encourage learners to monitor, self-question, and correct their errors. Focus on the learners' styles is particularly useful for students with learning

difficulties. The use of explicit instruction reduces confusion, and differentiated instruction is ideal for mixed-ability classes. Furthermore, strategy modelling and guided practice help learners to overcome their difficulties with attention or language processing challenges.

2.4.3. Grenfell and Harris's Model of Learner Strategy Instruction (1999)

The model of strategy training developed by Grenfell and Harris (1999) is tailored to the context of school-based language learning. The model is grounded in classroom realities, Vygotskian-guided learning (see Section 1.2.3.) and scaffolding principles. The strategy training the teacher leads explicitly happens in several phases.

The first phase is preparation through consciousness-raising, during which learners reflect on their learning strategies and ideas of strategic learning. It is followed by teacher modelling, where the teacher introduces and demonstrates specific strategies linking them to skills and/or subsystems like reading, listening, or grammar. Subsequently, learners apply the strategies within tasks and classroom activities. Through this process, learners develop metacognitive awareness and learn to transfer strategies acquired to other tasks to achieve their learning goals. Teachers gradually reduce their reminders as the training progresses to promote learner autonomy. In the final stage, students reflect on how well the strategies work for them and consider how they can use them in new contexts, which begins a new strategy development cycle (Grenfell, 2000).

Grenfell and Harris's Model (1999) emphasises the role of peer collaboration and cooperative learning in the classroom. It is well-suited for learners with difficulties as it allows for scaffolding from teachers and peers and encourages autonomy, allowing learners to adjust strategies to fit their needs.

2.4.4. Macaro's Strategy Training Model (2001)

Macaro's (2001) framework for strategy instruction draws on Anderson's (1983) theory of skill acquisition, which describes how declarative knowledge, through the use of teaching and practice, transforms into procedural knowledge and ultimately becomes automatic. Macaro believed that practical strategy training in the classroom should be supported by learning materials provided by the book and structured teacher guidance. The key element

of the process is scaffolding, understood as a structured support mechanism that helps learners to internalise strategies through controlled practice until they become automatic and self-regulated. This way, learners can decide when and how to use strategies to support their learning. Macaro (2001, p.176) presents this development as a nine-stage cyclical process in which strategy use is continually practised, evaluated and refined, leading to greater learner autonomy (see Figure 11).

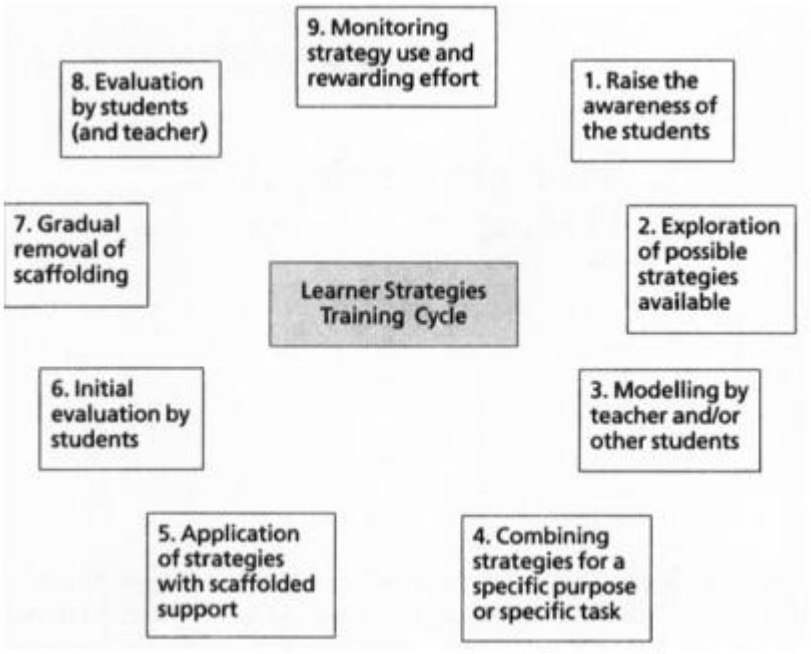


Figure 11. Macaro's Learner Strategies training cycle (Macaro, 2001, p. 176)

The first phase (steps 1 and 2) involves awareness raising; the teacher helps learners identify the strategies they use and those they lack. Macaro believed that by raising the awareness of existing strategy repertoires, learners become more conscious of their options and can begin to transfer and adapt to various L2 tasks. The following phase (steps 3-5) involves modelling; the teacher demonstrates clearly and repeatedly how to use strategies correctly. The teacher also guides learners to combine multiple strategies to suit specific tasks. This phase is the most effective when connected to concrete language skills and is more transferable to fundamental classroom skills. The next phase, step 6, is the initial evaluation of strategy training. Students assess whether a taught strategy is effective for them in general, as well as in comparison with other alternative strategies; thanks to this, they develop metacognitive control over their learning. The subsequent phase removes scaffolding, which means gradually withdrawing the teacher's or material support so that

the student internalises and uses the strategies independently. Macaro stressed that the length of scaffolding depends on students' motivation and the complexity of the task. Moreover, learners may vary in how quickly they internalise strategies, which is crucial in dealing with learners who have difficulties. The final step is evaluation, where the teacher collects learners' overall impressions of the strategy training programme through teacher-led or group discussions, questionnaires, strategy diaries, or interviews (Macaro, 2001).

Macaro (2001) emphasised that the training programme should be adapted to and integrated into particular teaching conditions. It should be a long-term process by design, but the teacher determines its duration and format based on the learners' needs. Strategies should be taught explicitly and integrated into real-world tasks; hence, the programme can be adapted to teach grammar effectively. Based on his pilot study conducted in 1996, Macaro (2001) outlined that strategy training must be differentiated as not all learners benefit equally from the same strategies. Importantly, the training examined by Macaro (2001) had a substantial impact on learners who started with weaker strategy repertoires, which is significant in teaching students with learning difficulties.

2.4.5. The Cognitive Academic Language Learning Approach (CALLA)

O'Malley and Chamot (1994) developed CALLA based on cognitive theory and research. The main aim of their instructional model is to help language learners to become more independent and self-regulated through explicit instruction in content and strategies. The CALLA model consists of five essential stages: preparation, presentation, practice, evaluation and expansion. During the preparation stage, the teacher identifies learners' prior knowledge and learning preferences. They also try to identify knowledge gaps that need further investigation and filling. The presentation stage includes an introduction and modelling of new strategies. In the following practice stage, learners apply strategies in content-related tasks to assimilate new knowledge. Then, individually or with their classmates, students evaluate the strategies used, and in the final step, learners apply new strategies to a real classroom context. O'Malley and Chamot (1994) emphasised that connecting new knowledge with prior concepts enhances their usefulness. The CALLA model can be applied to teaching grammar learning strategies as it emphasises the need for metacognitive development with a strong focus on helping learners plan, monitor and

evaluate their learning. Through the training, learners are taught to notice and understand grammatical forms and use them accurately in classroom tasks.

CALLA model is also relevant to inclusive classrooms as it supports scaffolded strategy instruction and a gradual transfer of control to the learner. Students with learning difficulties require repeated modelling, guided practice and explicit reflection to internalise grammar strategies. CALLA's structured phases and connection to language tasks facilitate strategic, self-regulated learning for students of different needs.

2.4.6. The key aspects of strategy training: Practical considerations

The models of strategy training presented above differ in their specific procedures, but they share a set of core principles. This section synthesises these principles into a practical framework for implementing strategy-based instruction, with a particular focus on the needs of SEN learners. While strategy training encompasses cognitive, social, and affective dimensions, the following discussion places special emphasis on metacognitive development. This focus is justified because metacognitive awareness the ability to plan, monitor, and evaluate one's own learning is the foundation of the self-regulation and learner autonomy that SBI aims to foster.

Rubin et al. (2007) emphasised that the first crucial step for younger learners is establishing their background, needs and motivation for learning a second language. These factors will determine which strategies students need to achieve their learning goals. In line with all presented strategy training models (Oxford, 1990; Cohen, 1998; Grenfell & Harris, 1999; Macaro, 2001; Chamot, 2004), the next step is to raise learners' awareness about what learning strategies are and which strategies they are already using. During the training, teachers should elicit learners' prior knowledge about how they approach various language tasks through class discussions or questionnaires. Thanks to this, learners will begin to reflect on their learning processes and teachers, and will become more autonomous.

Teachers should consider that young learners often find strategies too abstract. Therefore, their task is to model a new strategy explicitly, using simple language, relevant examples, and visual aids. It is also important to demonstrate the "think-aloud" protocol to explain how, when, and why to use a particular strategy. Following this demonstration, it is crucial to guide students through a reflection process, prompting them to consider not just what the steps are, but why a particular strategy might be useful for them personally.

After modelling, students can be asked to recall each step and name the strategies, reflecting on their use of similar strategies, which shows that some may be used even unconsciously. Naming and validating strategies expand young learners' strategy repertoire; this can be further reinforced by the use of posters and other visual aids that provide support for memorising and internalising strategies. Strategies, new or old, belong to procedural knowledge (Rubin et al., 2007).

New strategies are a form of procedural knowledge, and most students need multiple practice opportunities to automate them. According to Rubin et al. (2007), strategies can be practised with any classroom learning task as long as they pose a challenge. However, initially, the teacher should remind students to apply specific strategies. Peer interaction plays a crucial role in practising strategies as through collaboration, problem-solving and hands-on activities, learners can clarify and reinforce their understanding of strategies. This peer dynamic is particularly effective as it is believed that when learners observe a classmate's "think-aloud," they can learn more effectively than from the teacher's guidance alone (Rubin et al., 2007). Cooperation in class is also crucial for students with high affective filters and low confidence levels, as working in pairs or teams makes them feel safer and can lead to more productive whole-class discussions. The teacher's initial, extensive support and scaffolding should be gradually withdrawn with time to allow learners to choose and use the strategies they have learnt.

Rubin et al. (2007) outlined that after practising new strategies, learners should be given time and space to evaluate which strategies they have used, how helpful they have been and what personal adaptations they have made. Such a process facilitates the development of metacognitive awareness, a key element of autonomous learning. Teachers can support this process by providing learners with writing tasks, strategy checklists or class discussions guided by reflective questions. Teachers should encourage students to find specific strategies that work better for them than others for specific tasks. Since students often differ in the types of strategies they prefer to use, they should not be forced to use one strategy or another, but instead create a repertoire to enhance their learning effectiveness.

The final responsibility of teachers in strategy training is to assist learners in strategy transfer to new contexts and situations. It can be done by developing students' metacognitive skills through explicit strategy instruction. Guiding learners in planning, monitoring, and evaluating their learning process and resultant knowledge may help them to apply new strategies to different contexts. The second way to support learners in

transferring strategies is a guided reflection on how a strategy might apply across various tasks or subjects. This way, strategy training becomes more than just a classroom technique; it becomes a solid foundation for lifelong learning and self-regulation (Rubin et al., 2007).

2.5. The opportunities for teaching English in Polish primary schools

According to the Core Curriculum for General Education (ME, 2024), each student starting primary school learns one foreign language in grades 1-6, then two foreign languages in grades 7 and 8. The Central Examination Board (CKE, 2024), in the report on the eighth-grader exam for 2024, states that over 97,6% of students took the eighth-grader exam in English, less than 2% of students wrote the German language exam, and fewer than 1% of students took the exam in French, Russian or Spanish. The above data indicate that English is the dominant foreign language in primary schools in Poland and is a compulsory examination subject for most students.

The Core Curriculum (ME, 2024) also regulates the weekly number of teaching hours for all compulsory subjects; for a foreign language, they amount to two hours in grades 1-3 and three hours in grades 4-8. The Core Curriculum for modern foreign languages has been developed in accordance with the proficiency levels for individual language skills as defined in the Common European Framework of Reference for Languages: Learning, Teaching, Assessment (CEFR) (Council of Europe, 2001), a framework developed by the Council of Europe. However, since the CEFR was initially designed for adult learners of foreign languages, the alignment of curriculum variants with CEFR levels is intended solely to help to indicate an approximate level of language proficiency expected from students at the end of a given educational stage. This alignment does not constitute a formal linkage between the two documents. The Core Curriculum (ME, 2024) specifies the expected proficiency levels at the end of each educational stage. After the first phase of language learning (grades 1 -3), students are expected to reach the A1 level. By the time they complete primary education in the eighth grade, they should have reached the A2 level in productive skills and the A2+ level in receptive comprehension skills. The regulation of the Ministry of Education (MEN, 2017, p. 5) standardises the organisational aspect of foreign language classes: “Classes may be conducted in a class or inter-class group of no more than 24 students; when dividing into groups, the level of language proficiency should be taken into account”. Regardless of the

number of students in individual classes, some schools create inter-unit language groups, considering the proficiency level in a foreign language. Despite levelling tests, these classes are heterogeneous because students differ from one another not only in the level of language competencies but also in a wide range of individual variables, such as intelligence, language predispositions, personality, motivation, learning styles, stress, and beliefs (Ellis, 2004).

The effective teaching of foreign language grammar in a large, heterogeneous classroom is a challenge for teachers. In one group, there are students with a high level of language skills, high motivation, and a willingness to communicate, whereas the other group includes those who struggle with language learning and are, therefore, stressed during lessons or do not want to acquire L2 knowledge. Students from the first of these groups master new material quickly, and they often put pressure on students who work at a slower pace. Without teacher intervention, over time, these differences deepen, and students with higher levels of language anxiety or school stress withdraw and do not actively participate in lessons and, therefore, do not make adequate progress in learning.

2.5.1. The place of grammar in Polish curriculum and exam requirements

At the initial level of second language education in classes 1-3, the core goal is to contribute to the child's comprehensive development. During this period, learners should develop a positive attitude towards learning foreign languages and build an attitude of openness and respect towards the diversity of languages, cultures and nationalities. At the same time, learners should be supported in building their self-esteem and belief in their own abilities. When language skills are considered, students should develop the ability to understand and use simple messages in a modern foreign language. Hence, the curriculum does not address any grammar structures that need to be introduced at that level. It is assumed that the learner knows basic grammatical structures that allow them to create short and simple utterances based on models. The implicit grammar acquired allows students to understand written and listened- passages (ME, 2024).

In the second stage of foreign language education, the primary goal is to develop learners' ability to utilise language resources for communication in familiar contexts. The requirements are divided into five main categories (ME, 2024):

1. Knowledge of Language Resources (Use of English) - Students use a basic range of language resources (lexical, grammatical, orthographic and phonetic) to meet the remaining general requirements.
2. Comprehension of spoken and written texts - students understand simple spoken texts articulated clearly in the standard variety of language and simple written texts within the scope defined in the detailed requirements.
3. Production of spoken and written texts- students independently produce short, simple, coherent and logically structured spoken and written texts following the scope defined in the detailed requirements.
4. Responding to communication - students participate in conversations and respond appropriately and intelligibly in typical situations, either orally or in writing, using simple texts within the scope defined in the detailed requirements.
5. Mediation - students change the form of spoken or written content as specified in the detailed requirements.

The main requirements are further detailed, but the core curriculum does not directly mention grammar. It refers to grammar as a language resource that enables learners to understand passages they have listened to or read, and produce coherent oral and written texts about past, present, and future events. Students are also expected to express their intentions, opinions or feelings using appropriate grammatical structuring. Notably, the core curriculum emphasises strategies such as error correction, note-taking, and mnemonics, which primarily focus on improving grammatical accuracy. The curriculum encourages students to engage in strategic actions, such as self-assessing their language use and employing compensatory strategies (e.g., simplifying structures when a grammatical form is unknown). Furthermore, an emphasis is placed on language awareness, focusing on identifying similarities and differences between languages and communication strategies that facilitate proper language use. (ME, 2024)

The Guide for 8th Grader Exam (CKE, 2024), offers a more thorough description of grammar structures that need to be covered throughout primary education in Polish schools. Although the exam targets an A2 level of language proficiency, the scope of grammatical structures expected from eighth-grade learners is extensive. Students are required to demonstrate control over various forms, including tenses, modality, aspect, syntactic structures, and functional categories such as adjectives, adverbs, pronouns, and conjunctions. The grammatical demands include basic sentence formation (affirmative, negative, and interrogative) and more complex structures, such as relative and adverbial

clauses, passive voice in three tenses, and infinitive and gerund constructions. The official exam guide (CKE, 2024) outlined over 70 discrete grammar points, revealing a curriculum that implicitly assumes a substantial degree of morphosyntactic awareness and functional grammar competence, often exceeding what is commonly associated with the A2 CEFR level.

Furthermore, in assessing students' answers, an emphasis is placed on linguistic accuracy, underscoring that a student's answer is not accepted if it contains lexical or grammatical errors that alter meaning, writes unclear responses due to incorrect form, or uses Polish spelling. The answers should be logical and coherent with the grammatical context and discourse structure. Such requirements suggest that to be successful during the exam, students should pay attention to the following aspects of grammar: morphology in the correct use of tenses, comparatives, articles, etc., syntax - appropriate word order, clause relation and sentence coherence, lexicogrammar - precise vocabulary usage in syntactic structures, pragmatic grammar - using appropriate forms for specific communicative functions. For learners with special educational needs, this dense grammatical load highlights the importance of structured grammar strategy training and differentiated instruction in developing procedural control over core forms.

2.5.2. Grammar in teaching programmes

The core curriculum does not specify which grammar topics should be covered in primary school, nor does it outline the theoretical or methodological principles that teachers should apply when working with pupils. While the topics are precisely defined by the eighth-grade exam guide published by the Central Examination Board, only the teaching programmes prepared by publishers specify the methods and content covered between the fourth and eighth grades of primary school. Below, the curricula of two publishers, Pearson for the English Class textbook and Nowa Era for the Kids Can programme, will be presented and compared. The former was chosen, as the English Class textbooks are used in the school under study; the latter was taken for comparison since this publisher pays particular attention to students with learning difficulties.

2.6.2.1. Pearson's English Class teaching programme

Pearson's programme, prepared by Stefańska (2023), applies an eclectic language teaching method, drawing on conventional and non-conventional approaches. It refers to the grammar-translation method (see Section 2.2.1.), where the focus on grammatical features within the coursebooks occurs through explicit rule instruction, reading, translation, and metalinguistic explanation. For the early grades (IV-V), the audiolingual method (see Section 2.2.3.) is highly valued, as it helps learners to automate structures via listening and controlled speech drills, along with frequent repetition. The programme also mentions the cognitive method (see Section 2.2.4.), emphasising the creative and rule-governed nature of language use, viewing learners as active constructors of meaning rather than passive recipients. Its primary goal is to develop linguistic competence, defined as the ability to generate an infinite number of grammatically correct sentences based on a finite set of rules. It is stressed that language is acquired through meaningful exposure to comprehensible input in natural contexts and repeated attempts at communication, including errors, which are considered an essential and positive aspect of the learning process. The method values listening skills and promotes unstructured language production from grade six onward, encouraging students to experiment with self-generated speech and gradually comply with target norms.

The conventional methods within the course are complemented by several unconventional and learner-sensitive approaches to support diverse student needs. Accordingly, Total Physical Response (TPR) links language with physical movement, which enables kinesthetic learners to benefit when introducing early grammar structures, such as imperatives and prepositions. The Natural Approach underscores exposure to comprehensible input in a low-anxiety environment, where learners are encouraged to use language spontaneously, without pressure, which benefits shy or less confident students. The Communicative Approach prioritises meaningful, context-based communication, teaching grammar through real-life functions and promoting fluency before accuracy. Finally, the narrative method uses repetitive, multisensory storytelling to enhance receptive grammar skills, which is particularly helpful for younger learners and those with processing difficulties.

The programme encourages teachers to use a range of task formats to ensure lesson variety and maintain learners' engagement. They include whole-class activities (lockstep),

individual work (either guided or independent), closed pair work (where all students work in pairs), open pair work (where a pair presents in front of the class), group work, and project-based tasks, conducted either at school or at home. It is believed that collaborative formats, such as pair work, group tasks, and projects, should culminate in a presentation of outcomes shared with the teacher, peers, or the entire class, thereby fostering accountability and communication skills.

In line with Larsen-Freeman's (2003) concept of "grammaring" (see Section 2.2.7.), grammar is viewed as a fifth skill taught as a tool for facilitating meaningful communication, a perspective also emphasised by the national curriculum. The grammar instruction in the programme integrates deductive and inductive approaches (see Section 2.2.). The former is used mainly for complicated structures and students with lower motivation and limited metacognitive skills; teachers present the rule and apply it in structured exercises. The latter develops grammar structures through pattern recognition and hypothesis testing. Learners engage in deep processing through noticing, structuring and proceduralising. While inductive learning fosters deeper engagement, understanding, and learner autonomy, it also demands more time and cognitive effort and risks incorrect generalisations.

Overall, the programme recommends a balanced, mixed approach to grammar by blending rule discovery with teacher-led clarification and scaffolded tasks. Techniques mentioned in it include gap-filling, paraphrasing, sentence transformation, guided translation, multiple-choice questions, word order exercises, and grammar games, which help reinforce structures in a motivating and varied way.

2.6.2.2 Nowa Era's Kids Can programme

According to Nowa Era's (Niedźwiedź, et al., 2024) language teaching programme for grades IV-VII, the primary goal of foreign language education is to equip learners with the knowledge and skills necessary for effective linguistic communication. At the same time, during foreign language lessons, students should develop their abilities to cope with new and unfamiliar situations; the lessons should also foster creative thinking and problem-solving skills. The programme acknowledges the diversity of learners in terms of their sensory preferences, cognitive styles and overall learning potential. Therefore, it emphasises the need to individualise the teaching process with tasks with varied difficulty

levels, optional tasks to allow learner autonomy, and extra activities to challenge more advanced students. Such practices enable teachers to create an inclusive and motivating learning environment where all students have equitable opportunities to succeed, regardless of their learning profile or performance level.

Due to the diversity of personalities and learning profiles in any group of students, the programme recommends that teachers do not limit themselves to only one or two teaching methods. It is suggested that a holistic approach be introduced, incorporating elements from various methods. Among them, the communicative and cognitive methods (see Sections 2.3.5. and 2.3.4.) are identified as the leading teaching tools, while the others, such as the direct method, grammar translation method, suggestopedia, task-based teaching, TPR and natural approach (see Section 2.2.), support learners in overcoming difficulties met while learning a language.

Similar to Pearson's programme, it is suggested that teachers should ensure lesson variety by employing a range of formats, including individual, pair, group and project-based tasks. These flexible and varied forms of work aim to cater to individual needs while promoting communication, peer learning and learner agency.

Grammar instruction within the programme is closely linked to linguistic accuracy, but the primary function is to enhance the precision of meaning in communication. Grammatical competence is considered essential for effective language use, both in oral and written forms. It suggested that Komorowska's (2002) model of grammar instruction can be applied by dividing the process into three stages: presentation in an inductive or deductive way, controlled or semi-controlled practice and production, understood as using the items in a contextualised form. During grammar lessons, students can practice language by relying on imitation, complex and straightforward substitutions, transformation, and integration. Furthermore, learners should practice structures in realistic and engaging contexts through mini-dramas, pair interviews, and narratives to support the use of communicative grammar. These activities aim to embed grammar instruction within meaningful interaction and situational practice to reinforce linguistic form and function.

2.5.3 Teaching grammar to students with learning difficulties

This section will outline the key considerations for teaching English to students with SEN in the Polish educational context. It is divided into two main parts. The first part (i.e., Section 2.5.3.1.) will describe the ministerial guidelines and curriculum adjustments, as well as the practical solutions and general pedagogical principles for working with SEN learners found in teaching programmes. The second (i.e., Section 2.5.3.2.) will focus in detail on proven techniques for teaching grammar to this group of students. The section will conclude by highlighting the role of strategy training in fostering learner autonomy.

2.5.3.1. The institutional and curricular context

2.5.3.1.1. Ministerial and curricular guidelines

The number of pupils with special educational needs is constantly increasing in Poland and worldwide (MEiN, 2023; Hutchinson, 2021). The needs of students with learning difficulties are increasingly being addressed by the Ministry of Education, Coursebook creators, trainers, and educators who strive to support teachers in developing techniques and methods to facilitate foreign language learning for these individuals.

The Core Curriculum (ME, 2024) states that schools and teachers should provide individualised support for every student according to their needs and capabilities. The support includes diagnosing learners' individual potential and learning pace, and providing differentiated activities and adjusted forms of instruction to create equal opportunities for all learners, including those with special educational needs. The curriculum for foreign languages does not specify directly the methods and tasks appropriate for students with difficulties. The Central Examination Board (CKE, 2024) emphasised that students with documented special needs, such as dyslexia, specific learning disorders or intellectual disabilities, can take the end-of-school exam in an adjusted form. Depending on the learner's specific condition, they can benefit from adjusted time limits and adapted versions of exam papers, including those with simplified graphic design, larger font size or modified linguistic input. Furthermore, some learners can be assessed based on modified criteria, such as lowered required accuracy in spelling, which focuses on

communicative value rather than perfect form. Those adjustments aim not to disadvantage students with cognitive or linguistic processing challenges.

2.5.3.1.2. Practical application in teaching programmes

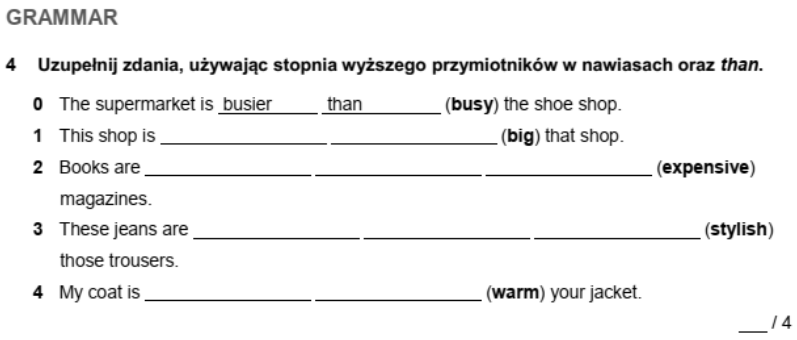
To illustrate how the official guidelines and pedagogical recommendations for supporting SEN students are realised in practice, the teaching programmes, Pearson and Nowa Era (see Sections 3.6.2.1. and 3.6.2.2.), will now be compared. The Nowa Era programme addresses the needs of SEN students more comprehensively than the Pearson programme. First, the programme emphasises individualisation and flexibility of teaching approaches as it acknowledges diversity in students' sensory preferences and learning styles. The programme has specified instructional strategies for students with different difficulties. For dyslexic students, whose difficulties include problems with decoding, letter confusion (e.g., b/d, p/q), spelling, and comprehension problems, it is recommended to use an adjusted font (sans-serif) with increased size (14-16 points) and increased line spacing.

Moreover, cream paper and one task per page may also support students in dealing with learning materials. It is also stressed that commands should be simplified, and learning materials should be enriched by visual aids and a structured layout (bold keywords, bullet points). The number of open-ended tasks should be avoided or reduced and closed-ended formats should replace them. Students should also be given extra time and support with reading aloud and comprehension. Students with ADHD, who display a short attention span, impulsivity, and hyperactivity, should be supported during language lessons through clear and consistent expectations (3R rule: regularity, routine, repetition). Such students should be seated in a classroom in a place that reduces their distractions. Teachers should encourage students to engage in tasks that require movement, and punishment in the classroom should be avoided in favour of positive reinforcement and frequent praise. As students with ADHD mainly have behavioural difficulties, the teaching process should be led in cooperation with parents and psychologists. Students with mild intellectual difficulties require collaboration between teachers, parents and specialists. Their teaching is based on an Individual Educational and Therapeutic Program, focusing on developing basic communicative functions in a foreign language.

The general rules of teaching that can be applied to all SEN students as students with non-specific learning difficulties include (Niedźwiedź et al., 2024, p. 33):

1. Reducing the number and complexity of tasks
2. Simplifying instructions and test formats
3. Providing transcripts for listening tasks
4. Highlighting keywords in reading/listening questions
5. Using matching, short-answer, or choice-based questions instead of written production

Teachers and teaching programmes also support students with learning difficulties throughout their primary school education. Pearson's teaching programme, for example, stresses that the multisensory approach caters for learners' individual needs, and that students can benefit from individualised instruction, differentiated tasks, and adjusted versions of tests. To illustrate how such adjustments are realised in practice, Figures 12 and 13 below present two versions of a test on the same grammatical material.



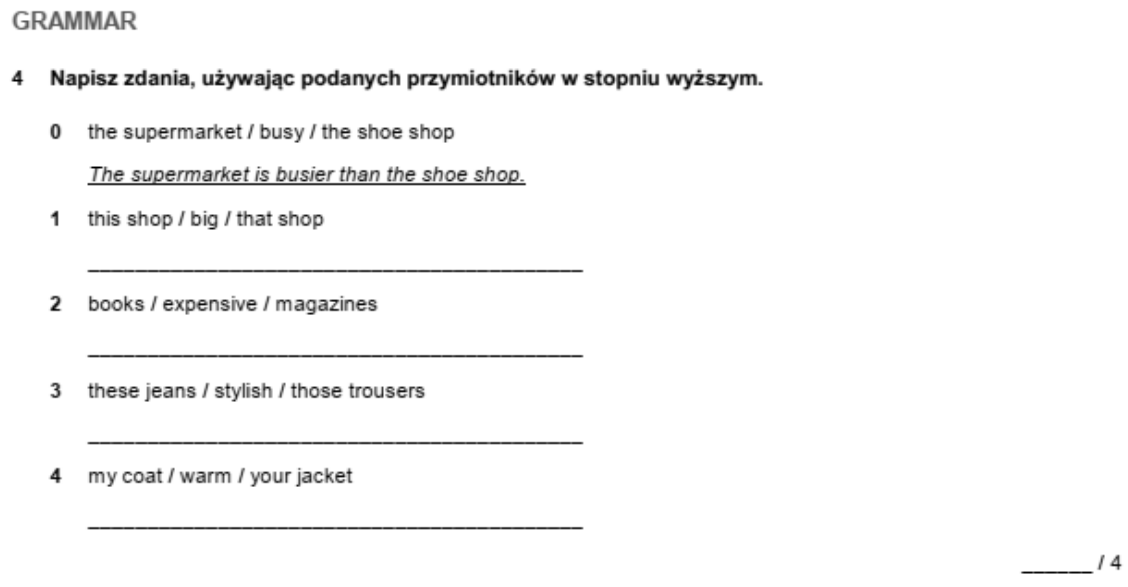
GRAMMAR

4 Uzupełnij zdania, używając stopnia wyższego przymiotników w nawiasach oraz *than*.

0 The supermarket is busier than (**busy**) the shoe shop.
1 This shop is _____ _____ (**big**) that shop.
2 Books are _____ _____ _____ (**expensive**) magazines.
3 These jeans are _____ _____ _____ (**stylish**) those trousers.
4 My coat is _____ _____ (**warm**) your jacket.

___ / 4

Figure 12. English Class A2 Pearson Central Europe 2019, Test unit 2, Group C



GRAMMAR

4 Napisz zdania, używając podanych przymiotników w stopniu wyższym.

0 the supermarket / busy / the shoe shop

The supermarket is busier than the shoe shop.

1 this shop / big / that shop

_____

2 books / expensive / magazines

_____

3 these jeans / stylish / those trousers

_____

4 my coat / warm / your jacket

_____

_____ / 4

Figure 13. English Class A2 Pearson Central Europe 2019, Test unit 2, Group A

Figures 12 and 13 provide excerpts from photocopiable tests that are available to teachers in their teaching resources. Both versions assess students' skills from Unit 2, the coursebook "English Class A2," dedicated to fifth-grade primary school students. The presented task checks students' ability to create sentences with adjectives in the superlative form. Group C, presented in Figure 12, is an adjusted version of the test for students with learning difficulties. The font is larger, and there are fewer tasks on each page, with simplified grammar exercises. Students are already given the beginning and end of the sentence and only have to provide an adjective in the correct form. The same task in version A of the test requires students to create the whole sentence with the adjective in the correct form. This approach to adjusting teaching requirements makes it easier for learners with difficulties to achieve positive grades in their learning. They also have more time at their disposal, as some tasks are already completed for them.

2.5.3.1.3. The challenge of standardised assessment and teacher recommendations

By implementing the aforementioned techniques, teachers enhance comprehension for students with difficulties as the instructions become more transparent and manageable. Simplified instructions and tests, along with accessible input, help reduce cognitive load, allowing students to focus on the essential content of tasks. Finally, all those practices ensure fair assessment, allowing all students to demonstrate their knowledge in adapted formats.

The main problem with such a way of individualised practice is that the end-of-the-school state exam does not offer a simplified version of the tests; students take the very same exam as learners without difficulties, and their only adjustments are a lengthened time to write it, the possibility to not transfer the answers to the answer card and adjusted assessing rules. Teachers experienced in working with SEN students, questioned by Król-Giernat and Forma (2020), stated that the offered adjustments are not enough for such learners. Their study included the following teacher-suggested accommodations for the eighth-grade examination (Król-Giernat & Forma 2020 p. 292-293), :

- change the layout of the document;
- use paper of a different colour (e.g., cream or light yellow);
- change the font to a sans-serif typeface (e.g., Verdana, Calibri);
- increase font size (to 14 -16);

- increase the line spacing (to minimise so-called visual stress);
- differentiate parts of the text (e.g., by bolding every second line);
- highlight (bold) keywords in questions related to reading or listening comprehension;
- simplify instructions;
- leave more space for writing answers;
- place only one task per page (edit tasks so that the student has the entire text in view while reading);
- reduce the number of tasks;
- include only simple tasks in the test to check understanding of heard/read information (general knowledge, everyday conversations/situations at a communicative level);
- shorten texts;
- shorten listening comprehension tasks;
- omit or reduce open-ended tasks while also reducing the required word count (writing short texts);
- convert tasks requiring written responses into multiple-choice tasks or provide additional prompts;
- include more tasks in the form of matching and single-choice (a, b, c) questions;
- provide a glossary of useful phrases that may support written production;
- provide transcripts of listening texts for students with dyslexia;

This comprehensive list of accommodations is well aligned with the needs and specific difficulties of students with dyslexia. It is essential to note that not every student with dyslexia or unspecified special educational needs exhibits the same deficits or the same degree of severity of these deficits. Nevertheless, most of them affect how students interact with foreign language and exam tasks (Król-Gierat & Forma, 2020). In light of these difficulties, researchers such as Bogdanowicz (2011) and Reid (2018) have explored various pedagogical approaches to support SEN students more effectively, especially in the domain of grammar, which presents particular difficulties due to its abstract and memory-intensive nature.

2.5.3.2. Specific methodological recommendations for grammar instruction

Bogdanowicz (2011) stated that SEN students often struggle with mastering grammar skills as it requires abstract thinking and well-working memory. Although learners with dyslexia who possess at least average cognitive abilities do not have problems understanding grammar rules, they often struggle with automatising new skills. They also forget about the form in language production and tend to mix different grammar forms. Bogdanowicz (2011) outlined that the regular PPP teaching model may not be enough for dyslexic learners to acquire new grammar material. As dyslexic learners face problems with memorising sequenced material and many linguistic structures need such processing, it is crucially important to introduce them with sensitivity to learners' individual needs. Reid (2018) also emphasises that while teaching foreign languages to students with dyslexia, teachers should remember to develop higher-order thinking skills. The most important general principles in teaching students with dyslexia are multisensory input, cumulative and sequential learning, and repetition for automation. These principles help consolidate information and strengthen short-term memory; embedding new information in different contexts also enhances long-term memory. Language games and the use of new technologies can also help students with difficulties, as such tools are attractive to them and, at the same time, they provide additional practice to support automation.

The first problems with English grammar appear when learners face the present simple tense - they have to memorise some patterns of inflexion, negation and question formation. Teachers should revise the rule multiple times using a multisensory and multi-method approach to ensure that all learners have the opportunity to understand and memorise new rules. Bogdanowicz (2011) presented a list of six guidelines for grammar teaching that are useful in the case of SEN students.

1. Present grammar rules step by step, dividing the teaching material into smaller, manageable parts.
2. Use visual aids; making a poster or asking students to illustrate the learnt rules visually can help them to internalise new knowledge.
3. Use colour coding; highlighting different parts of a sentence with different colours may help learners to understand the sentence structure. It is crucial not to mix the colours and to consistently use them for the same grammatical functions.

4. Use storytelling to present grammar rules; short, funny stories are more engaging for learners and facilitate memorising.
5. Use raps or rhymes to support memorising.
6. Use visual representations of the rules; tables, graphs, and diagrams can support learners in memorising new linguistic items.

Bogdanowicz noted that Polish dyslexic learners have difficulties with specific grammatical items, including articles, countable and uncountable nouns, irregular verbs, the present simple tense, the Saxon genitive, pronouns, and the comparison of adjectives. The listed structures are more challenging as they both require sequenced memorisation and are difficult to understand because of negative transfer from the Polish language. Still, teachers aware of those difficulties may support their learners in various ways to ensure that they progress and can use the learnt materials in receptive and productive ways. One way is the implementation of grammar strategy training, which can support learners' autonomy and help them develop learning skills that enable them to address their own learning difficulties. Fostering autonomy in students with learning difficulties involves increasing their metalinguistic and metacognitive sensitivity. By developing these skills, students acquire the ability to self-motivate, self-regulate, and recognise themselves as learners. Jaworska (2018) emphasised that learning strategies are essential for this process to happen. Their conscious and deliberate use helps students with difficulties to work in a way that enables them to achieve better results and learn more effectively. Strategy training in language classes equips students with the knowledge and skills necessary to learn effectively and manage their limitations. Conscious management of information processing strengthens the metacognitive aspects of thinking. Students with learning difficulties are a very diverse group. They differ not only cognitively but also emotionally and socially. Therefore, it is essential that learning strategy training encompasses as many strategies as possible and in as diverse a range as possible. At the same time, students should have the opportunity to try out strategies and become aware of the processes characteristic of language learning by testing different strategies and creating their own repertoire. By learning to use effective strategies, students take responsibility for their own learning, which is particularly important for students with learning difficulties in a large, diverse class. Through self-awareness and a better understanding of their own abilities and limitations, students will be able to learn more efficiently using appropriate strategies and materials.

Summary

Chapter 2 explored the multifaceted role of grammar in second language learning, with a special focus on instruction for primary school students with learning difficulties. It began by establishing the importance of grammar as a core component of communicative competence. It then traced the evolution of the place of grammar within various language teaching tools, from traditional form-focused to more communicative and skills-based ones, such as "grammaring". Subsequently, the chapter introduced the concept of grammar learning strategies, presenting key taxonomies that categorise the tools learners use to master grammatical structures. This led to the overview of several influential models of strategy-based instruction, which serve as the theoretical basis for pedagogical interventions. Finally, these theoretical considerations were situated within the practical context of the Polish primary school system. The chapter analysed national curriculum requirements, publisher approaches, and, most importantly, outlined specific pedagogical recommendations for teaching grammar effectively to students with special educational needs, thereby setting the stage for the empirical research presented in the subsequent chapters of this dissertation.

Chapter 3. Research Methodology

Introduction

The theoretical part of this dissertation has provided insights into the most important concepts related to teaching English grammar to primary school students with learning difficulties. To address the issues raised, the primary objective of this empirical study was to determine the impact of a grammar strategy training programme on English grammar acquisition among primary school learners with special educational needs. This chapter, therefore, outlines the methodological framework of the study, detailing the research design, data collection instruments, and analytical procedures. With this in mind, the present chapter is divided into eight sections. The chapter commences with an overview of the research methods that can be applied to investigating the language classroom (Section 3.1.). This is followed by the presentation of the most important research projects that have dealt with learning strategies in the past, focusing in particular on the interventionist studies introducing SBI into the L2 classroom and studies regarding learners with special educational needs (Section 3.2.). After that, the rationale for the study and research questions are described (Section 3.3.). Subsequently, there is a detailed description of the research design and the setting of the study (Sections 3.4. and 3.5.). The next sections describe participants (Section 3.6.), followed by the presentation of the instruments used in the current study(Section 3.7.). The chapter concludes with sections presenting the data collection and analysis issues (Section 3.8.).

3.1. The overview of research methods for investigating LLS

Over the past four decades, research into Language Learning Strategies (LLS) has evolved from simple descriptive profiling of so-called "good language learners" (Rubin, 1975; Stern, 1975) to more complex investigations of how strategies are taught, used, and transferred in diverse contexts. Researchers have designed increasingly diverse and imaginative tools to access learners' internal strategy use, though challenges persist. Among

these are the limitations of self-report tools, the difficulty of directly observing mental processes, and the variability in strategy use depending on context, task, and time constraints. As strategies are inherently internal, verbal report methods have become central, despite methodological issues with data transcription and interpretation. While significant progress has been made in quantitative approaches, recent scholarship emphasises the value of emerging qualitative research tools that can more effectively capture the dynamic and individualised nature of strategy use (White, et al., 2007).

3.1.1. Self-Report Questionnaires

Self-report questionnaires remain the most frequently used and efficient method for exploring learner strategies. Dörnyei (2007) emphasised that survey studies aim to describe the characteristics of a population by examining a sample of this group. The results of the questionnaire survey are typically quantitative, but they may also include some questions that require qualitative analysis. *Oxford's Strategy Inventory for Language Learning* (SILL) has been the most widely used instrument in language learner strategy research. Its reliability and validity have been confirmed by the Nyikos and Oxford research (1989, 1993). As questionnaires can be conducted among a large group of respondents, which enables gathering a great deal of information in a relatively short period, numerous questionnaires have been developed to examine the selected facets of the language learning process.

The *Language Strategy Use Inventory* (LSUI), devised by Cohen, Oxford, and Chi (2006), offers 90 items spanning the four macro-skills, as well as vocabulary and translation. Its companion, the *Strategies Inventory for Learning Culture* (SILC), adds a sociocultural dimension (Paige et al., 2004). Extracting the grammar-relevant statements (for example, looking for patterns in verb endings while reading or using peer feedback to refine sentence structure) enables researchers to situate grammar work within learners' broader strategic

The *Metacognitive Awareness of Reading Strategies Inventory* (MARSI) and its ESL adaptation, the Survey of Reading Strategies (SORS), profile global, problem-solving, and support strategies during reading (Mokhtari & Reichard, 2002; Sheorey & Mokhtari, 2001). Their listening analogue, *the Metacognitive Awareness Listening Questionnaire* (MALQ), distinguishes between planning/evaluating, problem-solving, mental translation,

person knowledge, and directed attention (Vandergrift et al., 2006). Because effective grammar learning depends heavily on monitoring and evaluation, short clusters from these scales can be repurposed to gauge how learners plan, check and repair their grammatical output.

Pawlak's (2018) Grammar-Learning Strategy Scale/Inventory (GLSS/GLSI) fills a long-standing gap by operationalising metacognitive, cognitive, affective and social tactics specific to grammar study. The instrument therefore captures the full cycle of form-focused learning, from initial noticing through procedural practice to attitude regulation and is particularly valuable when surveying learners whose grammatical accuracy is hampered by working-memory or attention constraints.

Dörnyei (2007) pointed out that questionnaires remain attractive in strategy research chiefly because they are efficient, easy to process, and versatile. A single administration can generate a large, computer-ready dataset in less than an hour. Moreover, thanks to anonymity, heterogeneous cohorts spread across multiple schools or regions can be reached. Such breadth is invaluable when the goal is to map which grammar-learning strategies students with learning difficulties claim to employ, a task that would be time-consuming if tackled through interviews alone. On the other hand, Dörnyei (2007) noted that questionnaires have several significant limitations. First, if inventories are poorly written, the resulting data may be invalid or unreliable; "no single method has been so much abused" as the questionnaire, Gillham (2000, p. 1) warns. Second, because items must remain comprehensible to every respondent, they often skim the surface of complex constructs, yielding only a "thin" snapshot (Moser & Kalton, 1971). Third, respondent factors, such as limited attention span, literacy issues, and social desirability bias, can further erode data quality. For learners with processing or literacy difficulties, items must therefore be phrased in plain language and illustrated with concrete examples; even then, self-reports are liable to miss covert strategies such as silent self-talk or mental timelines. To counter these limitations, questionnaire findings should be triangulated with richer methods, such as classroom observation, think-alouds, or focused grammar tasks, so that declared strategies can be compared with behaviour in real-time.

3.1.2.Observations

Observation remains a fundamental method of data collection in classroom-based research, providing direct access to what participants do, rather than what they claim to do. In grammar-focused lessons with learners who experience learning difficulties, systematic observation can reveal the strategies that SEN learners employ and those they lack in their regular classroom practice. As Wragg (1999) noted, observing human activity is a basic cognitive process that allows researchers to perceive and interpret behaviour as it unfolds in real time. Dörnyei (2007) pointed out that within applied linguistics, classroom observation serves not only as a means of documenting instructional practices but also as a tool for uncovering how learners engage with language in naturalistic contexts. We can distinguish between structured and unstructured observation. Structured observation means having a specific focus and concrete observation categories. It enables systematic comparison across time and groups, and yields data that can be subjected to statistical analysis. The unstructured observation occurs when the observer first notices what is happening in the classroom and then determines its significance for the research. The observer completes narrative field notes, supplemented by maps or diagrams, to gather the data for analysis.

In the context of examining LLS, White et al. (2007) emphasised that classroom observation, when paired with concurrent or stimulated-recall verbal reports, can uncover behavioural manifestations of strategy use that learners themselves rarely articulate. White (1995), for instance, demonstrated that noting down, listing, or underlining during a note-taking task only became visible through an observer's lens. Macaro's (2001) reappraisal demonstrated how teachers can detect on-the-spot "processing-time-buying" fillers (e.g., "uh," "mm"), reliance on peer support, dictionary consultation, or circumlocution, which can be treated as evidence that would otherwise remain buried in learners' covert cognition.

On the other hand, observation faces numerous limitations. First of all, it captures only visible phenomena, leaving out the mental and cognitive processes that often underpin language learning (Cohen, 1998; Naiman et al.,1996; O'Malley & Chamot, 1990; Rubin, 1975; Wenden, 1991). As Naiman et al. (1996) and Cook (2008) emphasised, even observable actions may fail to reveal the intentions or reasoning behind them. Observers risk misinterpreting what learners are doing cognitively, which can be a particularly relevant concern when investigating learners with special educational needs, whose

strategy use may not be evident in overt behaviours. Moreover, the observer's paradox may occur during observed classes. In more specific terms, Allwright & Bailey (1991) noted that the presence of an observer or recording equipment may alter participants' natural behaviour and pose further threats to research validity. Learners with SEN may feel particularly uncomfortable when being observed or recorded, which can further inhibit the very use of strategies under investigation. As such, it is recommended to combine structured observations with complementary methods, such as interviews, think-aloud protocols, or learner diaries, to capture a more comprehensive and valid picture of strategy use.

3.1.3. Interviews

Interviews constitute one of the most flexible qualitative instruments available to applied-linguistics researchers. According to White et al. (2007, p. 94), retrospective interviews were among the earliest techniques used to investigate LLS (see also Naiman et al., 1996; Rubin, 1975. Dörnyei (2007) noted that interviews are designed to elicit participants' insider perspectives on their language-learning experiences in the form of a professional conversation. He distinguishes three types of interviews:

1. *Structured interviews* follow a fixed schedule, ensuring cross-participant comparability, but they also curtail spontaneity and require labour-intensive coding.
2. *Unstructured (ethnographic) interviews* rely on rapport and minimal prompting, allowing exploration of personal narratives at the cost of analytic tractability.
3. *Semi-structured interviews,* the most widely adopted compromise, combine a prepared guide with the flexibility to pursue emergent themes, and are therefore well-suited to classroom research.

Within studies of learning strategies, interviews are seen as an important tool thanks to their flexibility - an interviewer can seek clarification and elaboration from learners during the conversation. The obtained data provide comprehensive information that allows for a deeper understanding of strategy use influenced by cultural, contextual, and individual factors (White et al., 2007). Pawlak (2009a) noted that learners are typically eager to provide answers, and they often cannot leave a question unanswered, which is a common issue in questionnaires. Moreover, during the retrospective interview, the interviewer may ask additional questions or provide examples to enable learners to articulate the cognitive, metalinguistic, and affective aspects of their work and reasoning.

Interviews offer several methodological advantages. Their dialogic, interactive character regularly yields narratives that are both richer and more precise than those elicited by self-report questionnaires (Trendak, 2015). When the interview takes place immediately after a pedagogic event or is framed as a video-mediated stimulated-recall session, the discussion can be anchored in concrete classroom episodes, thereby improving ecological validity and mitigating memory decay (Chamot, 2004). Dörnyei (2007) pointed out that a carefully prepared interview guide secures systematic treatment of the core themes while retaining sufficient elasticity to accommodate unforeseen lines of enquiry. This balance of structure and adaptability proves particularly useful when examining learners' grammar-learning strategies.

Several limitations counterbalance the aforementioned benefits. Because the technique depends on learners' capacity to recall and verbalise essentially internal cognitive activity, the resulting data are vulnerable to memory lapses and to the socially desirable image of respondents (Trendak, 2015). Cook (2008) also noted that strategic processing remains subconscious and, hence, it can be inaccessible to introspection. Dörnyei (2007) outlined that, from the researcher's perspective, conducting interviews is resource-intensive and requires good communication skills. Furthermore, as interviews are not anonymous, there is a chance that the respondent will try to present themselves in a more favourable light than in reality. The quality of the interview depends on the interviewee's communication skills; some respondents may be too shy or inarticulate to produce sufficient data, while others may be too verbose and generate a lot of less-than-useful data.For these reasons, it is recommended to triangulate interview data with complementary evidence, such as classroom observations or learner artefacts, to enhance the trustworthiness of the findings.

3.1.4. Diaries and Study Journals

Written diaries, logs, and journals have become important introspective tools for strategy research, offering perspectives that complement the snapshot data of other research methods, such as questionnaires or interviews. Dörnyei (2007) noted that diaries have been used in applied linguistics to obtain personal accounts of the experience of language learning from the learners, their parents, or other participants in the process. In the context of grammar learning strategies, diary entries create a time-sequenced narrative of learners'

language learning journeys, enabling researchers to track how their grammar learning strategies develop and fluctuate across different tasks and contexts. Such records, as noted by White et al. (2007), can be wholly open-ended or scaffolded by prompts or rating scales, allowing for the analysis of learners' current strategy repertoires, shifts following strategy instruction, and the qualitative depth with which strategies are applied. Recent innovations, such as e-journals, address several logistical challenges associated with traditional paper-based diaries. Because entries can be submitted remotely and are automatically time-stamped, they facilitate precise alignment with complementary data sources, such as interviews, questionnaires, and classroom artefacts. When researchers maintain a parallel, reflexive journal, they create an audit trail that documents analytic decisions, thereby enhancing the credibility of the study. The two records operate synergistically: learners' e-journals capture the ongoing enactment of grammar-learning strategies, while the researcher's notes chronicle the interpretation of those observations.

Because diary writing is private and unobtrusive, it grants the researcher access to the domains of learners' lives that are otherwise difficult to observe (Gibson, 1995, as cited in Dörnyei, 2007, p. 157). The method also turns participants into co-researchers who interpret their behaviour, yielding an "insider" account that is prized in qualitative inquiry. Regular entries capture intra-individual fluctuation over time, enabling fine-grained analyses of how grammar-learning strategies emerge, persist or fade in response to particular tasks or stimuli. Halbach (2000) adds that diaries are a valuable resource in strategy exploration s they offer the possibility to analyse learners' entries from different perspectives. She turned to learner diaries for a range of interrelated goals: to capture how students applied learning strategies, to gather evidence of how strategy training affected those practices, to track any shifts in strategy use over time, and to develop a rating scale for assessing those strategies. Because diaries provide a steady flow of background detail, they also enable researchers to disentangle the causal relationships between variables that might otherwise remain obscure.

On the other hand, Dörnyei (2007) emphasised that diary studies have several limitations. First of all, they place considerable demands on participants: they must be literate and comfortable writers. They must also be trained in the protocol and sustain regular, high-quality entries despite competing commitments. When learners grow tired, forget to write, or lose motivation, entries become sparse or disappear altogether, undermining the continuity of the longitudinal record. In practice, entry length and depth tend to decline over time (Gibson, 1995). Pawlak (2009a) mentioned other drawbacks,

including subjectivity and the difficulty in interpreting and analysing the gathered data. Hence, it is advisable to use diaries and journals in conjunction with other instruments to enhance the reliability of the data.

3.1.5. Case studies

According to Wilczyńska and Michońska Stadnik (2010), a case study is a hybrid research method using multiple techniques for data gathering and analysis. Within a case study, it is possible to connect qualitative procedures with research tools and techniques typically used in quantitative research. The individual case may be a single student, a group of learners or even a school or a learning programme. The investigation is based on a narrowly defined problem, examined in a given educational and social context. This approach enables researchers to grasp the complexity of the case under study, viewing it as an illustration of a more general theory of the phenomenon being investigated.

Stake (1995, 2005) distinguished three categories of case studies: intrinsic, instrumental, and multiple (collective). The intrinsic case study is used to comprehend the nature of some instances that draw researchers' interest (Dörnyei, 2007). An instrumental case study is conducted to help to understand a broader issue, in which the case itself is of secondary importance, serving primarily as a tool for exploring that phenomenon. The third type, the multiple or collective case study, involves examining several cases in detail to develop a more comprehensive understanding of a given issue.

As emphasised by Dörnyei (2007), a case study enables researchers to obtain a thick description of a complex social issue embedded within a particular cultural context, which is hardly possible with the use of different methods. Moreover, the rich and in-depth insights allow researchers to examine how a particular set of factors comes together and interacts in shaping a particular phenomenon. Properly conducted, case studies offer high completeness, readability, and depth of analysis, which can help generate new hypotheses, models, and insights (Duff, 2008). Furthermore, this method can be used to explore new or problematic research areas and is well-suited for combining with other research approaches in mixed-method studies, as it can provide an unparalleled understanding of longitudinal processes (Dörnyei, 2007).

As suggested by Duff (2008), most limitations of case studies stem from their comparison with large-scale experimental methods. However, the contrast is inappropriate

as the two types of methodologies are intended to achieve different goals. The case study suffers from some limitations common to qualitative research, such as subjectivity and a lack of replicability; hence, Dörnyei (2007) suggests using it in multiple-case designs and in combination with other methods.

In the field of investigating grammar learning strategies, Trendak (2015) maintained that case studies can be used for different purposes, such as describing, identifying, or classifying strategies. This research tool can also help to investigate the influence of these strategies on L2 learning or to assess the effectiveness of learning strategy training.

3.1.6. Experimental design

Well-established in science, experiments help to determine whether a given factor causes the predicted effect or change. As Dörnyei (2007) stated, a typical experimental design is an intervention study which contains at least two groups: the "treatment" or "experimental group" which receives a treatment, or is exposed to some condition, and the "control group", which provides a baseline for comparison. The crucial element of experimental design is the setting; procedures should take place in a tightly controlled environment where only the target variables are varied, while others are kept constant (Johnson & Christensen, 2004). Cook and Campbell (1979) emphasised that to ensure the proper comparability between an average participant in one group and the average participant in the other group, the random assignment of participants to experimental and control groups should be provided (Dörnyei, 2007). As for the classroom setting, it is impossible to assign the students randomly to the experimental and control groups. This is primarily due to practical constraints inherent in the school environment; educational institutions operate with pre-existing, intact class groups that cannot be reorganised solely for the purpose of the study. Research conducted under these conditions, where existing groups are used instead of randomly assigned ones, is therefore referred to as a quasi-experiment (Dörnyei, 2007).

During the procedures, progress is measured using pre-tests administered before intervention and post-tests administered after the treatment has been completed. The obtained data can be analysed in two ways. The first step is to compute the gain scores separately for the experimental and control groups. Subsequently, the gain scores are analysed using t-tests or analysis of variance (ANOVA) to determine whether the gain in

the treatment condition was significantly greater than in the control condition. The second method is the analysis of covariance ANCOVA, which compares post-test scores while controlling for pre-test scores. The method enables the reduction of the initial group differences (Dörnyei, 2007).

Dörnyei (2007) also stated that the experimental methodology helps to establish the cause-and-effect relationships between the examined variables; hence, it can be used to evaluate educational innovations. Although the design of a quasi-experiment enables the examination of authentic learning environments, it may cause selection bias. The bias means that some outcome differences in the study are present, not due to the treatment, but rather as a result of pre-existing differences between the compared groups. As Mackey and Gass (2021) pointed out, this tension between internal validity and ecological authenticity is a key limitation of classroom-based experimental research, which often requires methodological compromises. Furthermore, the intervention study can examine only one or two target variables at a time, which is a significant limiting factor due to the numerous individual differences that interact during L2 lessons.

Despite its limitations, the experimental methodology is crucial when examining the effect of strategic training on learners' grammar and overall learning progress (Trendak, 2015). It can also be helpful to notice the differences between students with and without learning difficulties within the two research groups. Studies on grammar learning strategies that are fully based on experimental procedures are rare, as they inherently lack a proper control group or a reliable measure of the effectiveness of the strategy training process. Moreover, it can be not easy to draw general conclusions based on a single experimental study (Pawlak, 2009a). As the classroom is a highly complex environment that cannot be treated as a closed laboratory, a mixed-methods approach, combining several research strategies, can broaden the scope of investigation and enrich the researcher's ability to conclude (Dörnyei, 2007).

3.1.7. Action research

Action research (AR) is a broad term for methods that integrate research and teaching, in which the teacher serves as both practitioner and researcher (Burns, 2005). This model of research emphasised the role of teacher autonomy, whereby teachers reflect on their practice and take action to improve the effectiveness of their work. The aim of the research

can be broad and encompass a range of factors that shape educational and social processes within a given environment (Wilczynska & Michońska Stadnik, 2010). Mills (2011) described action research as a deliberate and methodical process that educators use to gather insights and, in turn, enhance how their particular setting functions, shaping their instructional practices and advancing student learning. Through collaborative action research, teachers work together to tackle genuine issues that arise in their classrooms or to design practices aimed at boosting pupils' achievement. Because the inquiry centres on teachers' own classrooms, the process provides teacher-researchers with an authentic and meaningful form of professional learning. Action research takes place in a cycle (see Figure 14).

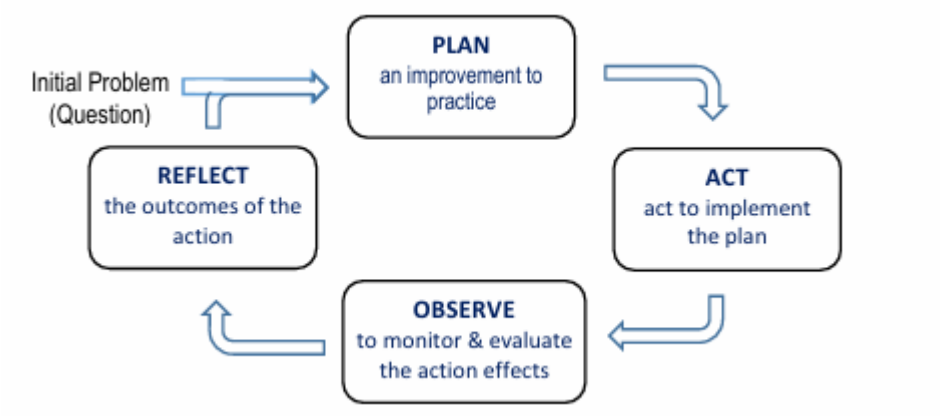


Figure 14. The four stages of the action research cycle (Pardede, 2018, p.284)

The process of action research begins when teachers identify a problem present in a given classroom. It is followed by setting and designing the intervention that aims to solve the problem (Plan); subsequently, the planned activities are implemented (Act). During the procedures, teachers gather information and monitor the actions (Observe). The final step is to examine the gathered data individually and collaboratively (Reflect), leading to revising classroom activities based on the results or what has been learned. If the intervention does not solve the problem, the revised plan is used to conduct the second cycle, which consists of the same four stages. The cycle can be repeated as many times as necessary to achieve the desired outcomes (Winter & Munn-Giddings, 2001).

Dörnyei (2007) noted that the popularity of action research is increasing, but it still lacks institutional support and widespread implementation. Edge (2001) and Croockes (1993) proved that action research can lead to fruitful self-reflection, local innovation and professional empowerment. On the other hand, Wilczynska & Michońska Stadnik (2010, p) list the shortcomings of this research method:

1. Insufficient rigour in the research procedure - the scientific value of the research may be questionable unless the teacher familiarises themselves with the state of research based on the literature on the subject, defines their research objectives and questions, and then conducts systematic observation of the situation using appropriately diversified research methods.

2. Data overload and complexity - as the gathered data may be highly detailed and multidirectional, researchers may face challenges in organising, coding, and synthesising large amounts of information, which can lead to selective attention or unintentional data omissions.

3. Subjectivity and researcher bias - the researcher is also a teacher; hence, their experiences, attitudes, and expectations may influence data collection and interpretation.

4. Difficulties in replicability and making generalisations - the study focuses on describing a specific individual teaching situation and its evolution, which limits the possibility of broader conclusions.

White et al. (2007) illustrate that AR can function as a flexible, cyclical framework for implementing strategy-based instruction. They demonstrate that through this framework, teachers (and sometimes researchers) can systematically (1) pinpoint learners' strategic needs, (2) introduce or adjust SBI techniques, and (3) evaluate and refine those techniques across repeated plan-act-observe-reflect cycles. Because AR positions teachers as co-investigators, it ties professional development directly to classroom experimentation, turning SBI initiatives into evidence-driven, collaborative projects that can be adapted and scaled as findings are shared.

The preceding overview of methodological approaches illustrates the range of tools and procedures available for investigating the use of strategy in the L2 classroom. Building on this theoretical foundation, the subsequent section reviews empirical studies concerning language learning strategies (LLS), grammar learning strategies, strategy-based instruction, and the specific challenges faced by learners with difficulties in foreign language acquisition.

3.2. Empirical Perspectives on Language Learning Strategies: Insights for Grammar Instruction and Learners with Difficulties

3.2.1. Learner Strategies in Second Language Acquisition

The first studies on the use of strategies in second-language classrooms were conducted in the 1970s by Rubin (1975). She examined adult, experienced learners to find and describe the features of effective learners. Rubin's concept was further explored by empirical research performed by Naiman et al. (1978). The main aim of the study was to identify the strategies and characteristics of successful foreign language learners. The study involved 72 students from grades 8, 10, and 12 in Ontario, Canada, who represented diverse language backgrounds and proficiency levels. Researchers employed a combination of language proficiency tests, cognitive and personality questionnaires, classroom observations, and interviews, utilising both quantitative and qualitative methods. For the data analysis, statistical correlation techniques were used to analyse the quantitative data from tests and questionnaires. In contrast, the interview and observation data were analysed qualitatively to identify recurring themes. and strategies. They identified five key strategies among effective learners: active participation in learning, analytical understanding of language as a system, willingness to communicate, emotional self-regulation, and self-monitoring. The study also noted that motivational and cognitive-affective traits contributed to success, although they were not sufficient on their own. Although the sample size was small and the study lacked randomisation, it remains a cornerstone in language learning research. Its insights are especially relevant to studies involving learners with difficulties, highlighting which strategies may be underdeveloped and thus indicating potential targets for instructional intervention in the next decade.

Oxford & Nikos (1989) conducted a study on a group of 1200 university students in the United States, who learnt different foreign languages. The primary objective of the research was to investigate how individual variables affect the choice and frequency of language learning strategy use. The study employed a quantitative approach, utilising the SILL questionnaire, and the data were analysed using statistical correlation and ANOVA. The main findings indicate that more motivated students employed strategies more

frequently. Moreover, the proficiency level is also positively associated with the frequency of strategy use. Interestingly, students of different target languages and majors showed different strategy patterns. The study confirms that strategy use is a highly individual feature, a finding that is particularly relevant when examining students with learning difficulties.

The positive correlation between language proficiency and the use of learning strategies has been consistently supported across empirical studies. For example, Green and Oxford (1995) found, in a study of 374 university-level ESL students in Puerto Rico, that more proficient learners reported significantly greater use of metacognitive, cognitive, and social strategies. Also in Poland, Drożdział-Szelest (1997) reported in her study of state secondary school students that higher-achieving pupils used a broader range of strategies and on more frequent basis. Similarly, Griffiths (2003) examined 348 adult ESL learners at a private language school in New Zealand and confirmed similar results. Using the SILL questionnaire, she gathered data on learners' strategy use. The data were then analysed using mean frequencies, correlation, t-tests, and regression analysis. The findings confirmed that higher-proficiency students employed a wider range of strategies more frequently, particularly metacognitive and cognitive ones. These findings support the notion that as learners advance in language proficiency, they tend to become more strategic and autonomous in their learning. Building on this correlation, several researchers have investigated whether the effectiveness of strategy instruction (SI) also varies by proficiency level. These studies typically show that higher-proficiency learners benefit more from explicit strategy training, suggesting that learners' ability to engage with and apply strategies may develop in tandem with their language proficiency.

3.2.2. Strategy-Based Instruction in Language Learning: Interventions and Outcomes

The promising correlation between strategy use and language proficiency, as revealed in descriptive studies, has prompted researchers to explore whether direct intervention, through explicit strategy-based instruction, can enhance learners' performance. Several interventionist studies have demonstrated the benefits of such training across different skills and contexts. For instance, research has shown that explicit instruction can enhance L2 vocabulary learning (Morin, 2003), boost vocabulary recall through mnemonic

techniques (Rodríguez & Sadoski, 2000), and improve oral and written performance through training in communication strategies (Maleki, 2007). However, for the purposes of the present dissertation, which focuses on grammar instruction for primary school learners with special educational needs, four studies are particularly relevant due to their focus on cognitive processes, metacognition in young learners, and process-oriented instruction.

First, Ellis and Sinclair (1996) investigated how phonological working memory supports the acquisition of grammar and vocabulary in adult second language learners. Eighty-seven English-speaking adults with no Welsh were split into three conditions: overt rehearsal (repeating the model phrases aloud), silent study, and articulatory suppression (counting aloud to block rehearsal). In a single, computer-mediated session, they encountered short Welsh sentences that comprised core morphosyntactic features such as soft mutation. The researchers primarily used ANOVA to analyse the data. Immediate post-tests of vocabulary, grammatical discrimination and pronunciation revealed a clear hierarchy: participants who could rehearse overtly outperformed their silent peers, while those forced to suppress articulation achieved worse results. The principal implication is that structured phonological rehearsal substantially strengthens both lexical and grammatical uptake. Although the sample did not include learners with diagnosed difficulties, the findings point to a straightforward cognitive tactic called guided vocal rehearsal, which is easily teachable and could be woven into grammar lessons to support students with fragile working-memory resources.

Second, Ikeda & Takeuchi (2003) examined 210 university students who learnt English as their L2 in Japan. The goal of the study was to examine whether explicit strategy instruction improves reading ability and ongoing strategy use, and to determine if these effects differ by proficiency level. The participants underwent an eight-week programme embedded in regular classes, and they were divided into high- and low-proficiency groups, with each group comprising both experimental and control subgroups. The data were analysed using a range of statistical procedures, including paired-samples t-tests, sign tests, repeated-measures ANOVA, and Friedman tests. The results showed that strategy use increased significantly, but only in the high-proficiency experimental group. Low-proficiency learners showed no significant gains. Notably, strategy use persisted 3-5 months after instruction. These findings suggest that proficiency level plays a critical role in the effectiveness of strategy instruction, with more proficient learners often benefiting more from explicit training. Given that the present study focuses on learners with difficulties, who frequently operate at lower proficiency levels, it is essential to investigate

whether a tailored, grammar-focused strategy intervention can still produce measurable gains in this group.

Third, Macaro and Erler's (2008) fourteen-month classroom experiment with 62 pupils in England (aged 11-12 years, beginners in French) aimed to determine whether an explicitly sequenced programme of strategy instruction could enhance reading performance and self-management. Teachers first made the metacognitive moves - planning, monitoring, and evaluating - highly visible through explanation and modelling, then gradually withdrew support while regularly checking attitudes. The data were analysed using a mix of non-parametric and parametric statistical tests, including the Kolmogorov-Smirnov test, Mann-Whitney U test, Spearman's rho correlation, ANCOVA, and independent-samples t-tests. A comparison of pre- and post-test comprehension scores, strategy-use questionnaires, and affective surveys revealed a threefold gain: learners processed both straightforward and syntactically dense texts more accurately, began combining strategies in more sophisticated ways, and expressed notably warmer feelings toward reading. Such evidence suggests that overt coaching in metacognition promotes comprehension, strategic flexibility, and motivation outcomes, which are particularly relevant for pupils who face learning difficulties.

Finally, Goh and Tabi (2006) aimed to investigate the effect of process-based listening instruction on the confidence and metacognitive awareness of young, lower-achieving learners. Their study involved a series of eight lessons with ten primary school pupils in Singapore (aged 11-12). Each lesson combined traditional listening tasks with post-listening reflection and teacher-led discussions about listening strategies. The analysis of the qualitative data from self-reports and listening tests, the researchers found that this approach led to improved confidence, particularly among the less proficient learners. This study demonstrates that young and lower-achieving learners can benefit significantly from explicit metacognitive strategy training, underscoring the need for the kind of guided reflection that provides a strong precedent for the present research.

3.2.3. Grammar Learning Strategies

The relationship between students' use of grammar learning strategies and their achievement in English grammar was examined by Tilfarlıoğlu & Yalçın (2005). The study group included 425 participants, English students at Gaziantep University, Turkey. The

data was derived from the 43-item Grammar Learning Strategy Questionnaire (based on Oxford's taxonomy (1990) and compared to students' scores from exams and quizzes). Later analysis was conducted using t-tests and ANOVA to compare means across groups. The results found no statistically significant difference between successful and unsuccessful students in their use of GLS. Strategy use varied slightly based on educational background and duration of English study, with newer learners reporting more frequent strategy use.

Learners' preferences in the use of strategies for learning grammar were also the centre of interest for Sarıçoban (2005), who examined 100 preparatory school students at Cankaya University, Ankara, Turkey, aged 18-19, using a 38-item GLS questionnaire. Data were analysed descriptively, with item responses tallied as percentages and aggregated by strategy category (cognitive, metacognitive, socio-affective) to compare prevalence. The results showed high reliance on cognitive GLS, such as note-taking, rule memorisation, deductive/inductive reasoning and L1/L2 comparison. The participants indicated that they rarely use metacognitive strategies such as self-monitoring and evaluation, and rarely refer to peer interaction and game-based learning strategies. These results may indicate that L2 learners require overt training to develop new learning skills that are not already established in their repertoires.

Stephen & Singh (2010) conducted an intervention study with 60 Nepalese students aged 14-15 to test whether short, explicit training in metacognitive planning, monitoring, and evaluation could improve grammar accuracy among lower-secondary EFL learners. The procedures lasted for four weeks. Teachers used modelling of cognitive routines, and participants noted their reflections in journals. The results were measured using the pre- and post-grammar test and strategy-use questionnaire. Data were analysed descriptively: pre-test and two post-tests were summarised as means/percentages and score ranges for experimental versus control groups, with groups matched on pre-test scores and no inferential statistics applied. The results showed that the experimental group outperformed controls on the post-tests, and journal entries showed increased use of planning and monitoring. The study shows that even a brief metacognitive coaching can lift students' grammatical accuracy and strategic self-direction.

Mirosław Pawlak and his colleagues (2008, 2009, 2012, 2013, 2018, 2023) have conducted the most significant and methodologically advanced research on GLS interventions in the Polish context. Of particular importance to the present study is his work to design and validate a specialised questionnaire, the Grammar Learning Strategy

Inventory (GLSI) (Pawlak, 2018). In this study, conducted among 106 university students majoring in English in Poland, the data were subjected to a range of statistical analyses, including Pearson's correlation, Kendall's W, and Exploratory Factor Analysis (EFA). The analysis revealed that the GLSI is a largely valid and reliable tool for collecting data on the use of grammar learning strategies. This validation provides a strong methodological foundation for its use in subsequent research, including the current dissertation, although the author noted that the affective and social strategy sections required further improvement.

Other studies conducted by Pawlak have provided further context for understanding GLS use. His earlier descriptive research consistently showed that Polish university-level EFL learners tend to rely heavily on rule-focused, cognitive strategies, mirroring how grammar was taught and tested (Pawlak, 2008, 2012). Furthermore, his correlational studies failed to find a strong, positive relationship between the general use of grammar learning strategies and language attainment, with only a weak link found for strategies related to explicit deductive learning and students' grades (Pawlak, 2009). Other investigations explored the specific strategies learners use during communication tasks (Pawlak, 2012, 2013), the limited contribution of GLS to mastering specific structures like the English passive (Pawlak, 2021), and cross-national comparisons of strategy use (Pawlak & Csizér, 2023). Collectively, these findings underscore a cognitive-strategy bias and the limited, though non-trivial, contribution of GLS to actual attainment. Based on these results, it may be suggested that scaffolded GLS training (especially for younger pupils with learning difficulties) can help learners to develop metacognitive self-regulation and effective communicative deployment.

Another researcher interested in grammar learning strategies in Poland is Mystkowska-Wiertelak (2008), who conducted a research project investigating the spontaneous use of grammar learning strategies among secondary school students. The participants were 160 Polish state school learners of English, aged 16-18, with lower-intermediate to intermediate proficiency, studying in various schools. The study employed a one-shot classroom survey administered during a regular EFL lesson. The questionnaire consisted of 50 yes/no items and was an adapted version of Oxford's SILL (1990), reworded in Polish. The data were analysed using descriptive statistics, and a correlational comparison was made between average strategy use and school grades. The results demonstrated that high school students adopt a broad strategy-mix; however, they mainly rely on memory and compensation strategies. Interestingly, participants reported seldom

using affective strategies. The results confirmed that higher overall GLS use was associated with better course grades, which may suggest that encouraging students to use grammar learning strategies more frequently (with the help of SBI) may have a positive impact on their learning outcomes.

In a multi-cohort study, Trendak (2015) investigated how grammar strategy training affects English learners at the junior high, senior high, and university levels. The primary objective of the study was to investigate whether a strategy-based instruction programme focusing on cognitive and memory strategies can enhance learners' mastery of emphasis constructions in English. Forty participants were divided into two groups and underwent a six-week classroom intervention consisting of awareness-raising tasks on emphasis structures in TL. The data were collected using the SILL before and after the pedagogic intervention, as well as through pre-tests, immediate and delayed post-tests, diaries, and questionnaires. They were analysed by computing group means and standard deviations, and conducting paired t-tests to compare performance across time points, with parallel test formats to limit practice effects. Although the study suffered from some limitations that temper its generalizability, as it addressed only one grammatical structure, tested only explicit knowledge, and relied on the generic SILL, the findings show that both groups improved on the post-test. Moreover, the memory group achieved larger and longer-lasting accuracy gains, suggesting that even a brief, mnemonic-rich SBI can meaningfully boost grammatical accuracy, a finding directly relevant to strategy instruction for learners with special educational needs.

More recently, very few studies worldwide address the issue of SBI for grammar learning strategies. Ismail & Dedi (2021) conducted a study on 72 Indonesian second-semester undergraduates to test whether a short, classroom-embedded programme of SBI in GLS benefits learners' grammatical competence. The participants were randomly divided into two groups: experimental and control. Students in the experimental group participated in eight SBI lessons, one per week, integrated into a general English course. During the lessons, the teacher modelled and practised metacognitive planning, rule analysis, and memory mnemonics. The results were measured using a pre- and post-grammar test, as well as a GLS questionnaire adapted from Oxford's (1990) taxonomy. The data were analysed with descriptive statistics and an independent-samples t-test comparing post-test grammar scores between the SBI and control groups (with a pre-test baseline check), while questionnaire responses were summarised via frequency analysis. The analysis of the gathered data revealed that both groups showed slight improvement on the post-test;

however, the differences between the groups were not statistically significant. Moreover, the questionnaire demonstrated a modest rise in reported strategy use only for the experimental class. The results may indicate that an eight-week period is too short to develop strategic behaviour in learners. Hence, strategies should be scaffolded in the classroom repeatedly to support learners in internalising new learning behaviours.

Despite the wide range of studies analysed, it is evident that all of them were conducted with students from mainstream education. In addition, empirical studies most often involve students or adult learners, and rarely refer to students in public schools. Students with special educational needs, whether related to dyslexia, working memory limitations, attention deficits, or language learning difficulties (see Section 1.4.5.), are conspicuously underrepresented in the empirical data on language learning strategies. Therefore, the next section will discuss studies that describe students with SEN and their learning process in English.

3.2.4. SEN L2 learners

Research into the challenges faced by L2 learners with special educational needs began in the late 1980s and has since evolved to explore the cognitive underpinnings of these difficulties, the perspectives of learners and teachers, and the efficacy of targeted interventions. Early studies, such as Gajar's (1987), established a clear link between low language aptitude, specifically in phonetic coding and grammatical sensitivity, and chronic failure in foreign language classes, highlighting the need for early screening. Subsequent research has consistently identified phonological processing as a core deficit area. For example, Ho and Fong (2005) found that phonological awareness was the main obstacle for Chinese dyslexic children learning English, while Helland and Kassa (2005) noted that Norwegian dyslexic pupils with poor comprehension struggled most with English morphology and spelling.

Beyond identifying these core deficits, research has also provided rich insights into the lived experiences of SEN learners and their teachers. Judit Kormos has investigated these challenges from multiple angles in the Hungarian context. Her research reveals a consensus between teacher and student perspectives. Teachers report that dyslexic learners often exhibit a slow pace of work and struggle with phonological issues, leading educators to use multisensory techniques despite feeling underprepared (Kormos & Kontra, 2008).

This mirrors learners' own experiences as in one of the studies, they reported high anxiety in fast-paced classes and prefer the support of small groups, frequent revisions, and assessments that de-emphasise spelling accuracy (Kormos et al., 2009). Furthermore, Kormos's research into the motivational dimension demonstrates that dyslexic learners often possess a weaker 'Ideal L2 Self,' which in turn predicts lower strategic effort in their language studies (Kormos & Csizér, 2010).

More recently, the focus of research has shifted from descriptive studies to interventionist projects designed to test the efficacy of specific pedagogical approaches. Liontou (2019) investigated how a technology-enhanced learning environment (TELE) supports reading comprehension and attitudes toward EFL learning in children with ADHD. Ten children aged 9-12, diagnosed with ADHD and learning English at an A2 level, took part in a year-long intervention that blended traditional lessons with supplementary computer-based activities. The TELE incorporated a range of supports, including visual prompts, colour fonts, and mind-maps, alongside features designed to reduce anxiety, such as options for resubmission and supportive feedback delivered via speech bubbles rather than simple scores. The results from a post-intervention attitude questionnaire were highly positive: a vast majority of students (90%) preferred the online TELE, describing it as a stress-free environment that boosted their confidence and independence. Furthermore, 80% of participants agreed that visual supports and embedded dictionaries directly aided their comprehension. The study's outcomes suggest that a thoughtfully designed TELE can significantly enhance motivation, self-esteem, and success for foreign language learners with ADHD.

Reraki (2022) investigated the impact of dyslexia-friendly practices on student motivation and performance in a Greek EFL context. The study involved final-year primary school pupils in Greece, in classes that each included at least one student with a formal diagnosis of dyslexia. Following a training programme based on the British "Dyslexia Friendly Schools" framework, teachers implemented a seven-week intervention using multisensory teaching, group work, and structured instruction. Data were collected through interviews and lesson observations. The results revealed that while the intervention enhanced motivation for most learners, performance gains were slight for students with dyslexia, who also experienced high anxiety when speaking in English. Furthermore, the study identified negative peer attitudes towards collaborative work and insufficient teacher awareness as significant barriers to successful inclusion.

Directly aligning with the present research on strategy-based grammar instruction for primary students with SEN, Tribushinina et al. (2022) tested the efficacy of a specific grammar intervention, the 'CodeTaal' method, for 75 Dutch-speaking primary school children (aged 11-14) with Developmental Language Disorder (DLD). Using a 12-week, quasi-experimental pre-test/post-test design, the study compared an intervention group receiving explicit, multimodal, and cross-linguistic instruction with a control group following a standard communication-focused curriculum. Progress was measured using a Grammaticality Judgement Task and a narrative production task. The results indicated that the CodeTaal group significantly improved their ability to identify ungrammatical English sentences and even showed improved grammatical accuracy in their native Dutch. However, neither group demonstrated significant gains in the accuracy of their spoken English. These findings suggest that for primary school students with language disorders, an explicit, strategy-based grammar intervention can enhance metalinguistic awareness, even if L2 production does not immediately improve.

In Poland, Nijakowska (2008, 2010) conducted experimental research with secondary school pupils diagnosed with developmental dyslexia to test if a multisensory training programme could improve their English reading speed, accuracy, and spelling compared to a control group. Her 2010 study involved an experimental group of dyslexic students who underwent a six-month training programme, and two control groups (one with dyslexia, one without) that received regular instruction. Progress was measured using a pre- and post-test battery. The results showed that the experimental group significantly reduced spelling errors and increased reading speed, outperforming the dyslexic control group and even some non-dyslexic learners. These findings prove that learners with difficulties can be supported by multisensory, mnemonic-rich instruction. Nijakowska later led the EU-funded DysTEFL projects, which developed professional-development materials to help teachers implement similar techniques.

Jaworska's (2018) case study of a dyslexic upper-secondary student aimed to explore the link between his individual learning style, strategy use, and potential for autonomy. The researcher employed multiple methods, including the analysis of documents, various questionnaires and tests, and an unstructured interview. The results revealed a significant mismatch: despite having a strong kinaesthetic-tactile learning style, the student's most-used strategies were social and cognitive. He rarely employed movement-based memory techniques, relying instead on rule-focused, note-taking

strategies while underusing the metacognitive and affective tools that could have enhanced his learning efficiency.

Łockiewicz et al. (2020) explored how dyslexia affects English word and non-word decoding and how native-language skills, such as phonological awareness and rapid automatised naming (RAN), influence this process. Using standardised cognitive tasks, they compared 60 junior-high boys split into four groups: English and Polish-speaking students, with and without dyslexia. The results showed that dyslexic students in both languages were slower and less accurate than their non-dyslexic peers. Phonological skills in the native language significantly predicted decoding ability in English students, while for Polish students, RAN was the key predictor for recognising English sight words. The study highlighted that native-language skills are more influential than language-specific factors, with RAN emerging as a universally important predictor.

3.3. Rationale for the study and study questions

The last decade has seen a growth in the number of primary school students diagnosed with learning difficulties. Although dyslexia is best described in pedagogical literature, the reality of the Polish classroom is that most students suffer from non-specific learning difficulties, stemming from slower cognitive development or deficits in their cognitive structures. The COVID pandemic has also made an impact on the school environment, causing visible gaps in basic knowledge and skills in learners who took part in digital learning during their first years of primary school. Hence, currently, most Polish L2 English classrooms are mixed-ability classes with special educational needs learners studying together with their more proficient peers. This situation is a significant challenge for teachers, whose university courses often do not fully prepare them to support the specific needs of these learners (Kormos & Kontra, 2008). The difficulty is particularly acute in the domain of English grammar, which is a foundational skill essential for communicative competence and a key component of high-stakes national examinations. Given the constraints of the mixed-ability setting that limit individualised instruction, training students to become more autonomous learners is a crucial and pragmatic goal. Research consistently demonstrates that a learner's ability to self-regulate through the conscious use of learning strategies is linked to greater proficiency and academic success (Green & Oxford, 1995; Macaro & Erler, 2008). Therefore, a practical solution is to help students to

develop their strategies to become more independent learners. Research has shown that when learners use strategies to guide their learning, they tend to achieve better results (Green & Oxford, 1995; Macaro & Erler, 2008). However, when it comes to grammar, students often stick to basic strategies like memorisation and need to be explicitly taught more effective ones (Pawlak, 2012; Sarıçoban, 2005). Despite this, there is a clear gap in the research as very few studies have focused on grammar strategy training for primary school students with SEN. This study aims to fill that gap. Drawing on an action research approach within a real classroom setting, this project uses pre- and post-tests and questionnaires to develop and evaluate a targeted programme for teaching grammar strategies. The ultimate goal is to find practical, evidence-based ways to help this important group of students to succeed in learning grammar.

Grounded in the theoretical rationale and earlier findings, the following hypotheses were advanced:

H0: There is no significant positive impact of direct strategy training in the L2 English classroom on SEN students' grammar learning progress.

H1: There is a significant positive impact of direct strategy training in the L2 English classroom on SEN students' grammar learning progress.

In more specific terms, the study sought to address the following research questions:

1. Do students with special educational needs intuitively use learning strategies in their educational practice? If so, which strategies do they use?
2. What is the effect of strategy training on SEN students' English grammar learning outcomes?
3. Are the effects of strategy training for SEN students the same or different from those obtained by students without learning difficulties?
4. What is the relationship between the SEN students' grammar learning outcomes and GLS preferences?

The effects of the intervention will be measured quantitatively through the statistical analysis of pre- and post-test scores. This numerical data will then be interpreted and enriched by a qualitative analysis of students' strategic preferences and classroom experiences. This combined approach is essential for a complete and reliable picture of a real classroom.

3.4. The Design of the Study

The study, conducted in the school year 2022/2023, employed a mixed-methods approach, combining the quasi-experimental method with action research. The interventionist practices were complemented by quantitative, survey-based research techniques, which enabled the researcher to gather data about the students' existing repertoires of grammar learning strategies. This methodological triangulation was selected to accommodate both the exploratory and interventionist dimensions of the research while examining the impact of grammar strategy training on school learners, including those with diagnosed or suspected learning difficulties.

The questionnaire study enabled the capture of self-perceived strategy use across a broad sample. As the answers were anonymised (students coded their questionnaires), it was suitable for learners who may feel self-conscious when reporting on their own learning strategies, achievement, or perceived weaknesses in front of peers and teachers, fostering more honest self-reports (Dörnyei, 2007). The data from the questionnaire served as a baseline for strategic awareness prior to the intervention, helping to identify areas where strategy training was most needed.

Educational settings do not allow for random participant assignment, which is essential for ensuring the validity of experimental research. Hence, the quasi-experiment was conducted to compare results between two naturally occurring, experimental and control groups (Dörnyei, 2007; Mackey & Gass, 2021), examined in connection with the grammar learning progress and further divided into two sub-groups each.

In consequence, there were two experimental groups exposed to strategy training and two control groups that received no instruction. Table 7 presents a visual summary of the study components. The quasi-experimental part comprises the pre-test (T1), the SBI intervention delivered in Sessions 1 -10 to experimental groups only, and the post-test (T2). The action research strand spans Sessions 1 -10, with baseline questionnaire administration in S1 and summative questionnaire during S10 and ongoing analysis of sessions.

Table 7. Overview of study components (quasi-experiment and action research, by session numbers)

Phase	Quasi-experiment	Action research
Baseline	T1 - grammar pre-test for 7E, 8E, 7C, 8C	Session 1 - baseline questionnaire; planning of AR cycle
Intervention	Session 1 -Session 10 - intervention lessons (treatment): SBI only in 7E &8E, ; 7C &8C= regular classes (no SBI)	Session 2 -Session 10 intervention lessons (treatment); researcher field notes, observation protocols, student artefacts
Outcome	T2 - grammar post-test (all groups); pre -post and between-group comparisons	S10 - exit questionnaire; synthesis of session analyses

The quasi-experimental strand refers to the treatment delivered in sessions 1-10, whereas in the action research strand, these sessions serve as the units of analysis within the plan-act-observe-reflect cycle. The whole treatment extended over eight months (see Table 8). A detailed description of the groups and the course of the intervention is provided in Subsections 3.6. - 3.7.

Table 8. Research timetable

Session	**Action**
Session 1 September	Questionnaire
Session 2 September	Awareness-raising training - Metacognitive strategies
Session 3 October	Awareness-raising training Cognitive strategies
Session 4 October	Awareness-raising training Affective, compensation and GLS used to deal with corrective feedback
Session 5 November	Awareness-raising training Memory strategies
Session 6 December	Strategy training practice - self-reflection
Session 7 January	Strategy training - practice - metacognitive
Session 8 February	Strategy training - practice memory strategies and irregular verbs
Session 9 March	Strategy training - practice - tenses
Session 10 April	Strategy training - evaluation of strategies

The design also mirrored the elements of action research as the researcher served as the teacher in experimental groups and took an active, reflective role. The researcher monitored, adjusted and evaluated the intervention in line with Burns (2005) and White et al. (2007). The results were measured utilising one pre-test and one post-test. This way, the

study also responded to the call for evidence-based classroom innovation, linking theory with real-world practice and offering insights for improving SBI for learners with SEN.

3.5. Research context

The study was conducted in a typical Polish primary school located in a town of approximately forty thousand citizens in western Poland. Over 500 pupils attend the school, and the average class size is 24 students. At the time of the study, there were 58 students officially diagnosed with special educational needs, as confirmed by a certificate from the local Psychological-Pedagogical Counselling Centre (Poradnia Psychologiczno-Pedagogiczna). The primary foreign language is English, which learners begin studying in the first grade and continue through to the eighth grade. The specific English classroom setting and rules are described in detail in Section 2.5. The secondary foreign language is German, which is taught in the seventh and eighth grades.

Due to the district where the school is located, students come from a wide range of socio-economic backgrounds. This diversity contributes to a highly mixed-ability classroom profile, where students differ not only in terms of their individual cognitive and affective factors, but also in the level of educational support and resources available to them at home..

The intervention was conducted during the school year of 2022/23 in the form of pedagogical innovation approved by a school principal and the parents' council. The participants of the present study are students of Grade 7 and 8 who experienced the COVID pandemic while being in Grades 5 and 6, respectively. Undoubtedly, the period of online learning connected to COVID is an important contextual factor as it likely impacted students' foreign language acquisition.

3.6. Participants

The participants of the study included 72 students attending one of the primary schools in Nowa Sól, which is considered to be a typical Polish primary school. The participants were 41 males and 31 females, born in 2009 and 2010.

While the participants' regular classes consisted of approximately 23-24 students, the final analysis was conducted on groups of 18 students each. This adjustment was

necessary due to student attrition as some learners were absent during key stages of the research, such as the pre-test or post-test sessions. Ensuring equal group sizes allows for a more reliable comparison of the results. Each group consisted of students with learning difficulties confirmed by certificates issued by the Pedagogical Council. There were ten SEN students in experimental group 7E, eight SEN eight SEN students in experimental group 8E, and the control groups included eight SEN students in each group, that is 7C and 8C. Table 9 presents the distribution of participants across the four groups, including the number of learners with SEN in each.

Table 9. Sample characteristics: group size and SEN status across four groups (7E, 8E, 7C, 8C)

	Experimental groups		Control groups	
Group number	7E	8E	7C	8C
Total number of learners	18	18	18	18
SEN learners	10	8	8	8
Non-SEN learners	8	10	10	10

A notable characteristic of the seventh-grade cohort requires explanation. These students were subject to a national educational policy that allowed their parents to choose between starting school at age six or seven. Many parents, usually to allow their children an additional year for developmental readiness, opted for the later start. This trend appears to be reflected in the composition of the experimental group from this grade, which has a high concentration of learners with diagnosed SEN (10 out of 18 participants).

All the SEN participants in experimental groups were diagnosed with non-specific learning difficulties, with a wide range of different variables depicted in Table 10.

Table 10. Experimental group participants' learning difficulties

	Code (ENG)	**English description**	**Number of participants**
1	PACE-SLOW	slow working/learning pace	12
2	INT-LOW	low intellectual functioning / disharmonious cognitive development	9
3	PHON-ANA	delayed phonological analysis and synthesis	12
4	LATERAL-R	right-hand / eye dominance	7
5	LOG-MATH	weak logical-mathematical reasoning	7
6	VISUO-MOTOR	poor visuomotor coordination	12
7	EMOT-REG	emotional-regulation difficulties / heightened sensitivity	6

8	LATERAL-MIX	mixed (cross) dominance	4
9	MOTIV-LOW	low learning motivation	8
10	LANG-EXP	reduced expressive language skills	4
11	WRK-MEM	reduced working / phonological memory	5
12	ATTN-CONS	attention / concentration difficulties	2
13	MATH-ACH	mathematics learning difficulties	2
14	READ-COMP	reading-comprehension difficulties	4
15	VIS-PERCP	visual-perception deficits	5
16	WRITE-HAND	illegible handwriting / reduced graphomotor skills	4
17	BEH-CONS	behavioural / conduct problems	1
18	LATERAL-L	left-hand / eye dominance	1
19	VIS-MEM	reduced visuospatial memory	5
20	FATIGUE	increased fatigability / fluctuating activity	1
21	LANG-REC	receptive language impairment	1

A qualitative analysis of the students' documents shows a complex combination of co-occurring difficulties. The most prevalent issues within the group were deficits in phonological analysis and synthesis (PHON−ANA) and poor visuomotor coordination (VISUO−MOTOR), and slow working pace (PACE−SLOW), each identified in 12 of the 18 cases. Other frequently observed characteristics included disharmonious intellectual functioning (INT−LOW; 9 cases), and low learning motivation (MOTIV−LOW; 8 cases). This initial analysis highlights a constellation of cognitive, processing, and affective difficulties that characterise the participant group. To further illustrate the individual nature of these challenges, the total number of co-existing difficulties was calculated for each student. This quantitative analysis reveals significant variability across the group. As

visualised in Figure 15, the number of diagnosed deficits ranges from a minimum of three to a maximum of nine per student.

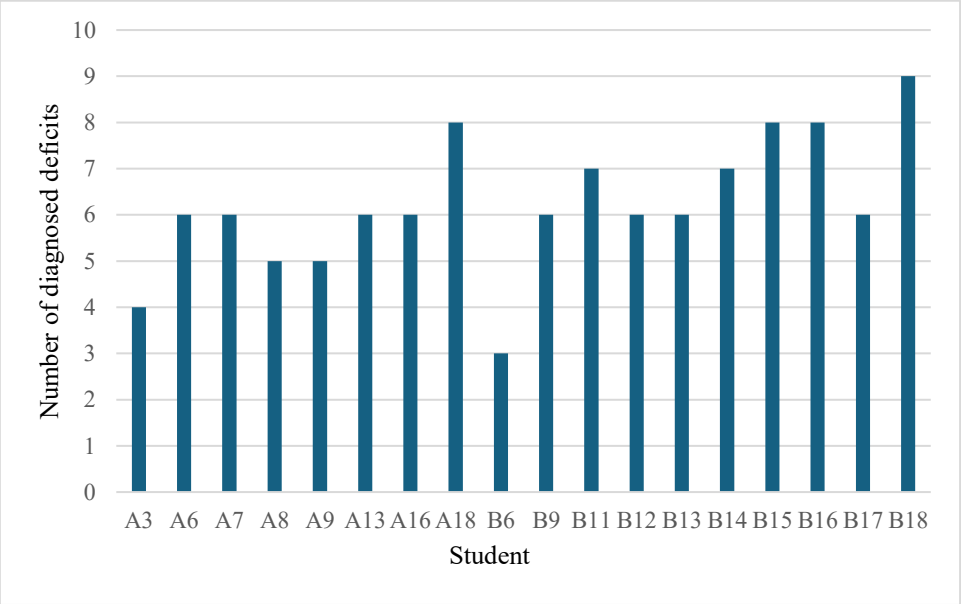


Figure 15. Number of difficulties in one learner

This wide range of suffered difficulties underscores not only the unique combination of challenges each learner faces but also the vast differences in the potential cognitive load they experience. The high degree of individual variation in the complexity of these learning profiles provides a strong rationale for investigating flexible, individual-oriented approaches, such as strategy training, rather than uniform pedagogical methods. The developmental stage of the participants themselves further highlights the potential efficacy of such an intervention.

Adolescent learners undergo massive reorganisation of their neurological structures. Those changes impact the way teenagers perceive the world, interact socially, and learn (Harklau, 2022). Steinberg (2014) describes adolescence as a period of heightened brain plasticity second only to infancy, creating a crucial "use it or lose it" window for learning. This involves significant "synaptic pruning," a process that, according to Dahl et al. (2018), is shaped by the teenager's own experiences. Because of these brain changes, adolescents tend to learn through social engagement and are highly receptive to peer interactions, status, and rewards (Galván, 2017).

Teenagers are also characterised by high emotional sensitivity. Knoll et al. (2017) claim that teens are more vulnerable to social anxiety, which can directly affect their confidence and willingness to communicate in a foreign language. At the same time,

according to Erikson (1968), teenagers expand their social roles and language use to form their adult identity, which is believed to be a central process of adolescence.

Considering the factors described above, teenagers are a group of students who require a tailored approach. Educators can support them by introducing and practising learning strategies that promote autonomous learning. This way, students not only become more effective in acquiring knowledge, but also develop attitudes that will serve them well in their lifelong learning. Moreover, such an approach helps learners to build confidence and manage their language anxiety, which is crucial in lowering the affective filter that hinders language progress. Learning how to learn is a fundamental skill that prepares adolescents, especially those with learning difficulties, to face lifelong challenges, helping them to see themselves as capable, resourceful, and independent individuals.

3.7. Data Collection

Data were gathered from five sources: the grammar-strategy questionnaire based on Pawlak's (2009b) GLSI, administered to the experimental groups during the strategy-training phase to profile students' initial grammar learning strategies. Grammar achievement tests were administered to all groups at baseline (pre-test) and at the end of the intervention (post-test) to observe the grammar learning outcomes. The experimental groups completed brief session questionnaires during selected lessons to capture immediate reflections on strategy use and learning. Researcher field notes from Sessions S1 -S10 were used to document implementation fidelity, classroom dynamics, and emergent contingencies. Student artefacts (e.g., learning plans, worksheets) produced during the intervention were used as direct evidence of strategy uptake, task engagement, and changes in grammatical control over time. All collected instruments were completed anonymously and coded with participant IDs.

3.7.1. Questionnaire

The main research instrument was a carefully constructed questionnaire consisting of 53 items designed to provide a multi-layered view of students' language learning strategies (see Appendix 1). To ensure full comprehension by the participants, the questionnaire was

administered in Polish. There were two parts of the questionnaire. The initial eight questions were adapted and translated into Polish from Oxford's (1990) Strategy Inventory for Language Learning (SILL). These items were selected to examine the general characteristics of the students' language learning actions, establishing a baseline of their broad strategic tendencies, such as reviewing material, seeking opportunities to use the language, and monitoring their progress. The subsequent 45 questions are derived and translated directly from Pawlak's (2009b) Grammar Learning Strategy Inventory. The number of strategies from the original inventory was reduced in order to make it more suitable and comprehensible for young learners. The list below shows how the chosen items map onto Pawlak's original categories:

1. Metacognitive Strategies (Part A): The instrument includes 7 items from this category, focusing on how learners plan, monitor, and evaluate their grammar learning.
2. Cognitive Strategies (Part B): This is the most extensively represented area, with a total of 28 items drawn from Pawlak's four subcategories:
    a. B1 (Assisting Communication): six items are included to assess strategies for using grammar in communicative tasks.
    b. B2 (Developing Explicit Knowledge): fourteen items examine the strategies used to consciously learn and understand grammar rules, such as analysing examples and using reference materials.
    c. B3 (Developing Implicit Knowledge): three items focus on strategies aimed at internalising grammar through practice, such as doing numerous exercises and creating new sentences.
    d. B4 (Dealing with Corrective Feedback): five items are dedicated to understanding how learners respond to and utilise corrections from the teacher.
3. Affective Strategies (Part C): The questionnaire contains five items from this category, which investigate how learners manage their anxiety, and motivation when learning grammar.
4. Social Strategies (Part D): Finally, five items are included to explore the social dimension of grammar learning, such as asking for help, practising with peers, and willingness to be corrected.

All 53 questionnaire items were rated on a 5-point Likert scale to measure the extent of strategy use. Participants were asked to choose a response from 1 ("never or almost never

true of me") to 5 ("always or almost always true of me"), indicating how well each statement described their learning habits. By integrating the robust, general framework of Oxford's SILL with the specialised focus of Pawlak's GLSI, this research instrument is methodologically designed to yield a rich and multi-faceted dataset, enabling the present author to delve into the strategic behaviours of language learners.

3.7.2. Pre- and post- tests

The project was initiated by administering a pre-test (see Appendix 2) in September to both study groups and two control groups. The same test was re-administered at the end of the procedure. During one of the English lessons, students received the prepared tests and were asked to complete them within 45 minutes. The test was designed based on the grammar exercises present in the textbook adopted by the school under investigation. It consisted of six distinct tasks designed to assess various aspects of grammar knowledge and application. The first task was a two-option multiple-choice activity comprising twenty items, designed to evaluate learners' ability to distinguish between two grammatical structures. The second task required students to reorder jumbled words to form grammatically correct questions, with five examples provided. The third task involved a short text in which learners were instructed to supply the correct form of verbs given in brackets, thereby assessing their understanding of tense and agreement within a contextualised passage. In the fourth task, students were asked to formulate appropriate questions for five given answers, testing their ability to formulate questions effectively. The fifth task consisted of five English sentences with embedded Polish fragments, which students were required to translate accurately, reflecting their ability to integrate grammatical and lexical knowledge across languages. Finally, the sixth task comprised five standard multiple-choice items (A, B, C format). The maximum score obtainable across all tasks was 45 points, scoring one point for every correct answer. The test assessed knowledge about the basic concepts of English grammar present in the primary school curriculum in Poland

1. basic verbs - to be, have got, can, have, must, should,
2. grammar tenses: Present Simple, Present Continuous, Present Perfect, Past Simple, Past Continuous, Future Simple,
3. grammar structures of: be going to, have to,
4. singular and plural nouns,

5. pronouns
6. possessive adjectives and's,
7. adjectives and adverbs including comparative and superlative forms of adjectives.

3.7.3. Strategy training

The strategy-based grammar instruction took place over ten sessions, spanning from September to April, and was embedded within regular English lessons conducted by the researcher. It followed O'Malley and Chamot's (1990) CALLA framework (see Section 2.4.5.), which unfolds in five consecutive stages: Preparation, Presentation, Practice, Evaluation, and Expansion. instructional sequence was designed to follow a structured progression, from initial diagnostic assessment through awareness-raising about strategy use, to guided practice, and finally evaluation.

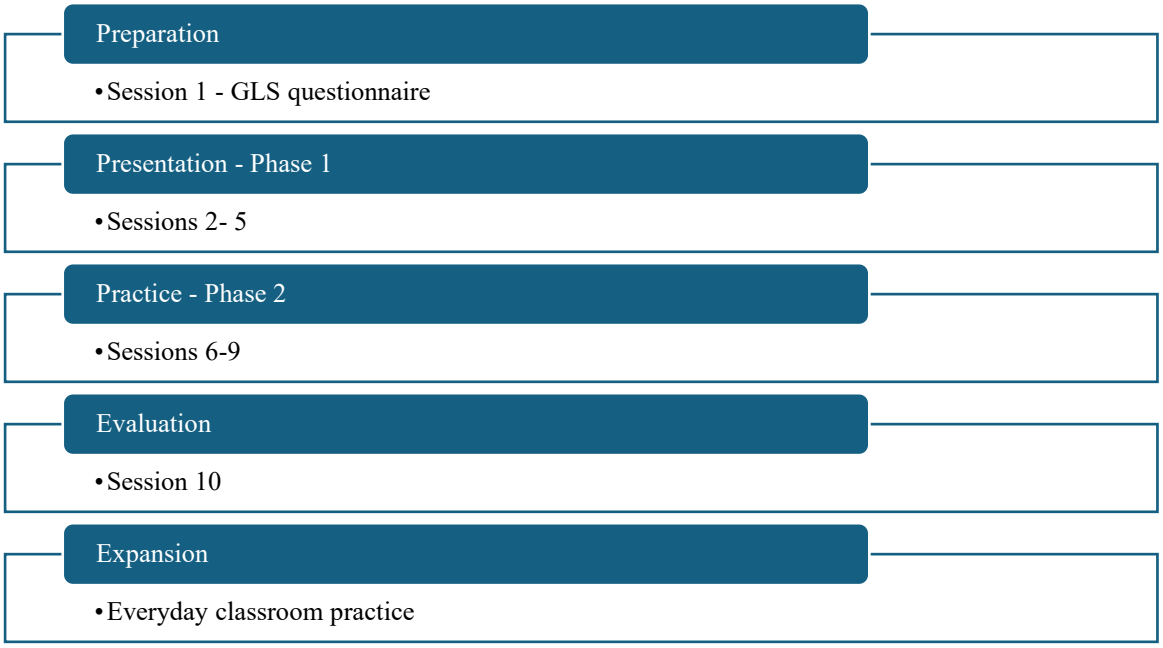


Figure 16. Study Intervention Schema mapped to CALLA stages

The first session aimed to diagnose learners' current use of GLS using Pawlak's (2009b) GLSI. Then, a structured intervention consisting of three instructional phases commenced. The first phase (Sessions 2-5) involved explicit awareness-raising activities, during which learners were introduced to specific categories of grammar learning

strategies: metacognitive, cognitive, affective, social, compensation, and memory-related. This phase aimed to develop learners' declarative knowledge of the strategy taxonomy and cultivate metacognitive understanding of when, why, and how particular strategies can support grammar learning, thereby preparing them for subsequent guided practice and autonomous application of these strategies. Each session focused on a selected cluster of strategies and provided opportunities for discussion, teacher-led modelling, and reflection on how these strategies could support grammar learning.

The second phase (Sessions 6-9) centred on guided practice, in which pupils engaged in tasks designed to encourage strategic behaviour, foster self-awareness, and apply selected strategies in grammar-focused activities such as working with irregular verbs or tenses. The main goal of this phase was to support the proceduralisation of strategy use in authentic grammar tasks, strengthen self-regulatory routines (planning, monitoring, evaluating), and promote transfer from prompted to increasingly autonomous application of strategies. The final session, Session 10, was dedicated to evaluating strategy use, allowing learners to assess their progress, reflect on their experiences, and consolidate their strategic routines.

3.7.3.1. Sessions 2-5

Session 2 began with an interactive brainstorming session, during which learners generated their definitions and examples of learning strategies. Their contributions were recorded on the board, and the teacher explained that during the session, strategies responsible for planning and organising the learning process would be discussed. The students were prompted to say how they organise their learning before grammar tests. The discussion was followed by a PowerPoint presentation that displayed Pawlak's (2009b, 2018) classification of metacognitive strategies. The teacher stopped at each strategy mentioned, explained it, and asked students when and why such tactics might improve grammar accuracy. At the end of the session pupils noted in their notebooks the metacognitive strategies they felt most inclined to try.

Session 3 shifted the focus to cognitive strategies, applied for developing both explicit and implicit knowledge of grammar. Using annotated examples, the researcher-teacher demonstrated each tactic and invited learners to supply further illustrations from recent class practice. Short paired exchanges allowed them to judge the efficiency of, for

instance, colour-coding tense markers or rehearsing sentence frames aloud and using the Internet and TV to practice grammar.

At the beginning of Session 4, the teacher remarked that emotion and social interaction play a vital role in the grammar learning process. Then, using a PowerPoint presentation, the teacher introduced affective and social strategies, as well as strategies for dealing with corrective feedback on errors in production. Each strategy was briefly discussed, and then, students explored ways to reduce language anxiety, providing examples of how they deal with stress before grammar tests. Then the teacher highlighted how important it is to learn from one's mistakes with the use of corrective feedback offered by the instructor. The lesson ended with reflection prompts that asked learners to identify emotions that either hinder or facilitate the learning process.

Session 5 started with an open discussion about how human memory works. The teacher asked students to identify what makes them memorise new information more quickly and retrieve information faster. The discussion was followed by the presentation of memory strategies derived from cognitive strategies of Pawlak's (2009b) GLSI. The researcher chose a list of twelve cognitive strategies (see Table 11) that refer to memorisation.

Table 11. Memory strategies, training session 5

	Strategy number from Pawlak's taxonomy	**Strategy description**
1	**23**	I mark new grammar structures graphically (e.g. colours, underlining)
2	**25**	I make charts, diagrams or drawings to illustrate grammar rules
3	**26**	I remember grammar information by location on a page in a book
4	**27**	I use rhymes or songs to remember new grammar rules
5	**28**	I physically act out new grammar structures
6	**29**	I use a notebook/note cards for new rules and examples
7	**30**	I group grammar structures to remember them better
8	**31**	I review grammar lessons to remember the rules better
9	**41**	I memorise whole phrases containing specific language forms
10	**43**	I repeat the rules and examples to myself or rewrite them many times
11	**48**	I try to use whole phrases containing specific structures in my speech
12	**51**	I listen to and read texts containing many examples of a grammar structure

The chosen mnemonic devices referred to both the memorisation of rules and irregular verbs, and were demonstrated using a PowerPoint presentation. Learners then ranked the strategies by perceived usefulness, creating an individual "top three" list in their

notebook to carry into the subsequent practice phase. The session closed with a summing-up discussion that aimed to draw connections among all four strategy families and underscore how deliberate selection supports autonomous learning of grammar.

The main aim of Phase 1 of the research was to raise students' awareness about various strategies they can employ while learning grammar and to underscore the fact that they already use some of them unconsciously. Open brainstorming activities helped to surface learners' existing practices, priming them to link new strategies to familiar routines. Through active articulation of strategies, their exemplification, and appraisal of their usefulness participants' reflective awareness was fostered with respect to how, when, and why a given tactic might aid grammar learning. To create a retrieval-practice effect that reinforces long-term retention, each new session began with revisiting and summarising the previously introduced and discussed content. Students were able to note their preferred strategies, which is believed to be a step to enhance strategy transfer into their routines (O'Malley & Chamot, 1990).

3.7.3.2. Session 6

Session 6 took place one month after the previous training and aimed at enhancing students' self-awareness in grammar learning. It started with a five-minute warm-up during which each student named one strategy learnt during earlier sessions.

Next, the students examined their learning materials, including the coursebook, workbook, and notebook. During this guided search, pupils identified where particular grammar topics appear, analysed how new structures are presented, and noted the exercise types used for practice. Subsequently, students consulted their notebooks and located grammar-related notes. They compared them with the coursebook content to raise their metacognitive awareness of both resources and the learning strategies they already employ. In the following tasks, students used teacher-prepared worksheets (see Appendix 3) to record which grammar topics were covered in the book. They next rated each topic on a six-point scale (1 = minimal command, 6 = complete command), drawing on their prior learning experiences to judge the depth of their understanding. Each learner then selected three topics they found most challenging and then, in pairs, students discussed what can be done to support learning of those problematic areas. Finally, in an open discussion, learners exchanged their responses. The session closed with a summing-up exercise in which

students were asked to list 4-5 examples of actions they can take to improve their grammar learning. At the end of the lesson, the teacher gathered the worksheets.

The sequence of tasks was designed to deepen students' self-awareness as active learners of grammar. By rating each topic, students pinpointed the problematic grammar areas and, by formulating their remedial actions, they practised the decision-making skills that underpin autonomous study. The session, therefore, gave them both a clear picture of their needs and a self-made plan to guide future, more autonomous learning.

4.7.3.3.Session 7

Session 7 started with a quick review of strategies from previous sessions. The teacher then explained that the lesson would focus on planning, organising, and monitoring learners' grammar study. The core of the session comprised two stages. First, learners completed a Polish-language questionnaire addressing 16 metacognitive strategies drawn from Pawlak's (2008) GLSI and Oxford's (1990) SILL (see Table 12).

Table 12. Training Session 7: adopted metacognitive strategies and additional questions

Number	Strategy	Source	Additional question
1	I have specific goals and objectives in learning grammar	GLSI A6	My goal is to…
2	I schedule grammar reviews in advance.	GLSI A7	Why?
3	I plan my schedule so I will have enough time to study SL.	SILL 34	How often do you study? How do you do it?
4	I preview the grammar structures to be covered in a lesson.	GLSI A1	How often do you do it? How and where?
5	I try to find out how to be a better learner of English.	SILL 33	How do you know that you have made progress?
6	I think about my progress in learning English.	SILL 38	How do you check your progress?
7	I look for opportunities to practice grammar structures in many different ways.	GLSI A3	Give examples of where you look for opportunities to practice
8	I try to find more effective ways of learning grammar.	GLSI A4	What kind of exercises do you do while studying
9	I try to find as many ways as I can to use my English.	SILL 30	How do you use English outside school?
10	I look for opportunities to read as much as possible in English.	SILL 36	What do you read in English?

11	I pay attention when someone is speaking English.	SILL 32	What do you listen to in English?
12	I pay attention to grammar structures when reading and listening.	GLSI A2	Can you give an example of a grammar structure you have recently noticed?
13	I know my strengths and weaknesses when it comes to grammar.	GLSI A5	What are your strengths and weaknesses in grammar?
14	I notice my English mistakes and use that information to help me to do better.	SILL 31	What do you do when you see your mistakes on the test?
15	I pay attention to grammar structures in my own speaking and writing.	GLSI A8	Do you check what you have written in English? How?
16	I look for people I can talk to in English.	SILL 35	How important is grammatical accuracy in communication?

Each student indicated whether they had already used a given strategy and, in an adjacent column, answered follow-up questions designed to prompt reflection on its usefulness. Fifteen minutes were allotted for this task. Next, the teacher announced the date of the upcoming grammar test (two weeks ahead) and asked students to analyse the current course-book unit and their notes, then draft a study plan to guide their preparation. The session concluded with several student volunteers presenting and explaining their drafted study plans to the rest of the class. It is important to note that the researcher did not collect these plans. They were intended to be personal, dynamic documents for students to own and use, reinforcing the principle of learner autonomy that was central to the intervention. The focus of the task was on the metacognitive process of planning, rather than the final product.

4.7.3.4. Session 8

The 45-minute session opened with a preview of the irregular-verb table printed at the back of the coursebook (82 verbs, three forms each, plus Polish translations). With the use of the memory strategies introduced in Session 5, the teacher facilitated a brief discussion on mastering all 82 verbs at once. This discussion reinforced the principles of the spacing effect (Cepeda et al., 2006) and chunking (Miller, 1956), underscoring the impossibility of memorising long lists of vocabulary in one learning session. Therefore, the teacher recommended introducing no more than ten new irregular verbs per learning session and emphasised that using various activities with irregular verbs can foster their learning

process as different tasks promote deeper processing and retrieval-based learning (Roediger & Karpicke, 2006).

After the theoretical recap, the teacher divided students into three mixed-ability groups of six, intentionally blending learners with and without learning difficulties to foster peer collaboration. Each group received a random, unique set of ten verbs from the coursebook list. Their primary task for the next 20 minutes was explicitly metacognitive: to design a portfolio of three distinct practice activities: two offline and one online, that their classmates could use for future, autonomous study. Students were encouraged to draw upon the full repertoire of strategies from Session 5 and were permitted to use their notes and phones to search for examples of online tasks. While the students were working, the teacher circulated among the groups, acting as a facilitator to prompt deeper thinking, answer questions, and ensure collaborative engagement. During the reporting phase, each group presented their designed tasks to the class. The explicit goal was not to master the ten verbs within the session itself, but rather to collaboratively build a shared, varied repository of learning tasks, thereby empowering students to select strategies best suited to their individual preferences and moving beyond passive re-reading

4.7.3.5. Session 9

The ninth session was dedicated to the practical application of learning strategies to the grammatical domain of English verb tenses - the session aimed to foster a transition from isolated strategy practice to an integrated, problem-solving approach. During a 45-minute lesson in March, after revision of the previously introduced strategies, learners worked in small heterogeneous groups of three. The groups purposefully mixed learners with and without special educational needs to foster peer scaffolding and collaborative learning.

The researcher prepared six one-page handouts in Polish (L1), each introducing a different English tense: present simple, present continuous, past simple, past continuous, present perfect, and future simple. Student groups then randomly drew one handout each. The central task was to collaboratively process and visually re-synthesise the information for their randomly drawn tense. Throughout this process, the researcher circulated among the groups facilitating learners' work, and actively prompting students to employ the strategies from their training, such as marking key structural elements, synthesising rules into concise diagrams, and using colour-coding. The session concluded in a sharing phase

where each group presented their final visual aid to the class. During their presentation, students not only explained the grammatical tense but were also asked to articulate which strategies they had used and why they found them helpful, thereby promoting valuable metacognitive reflection.

3.8. Data analysis

Collected data will be subject to both quantitative and qualitative analysis, the former of which is intended to determine the statistical significance of intervention effects. All statistical procedures will be conducted using TIBCO Statistica (Version 14), with the significance level (alpha) for all inferential tests set at $p<.05$.

The quantitative data from the pre- and post-intervention questionnaires will be transcribed into Microsoft Excel and subsequently imported into Statistica. The initial analysis will involve calculating descriptive statistics to summarise the data; this will include frequencies and percentages for categorical variables (e.g., gender, specific learning difficulty diagnosis), as well as measures of central tendency (mean, M) and variability (standard deviation, SD) for continuous variables such as grammar test scores. Following this, inferential statistics will be employed to address the core research questions. The specific choice of inferential tests will be contingent upon the data meeting the assumption of normality, which will be assessed using the Shapiro-Wilk test. To evaluate the impact of the intervention, the primary procedure for comparing post-test scores between the experimental and control groups is the independent-samples t-test; however, should the normality assumption be violated, its non-parametric equivalent, the Mann-Whitney U test, will be used. Similarly, the change in scores from pre-test to post-test within the experimental group will be analyzed using a paired-samples t-test, or its non-parametric alternative, the Wilcoxon signed-rank test, if required. Finally, to explore the relationships between variables, a Pearson product-moment correlation coefficient (r) will be calculated to investigate the association between students' reported use of learning strategies and their grammar proficiency scores.

The examination of qualitative data, gathered from open-ended questionnaires and students' worksheets, will follow the thematic analysis framework proposed by Braun and Clarke (2006). After thorough familiarisation with the data, a systematic coding process will be undertaken. Initially, descriptive codes will be assigned to relevant segments of the

data to capture key features. These initial codes will then be collated and organised to identify broader patterns, which will be developed into potential themes. The viability of these themes will be rigorously reviewed by checking them against the coded extracts and the entire dataset to ensure they form a coherent and accurate representation of the data. Finally, the themes will be defined, named, and used to construct an analytical narrative that answers the research questions, supported by illustrative data extracts.

In summary, this mixed-methods research design will integrate both quantitative and qualitative data to create a comprehensive understanding of intervention effects. The quantitative results will provide statistical evidence of the impact of strategy training on students' grammar scores, while the qualitative analysis of their written work and responses will illuminate how and why these changes occurred. By triangulating the numerical findings with the rich, contextual insights from the thematic analysis, this study aims to produce a more robust and nuanced interpretation of the learning process than either method could achieve alone.

Summary

This chapter detailed the methodological framework designed to investigate the effects of strategy-based instruction on the grammar acquisition of primary school students, including those with special educational needs. The study employed a mixed-methods approach, integrating a quasi-experimental design with an action research paradigm to ensure both empirical rigour and pedagogical relevance. The research was conducted with 72 seventh- and eighth-grade students, who were divided into experimental and control groups. It involved the use of multiple data collection instruments, such as a grammar learning strategy questionnaire, pre- and post-intervention grammar tests, and student artefacts. Both quantitative and qualitative data analysis procedures were planned to provide a comprehensive, triangulated understanding of the influence exerted by the intervention on learners' strategic behaviours and grammatical development.

Chapter 4. Results

Introduction

The present chapter describes the results of the empirical study conducted among primary school learners with and without special educational needs. Both the quantitative and qualitative data are presented and compared across the experimental and control groups. The chapter begins with the results of the Grammar Learning Strategy Questionnaire, which identify the initial strategic profiles of the participants. Subsequently, a detailed qualitative analysis of the strategy training sessions is provided, presenting the outcomes and student-generated artefacts from the core of the intervention. Subsequently, special emphasis is placed on the statistical analysis of the pre- and post-test results to determine if any progress in grammar acquisition was made as a result of the strategy training. Finally, the qualitative analysis linking the SEN students' reported strategy use to their individual learning gains is presented, making it possible to delineate which strategies were employed by the high-, mid-, and low-achieving learners in this cohort.

4.1. Grammar strategy use questionnaire results

The analysis of the questionnaire data revealed several key tendencies in the students' strategy use. This section will present these results in several stages, beginning with an overview of the most and least frequently reported strategies for the entire sample to identify the top- and bottom-use items. Subsequently, the results will be broken down to illustrate contrasts between grades (Grade 7 vs. Grade 8) and between students with and without special educational needs. The discussion will then delve into more detailed item-level analyses to highlight specific differences before concluding with an examination of aggregated strategy groups to describe the learners' broader strategic profiles.

To preliminarily examine how the participants used learning strategies, a questionnaire containing 53 items rated on a five-point Likert scale (1 = never, 5 = always) was used. Following the adopted research procedure, before proceeding with comparative analyses, the normality of the distribution of results for each strategy in each group was

checked using the Shapiro-Wilk test, recommended for small sample sizes. Initial comparative analyses were conducted to investigate differences in strategy use between Grade 7 and Grade 8, as well as between students with and without special educational needs. These analyses showed no statistically significant differences in strategy use between the groups. This finding suggests a broadly similar strategic profile for all participants in the study.

In the descriptive analysis of the use of individual strategies across the entire group, the preferred strategies most often relates to self-monitoring and attention to form. To make these tendencies transparent, Table 13 presents the Top-10 and Bottom-10 strategies for all 36 participants (ranked by endorsement).

Table 13. Descriptive statistics for the top-10 and bottom-10 most and least frequently used grammar learning strategies

Rank	Strategy	Mean (1 - 5)	SD
TOP STRATEGIES			
1	I notice my mistakes and try to eliminate them.	3,93	0,66
2	I know my strengths and weaknesses in grammar.	3,72	1,14
3	When practising grammar, I try to notice and correct my own mistakes.	3,65	0,88
4	When reading in English or watching films and series in this language, I try to expand my grammar knowledge.	3,63	1,21
5	I try to understand every grammar rule.	3,53	1,11
6	I like being corrected when I make mistakes in grammatical structures.	3,42	1,50
7	I try to find as many opportunities as possible to use English.	3,41	1,18
8	I notice (or remember) structures that occur frequently in the text.	3,41	1,24
9	I listen carefully to any feedback from the teacher about the structures I use.	3,40	1,07
10	I notice when I am corrected for grammar in spontaneous communication (e.g., when giving an opinion).	3,39	1,20
BOTTOM STRATEGIES			
1	I memorise whole phrases containing specific language forms.	2,25	1,26
2	I make charts, diagrams, or drawings illustrating grammar rules.	2,32	1,38
3	I use rhymes or songs to remember new grammar rules.	2,37	1,61
4	I look for opportunities to practise grammatical structures in many different ways.	2,37	1,12
5	I plan my English grammar learning in advance.	2,39	1,50
6	I use grammar books, grammar sections of textbooks, or grammar information in dictionaries.	2,48	1,28
7	I talk to others about how I feel when learning grammar.	2,56	1,42
8	I try to discover grammar rules by analysing examples.	2,58	1,39
9	I practise grammatical structures with other students.	2,63	1,40
10	I do many grammar exercises (e.g., paraphrasing, translation, multiple choice).	2,67	1,21

Consistent with Table 12, the most frequently endorsed strategies were noticing and eliminating one's own errors (M=3.93, SD=0.66), knowing one's strengths and weaknesses in grammar (M=3.72, SD=1.14), deliberately noticing and correcting mistakes while practising (M=3.65, SD=0.88), attending to grammatical form during reading, films and series (M=3.63, SD=1.21), and trying to understand every grammar rule (M=3.53, SD=1.11). At the opposite end there are strategies connected with a mnemonic or pre-planning: memorising whole phrases containing a given form (M=2.25, SD=1.26), making charts/diagrams of rules (M=2.32, SD=1.38), using rhymes or songs to remember rules (M=2.37, SD=1.61), looking for many different ways to practise structures (M=2.37, SD=1.12), and planning grammar learning in advance (M=2.39, SD=1.50). In short, learners report doing a lot of on-the-spot monitoring and noticing, but comparatively little advance planning or mnemonic scaffolding

Across the groups, the overall strategy-use index was very similar in Grade 7 and Grade 8: Grade 7 learners scored M=2.93 (SD=0.54, N=18) and Grade 8 learners M=3.02 (SD=0.70, N=18). Differences between SEN and non-SEN students are visible in the Figure 17.

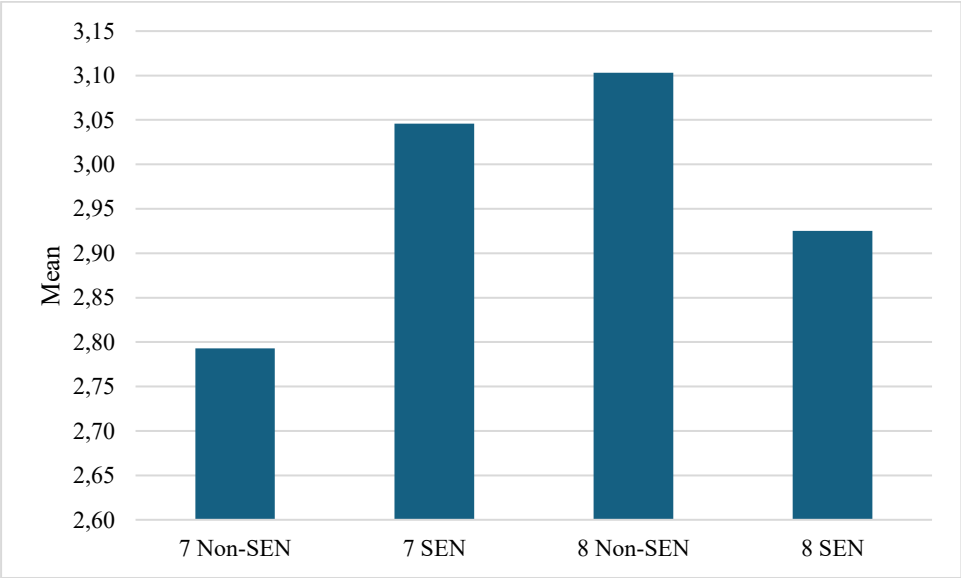


Figure 17. Mean overall strategy use for SEN and non-SEN students by grade

Figure 17 shows that the pattern of strategy use differs by grade: in Grade 7, SEN learners report higher overall strategy use than their Non-SEN peers, whereas in Grade 8 the pattern reverses (Non-SEN > SEN). These contrasts are descriptive only and were not

statistically significant (Grade 7: t (≈11.8)=0.94, p=.368, g=0.44; Grade 8: t (≈15.5)=−0.53, p=.606, g=−0.24).

As an entire group, SEN learners from both classes show a closely related but not identical profile to their non-SEN peers. Their top strategies include knowing their grammar strengths and weaknesses (M=3.94), noticing and eliminating errors (M=3.80), checking authentic usage via Google or other search tools (M=3.69), actively seeking opportunities to use English (M=3.60), and contrasting correct with incorrect versions to see differences (M=3.53). The lowest-ranked items for SEN are planning grammar learning in advance (M=2.00), looking for many different ways to practise structures (M=2.09), using rhymes/songs (M=2.15), practising structures with other students (M=2.20), and making charts/diagrams (M=2.31).

There is a clear overlap at the top of chosen strategies: both the whole group and SEN place error noticing/correction and self-knowledge of grammar strengths/weaknesses among their most frequently used strategies. At the same time, SEN learners rank searching for authentic online usage and actively seeking chances to use English in their top five, whereas these do not appear in the whole-group top five. By contrast, whole-group emphases not mirrored by SEN include attending to grammar in media and trying to understand every rule, both of which make the overall top five but not the SEN top five. Peer work is ranked lower for SEN: practising grammatical structures with classmates falls into the SEN bottom five, while it is not among the whole-group laggards. Finally, there are shared weak spots across both groups, planning, mnemonic devices (rhymes/songs), and charts/diagrams consistently occupy the lower end of the ranking.

The grade contrasts analysis reveals that in Grade 7, SEN learners more often endorse review and rule-discovery activities, for example, review grammar lessons (M_SEN=3.71 vs M_Non-SEN=2.00; δ=+0.71, large; p=.023, not significant after FDR), use specific structures in communication (3.83 vs 1.50), and discover rules by analysing examples (3.11 vs 1.80). Conversely, non-SEN learners in Grade 7 report stronger progress monitoring (4.00 vs 2.75). In Grade 8, there is a trend toward higher non-SEN scores on social-affective/peer-based strategies (e.g., practise with peers: 3.25 vs 1.86; paraphrase rules: 3.11 vs 2.14; talk about feelings while learning: 2.80 vs 1.50), although p-values are moderate (≥.14) and none of these differences survives FDR correction. Overall, it is significant that these patterns are informative for pedagogy but do not meet the threshold for statistical significance after controlling for multiple comparisons (q=.05).

Item analyses point to a high rank of error monitoring and noticing. Aggregating the data to strategy families confirms that feedback-oriented routines top the profile (see Table 14), while affective regulation is ranked lower and shows weaker internal coherence, so conclusions about that domain should be cautious. Subgroup contrasts do not reach significance after correction, suggesting broadly similar strategic profiles across classes and SEN status, with a few exploratory differences meriting follow-up.

Table 14. Descriptive statistics and reliability for ranked grammar learning strategy groups

Rank	Strategy group	k items	M	SD	Median	Q1	Q3	α
1	Cognitive feedback	5	3,1	0,76	2,9	2,6	3,65	0,699
2	Cognitive communication	6	2,95	0,67	2,92	2,5	3,5	0,57
3	General LS	8	2,93	0,66	2,88	2,47	3,41	0,693
4	Metacognitive	7	2,77	0,71	2,64	2,25	3,43	0,765
5	Social	5	2,71	0,81	2,6	2,15	3,2	0,638
6	Cognitive	17	2,62	0,59	2,68	2,18	3,13	0,83
7	Affective	5	2,57	0,67	2,6	2,2	3	0,477

Table 14 shows that group means cluster between 2.57 and 3.10, with medians close to the means and moderate spread (typical Q1 -Q3 ≈ 0.8 -1.2). The profile peaks for Cognitive feedback (M=3.10; Q1 -Q3=2.60 -3.65), followed by Cognitive communication (M=2.95) and General LS (M=2.93), with Metacognitive mid-range (M=2.77). Social (M=2.71) and the broad Cognitive composite (M=2.62) are lower, while Affective is lowest (M=2.57). Reliability is strong for Cognitive (α=0,830) and satisfactory for Metacognitive (α=0,765), adequate for General LS and Cognitive feedback (α≈0,69 -0,70), but limited for Affective (α=0,477), so inferences for that domain should be cautious.

When the two groups, 7 and 8, are compared, it is visible that Class 8 tends to score slightly higher for cognitive feedback (see Figure 18). Still, none of the class differences are statistically significant once we verify the initial p-values with a non-parametric check (Mann -Whitney U) and control familywise error across the seven groups using Holm's procedure (all adjusted p >.05).

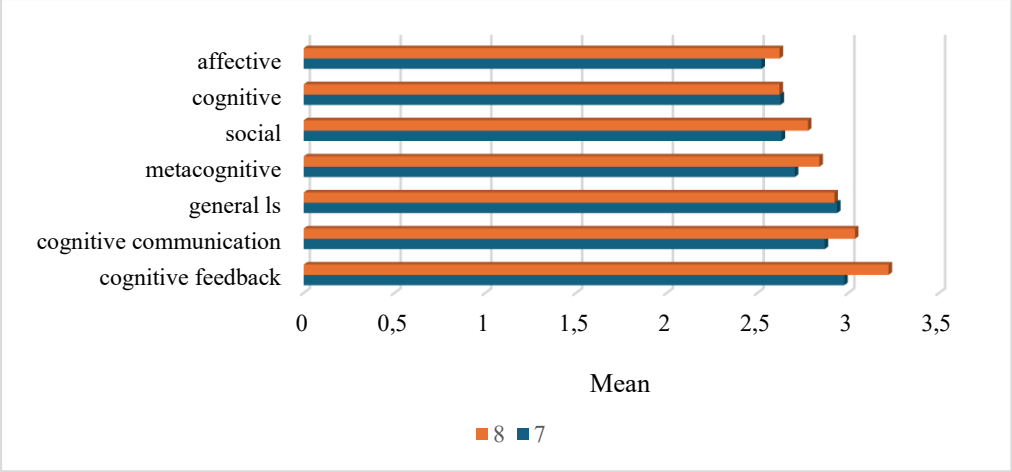


Figure 18. Strategy-group means by class (7 vs 8).

An in-class comparison revealed the main differences between SEN and non-SEN Learners, presented detail in Table 15.

Table 15. An in-class main differences between SEN and non-SEN in strategy use

Strategy group	M SEN	M non-SEN	Δ (non-SEN − SEN)	g
Class 7				
Affective	2,72	2,28	−0,445	−0,678
Cognitive	2,76	2,46	−0,296	−0,545
Cognitive communication	3,02	2,69	−0,329	−0,467
Metacognitive	2,79	2,61	−0,179	−0,249
General LS	2,99	2,88	−0,112	−0,166
Social	2,60	2,68	0,08	0,08
Cognitive feedback	2,96	3,00	0,04	0,05
Class 8				
Social	2,35	3,12	0,77	1,02
Affective	2,30	2,88	0,58	0,84
Cognitive feedback	3,08	3,34	0,27	0,31
Metacognitive	2,71	2,94	0,23	0,28
Cognitive	2,54	2,69	0,15	0,21
Cognitive communication	3,02	3,05	0,03	0,04
General LS	2,92	2,93	0,00	0,00

In Grade 7 SEN learners reported their highest use of cognitive-communication strategies (M=3.02), followed by general learning strategies (M=2.99) and cognitive feedback (M=2.96), with metacognitive (M=2.79) and cognitive routines (M=2.76) mid-range, and affective (M=2.72) and social (M=2.60) lowest. Compared with their non-SEN peers, SEN students tended to use affective, cognitive, and cognitive-communication strategies more often (medium effects), while differences elsewhere were minor. Taken together, Grade-7 SEN learners reported more frequent strategy use than non-SEN across most groups, although these contrasts did not reach significance after Holm correction; the pattern points to a somewhat more substantial reliance on self-regulatory routines and "use-it-in-practice" approaches among SEN students in this class.

At the same time, Grade 8 SEN learners, again, ranked cognitive feedback (M=3.08) and cognitive-communication (M=3.02) at the top, followed by general learning strategies (M=2.92) and metacognitive routines (M=2.71), with cognitive (M=2.54), social (M=2.35) and affective (M=2.30) lowest. Here, non-SEN students outscored SEN peers most clearly on social and affective strategy use (significant and moderate effects, respectively), while differences in other clusters were small or negligible (e.g., almost no gap in cognitive-communication and general LS). As with Grade 7, none of the within-class SEN -non-SEN differences survived Holm adjustment, indicating that these are directional tendencies rather than definitive gaps; practically, Grade-8 SEN learners appear comparatively less engaged with socially mediated and emotion-regulation strategies despite broadly similar uptake of feedback- and communication-focused approaches.

Across classes, SEN students most frequently reported feedback-oriented and communication-focused approaches, with general learning strategies close behind; metacognitive routines occupied the middle, while cognitive (forms-focused drills), affective, and especially social strategies were ranked lowest When compared with non-SEN peers, no differences were statistically significant after correction, though two tendencies recurred: SEN learners were slightly more inclined toward using grammar in communication (and, to a lesser extent, cognitive self-work), whereas non-SEN learners leaned somewhat higher on social (and in Grade 8 also affective) strategies. Taken together, the profile suggests that SEN learners engage reliably with error monitoring and teacher feedback but may also benefit from structured social practice and light-touch affective supports (e.g., scripted peer routines, brief regulation cues) to round out their strategic repertoire.

4.2.Strategy training results

This subsection presents a detailed description of the results from sessions 6 to 10, which comprised the core of the research intervention. The data are presented chronologically, with each session discussed individually to capture the dynamics of the learning process. For each session, the results are consistently broken down into the two experimental groups (Group 7 and Group 8). Within each of these groups, a detailed comparison is then made between the performance of students with special educational needs and their non-SEN peers. The description covers both quantitative data, illustrated in tables and supported by statistical analysis, and qualitative insights into the students' perceived difficulty of specific grammar topics.

4.2.1. Session 6

Session 6 was designed first and foremost to sharpen learners' metacognitive awareness of their own grammatical competence. By rating each grammar topic on a six-point mastery scale and then highlighting the three areas they found most challenging, students produced a dataset that pairs perceived difficulty with observed performance. This section analyses those self-assessments and the accompanying strategy reports, with particular attention to differences between the two experimental groups and between students with specific learning difficulties and their peers.

As regards the relative difficulty of individual grammar structures, the two experimental groups listed a slightly different set of grammar units covered in their textbooks. Participants were asked to assess their command of each structure on a scale from one to six, where one stands for inferior command, and six stands for excellent command (see Table 16).

Table 16. Results of session 6, grammar self-assesment groups 7 and 8, session 6

Group 7E	**Present simple**	**Present continuous**	**Verb patterns**	**Past simple**	**Past continuous**	**Modals**
Average score whole group	3,56	3,17	2,67	3,50	3,28	2,89
Average score SEN students	3,80	3,30	2,60	3,00	3,20	2,90
Average score non-SEN students	3,25	3,00	2,75	4,13	3,38	2,88
Group 8E	**Present simple**	**Present continuous**	**Passive**	**Past simple**	**Past continuous**	**Present perfect**
Average score whole group	3,47	3,00	2,89	3,47	3,26	2,95
Average score SEN students	2,63	2,38	2,38	2,63	2,75	2,38
Average score non-SEN students	4,09	3,45	3,27	4,09	3,64	3,36

Group 7E rated the present simple as their strongest point (M = 3.56, SD = 0.99), whereas verb patterns received the lowest rating (M = 2.89, SD = 1.01). Within-group comparison revealed a pronounced gap in past-simple accuracy: SEN learners (M = 3.00, SD = 0.94) underperformed their non-SEN peers (M = 4.13, SD = 1.09), U = 21.0, p =.078, Hedges g = -0.90, 95 % CI [-1.82, -0.01] (see Table 17). While this p value narrowly misses the conventional α =.05 threshold, the large negative g signals a practically important disparity, roughly one full point on a six-point mastery continuum

Table 17. Table Descriptive statistics and non-parametric comparison of past-simple accuracy (Group 7E), session 6

Group	**Grammar aspect**	**Mean (SEN)**	**Mean (non-SEN)**	**Hedges g**	**p (U-test)**	**Verdict**
7E	Past simple	3,00	4,13	-0,90	0,08	Large negative g, *p* just above.05 → trend: SEN weaker.
	Other 5 items	-	-		>,46	Differences small/negligible.

While Table 17 highlights a sizable performance gap in the past simple, no other grammar item yielded a meaningful difference (all |g| < 0.25). These results suggest that targeted support in narrative-past morphology may be warranted for SEN learners before introducing more cognitively demanding structures.

Group 8E rated both the present simple and the past simple as their areas of highest confidence, (M = 3.47, SD ≈ 1.3-1.5), whereas the passive voice received the lowest rating (M = 2.89, SD = 1.33). Within-group comparison revealed sizeable gaps in several areas: SEN learners scored markedly below their non-SEN peers on the present simple (M = 2.63 vs 4.09, U = 14.0, p =.013, Hedges g = -1.33, 95 % CI [-1.89, -0.73]), on the past simple (M = 2.63 vs 4.09, U = 19.0, p =.033, g = -1.08), and on the present continuous (M = 2.38 vs 3.45, U = 19.0, p =.038, g = -0.99). Differences for the passive, past continuous, and present perfect did not reach significance (all |g| ≤ 0.68, p ≥.16). Taken together, these results indicate that basic tense control rather than complex voice or aspect is the principal stumbling-block for 8E SEN learners in this class, and thus merits focused remedial work before more cognitively demanding targets are introduced (see Table 18).

Table 18. SEN and non-SEN learners grammar assessment statistics in group 8E, session 6

Grammar aspect	**Mean (SEN)**	**SD (SEN)**	**Mean (non-SEN)**	**SD (non-SEN)**	***U***	***p***	**Hedges *g***
Present simple	2,63	0,74	4,09	1,22	14,0	,013	-1,33
Present continuous	2,38	0,52	3,45	1,29	19,0	,038	-0,99
Passive	2,38	1,06	3,27	1,42	27,0	,167	-0,67
Past simple	2,63	1,19	4,09	1,38	19,0	,033	-1,08
Past continuous	2,75	1,16	3,70	1,49	24,0	,160	-0,67
Present perfect	2,38	0,74	3,36	1,69	28,0	,185	-0,68

With the accuracy profiles for both classes now established (Tables 17 and 18), the quantitative picture is clear: while Group 7E shows a single, near-significant gap in the past simple, Group 8E reveals broader SEN under-performance in several high-frequency tenses.

Learners' own difficulty ratings closely mirror these results. In Group 7E, fourteen of eighteen pupils (78 %) selected the past simple as their hardest item; verb patterns (72 %) and modals (61 %) followed. All three categories are rich in irregular or formulaic elements, demanding memory-based learning rather than rule-based generalisation. In Group 8E, the present perfect was nominated most often (16 of 18 learners, 89 %), with the passive voice and the past simple tied for second place (74% each).

Thus, despite differences in the teaching sequence, the past simple remains a persistent obstacle in both cohorts, while the present perfect and passive voice add an extra burden for Group 8E. The differences between the most challenging areas of grammar between SEN and non-SEN learners are shown in Table 19.

Table 19. Most difficult grammar areas, session 6

Group 7E	**Present simple**	**Present continuous**	**Verb patterns**	**Past simple**	**Past continuous**	**Modals**
SEN %	10	20	60	80	60	80
non-SEN %	13	0	88	75	50	38
Group 8E	**Present simple**	**Present continuous**	**Passive**	**Past simple**	**Past continuous**	**Present Perfect**
SEN %	13	13	75	88	0	100
non-SEN %	18	18	73	64	27	82

Across both classes, SEN and non-SEN learners broadly agreed on the key areas of difficulty, yet the profiles are not identical. Modals emerged as the most transparent SEN challenging structure, ticked by 80% of SEN learners in Group 7E compared with 38% of their non-SEN peers. Every SEN learner in Group 8E indicated Present Perfect as the most problematic, and this was also the case for 82% of their non-SEN peers. Past simple also emerges troublesome for SEN students (≈ 80 % in Group 7E, 88 % in Group 8E), making it the only item that both sub-groups in both classes placed in their top tier. By contrast, non-SEN learners in Group 7E highlighted verb-pattern accuracy more often than their SEN classmates (88 % vs 60 %). Although none of these gaps reaches statistical significance given the small samples, the descriptive pattern dovetails with the accuracy data: SEN learners perceive the very areas in which they objectively score lowest. It may indicate that intensified scaffolding of modal verbs and a renewed focus on past-simple consolidation, especially for SEN pupils, is needed in grammar lessons.

Asked for solutions to their difficulties, learners listed nineteen different actions that they can take to improve their grammar learning performance (see Table 20).

Table 20. Actions listed by students that improve grammar learning performance, session 6

Strategy	**GLSI category**	**Number of mentions by SEN and non-SEN students**
Take systematic notes	Cognitive (B2) - note-taking	22
Pay attention during English lessons	Metacognitive (A) - attention control	21
Start studying earlier	Metacognitive (A) - advance planning	20
Revise material regularly	Metacognitive (A) - scheduled review	15
Do extra grammar exercises	Cognitive (B3) - intensive practice	14
Use flashcards	Cognitive (B2) - memorising rules/forms	12
Browse the Internet for Grammar Help	Cognitive (B2/B1) - electronic resources	12
Take additional lessons	Social (D) - external help	9
Attend english lessons regularly.	Metacognitive (A) - time management	8
Use Online Games, Quizzes, or Apps	Cognitive (B3) - tech-assisted practice	7
Talk in English With Friends	Social (D) - peer interaction	6
Watch Films in English	Cognitive (B1) - input for comprehension	6
Put Your Phone Away in Class	Metacognitive (A) - distraction control	5
Create sentences with new grammar	Cognitive (B3) - rule application	5
Read Books in English	Cognitive (B1) - extensive reading	5
Ask the Teacher for Clarification	Social (D) - instructor assistance	2
Stay Motivated to Learn	Affective (C) - self-encouragement	1
Listen to English Songs	Cognitive (B1) - authentic input	1
Notice and Correct Your Own Mistakes	Cognitive (B4) - self-monitoring	1

It can be observed that three of the four most-cited strategies are related to meta-cognition and self-awareness: *paying attention during lessons, studying earlier* and *revising material regularly*, all of which relate to planning, monitoring or maintaining focus (GLSI category A). *Note-taking* is the most commonly valued cognitive strategy listed by 22 students. *Doing extra grammar exercises* and *using flashcards* were also mentioned frequently (14 and 12 times), which signals that students see written rehearsals and memorisation as a key to mastering grammar. Moreover, the use of the Internet and mobile apps (12 and 7 mentions) is viewed as a practice aid more than social interaction (6 mentions). Only one student mentioned *noticing and correcting their own mistakes*, suggesting that the strategies regarding dealing with corrective feedback are not frequently

used by learners, similarly to affective strategies, which were also mentioned only by one participant. Figure 19 presents differences in the use of particular strategies by students with and without learning difficulties.

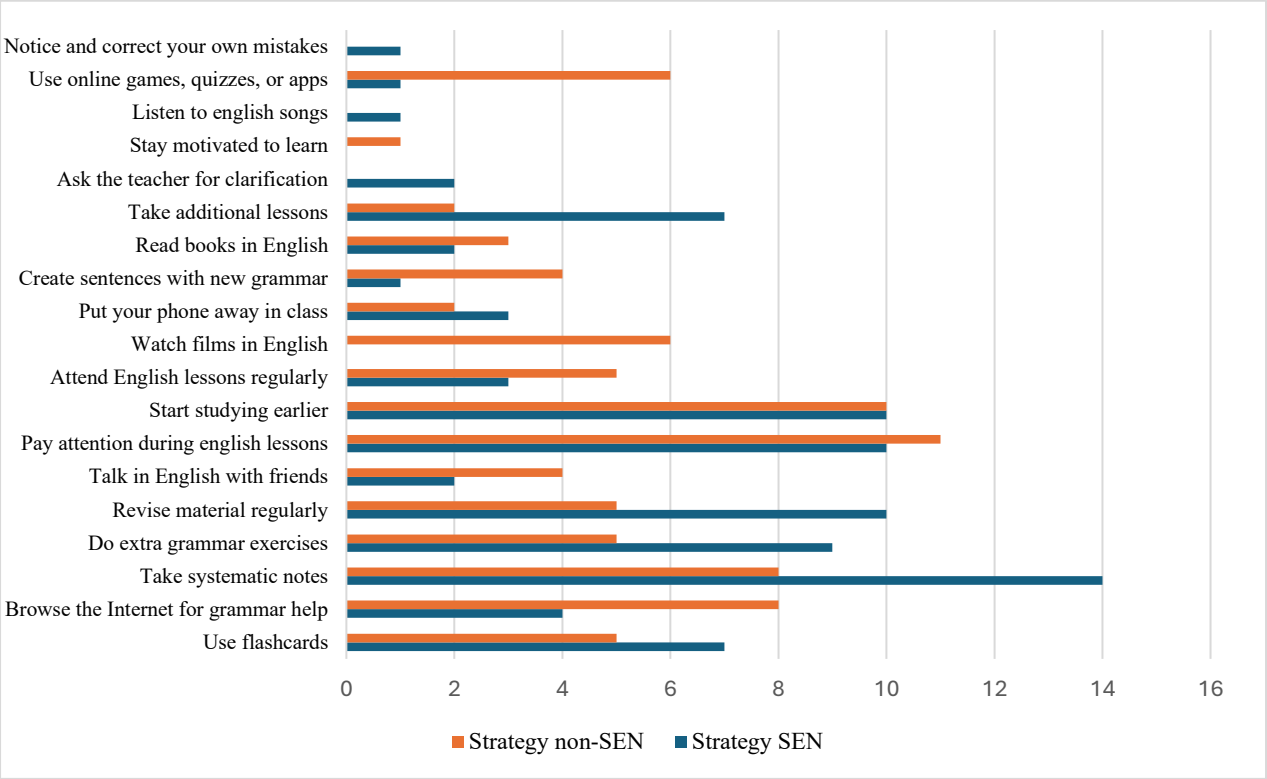


Figure 19. Differences in strategies mentioned between SEN and non-SEN learners, session 6

The data indicate the two groups of learners value self-regulation at a similar level; strategies such as *paying attention in lessons* or *starting studying earlier* were equally highly mentioned in both groups. Moreover, it can be seen that SEN learners favour high-structure, teacher-mediated routines as they pointed to *taking notes*, *taking additional lessons* and *doing extra grammar exercises* more often than their non-SEN peers. Students with difficulties are less likely to engage in exposure-rich activities as often as students without difficulties. Self-directed learning, which included the use of the Internet, online games, quizzes, watching films in English, or creating sentences with new grammar, was more often listed by non-SEN students.

4.2.2. Session 7

As part of the research intervention, session seven was dedicated to the explicit practice of metacognitive strategies. Table 21 presents the results of a questionnaire administered during the session (see Appendix 4). The data show the percentage of students in each group who reported using various learning strategies. The results are disaggregated by grade level (7 and 8) and by SEN/non-SEN status.

Table 21. The reported use of strategies by grade and SEN status, session 7

	TOTAL	Group 7E SEN	Group7E non-SEN	Group 8E SEN	Group 8E non-SEN
I notice my English mistakes and use that information to help me to do better	72%	50%	75%	38%	80%
I try to find out how to be a better learner of English.	69%	40%	88%	25%	70%
I pay attention when someone is speaking English	64%	50%	88%	50%	60%
I have specific goals and objectives in learning grammar	61%	100%	88%	100%	50%
I try to find as many ways as I can to use my English.	58%	30%	50%	50%	50%
I look for people I can talk to in English	53%	40%	63%	38%	50%
I know my strengths and weaknesses when it comes to grammar	50%	40%	63%	13%	50%
I plan my schedule so I will have enough time to study SL.	47%	30%	38%	50%	50%
I look for opportunities to read as much as possible in English	47%	70%	63%	63%	30%
I schedule grammar reviews in advance.	44%	40%	63%	75%	40%

I think about my progress in learning English.	39%	60%	50%	63%	40%
I try to find more effective ways of learning grammar.	39%	20%	50%	25%	30%
I pay attention to grammar structures in my own speaking and writing	36%	60%	50%	75%	20%
I preview the grammar structures to be covered in a lesson.	31%	50%	25%	50%	30%
I look for opportunities to practice grammar structures in many different ways	25%	20%	25%	50%	30%
I pay attention to grammar structures when reading and listening.	25%	50%	38%	63%	10%

It can be observed that the most commonly chosen strategies among all the participants were connected with metacognitive "monitoring" behaviours: *I notice my English mistakes and use that information to help me to do better* (72%), *I try to find out how to be a better learner of English*"69%), I *pay attention when someone is speaking English* (64%), *I have specific goals and objectives in learning grammar* (61%). Apart from the last strategy mentioned above, the rest do not focus explicitly on grammar, but relate to the general process of improving English skills. The strategies concerning grammar, such as *I pay attention to grammar structures when reading and listening* (25%), *I look for opportunities to practice grammar structures in many different ways* (25%),*I preview the grammar structures to be covered in a lesson* (31%), were the least frequently chosen by students. It may indicate that learners find advance planning and diversified practice difficult and generally lack focused grammar learning strategies in their repertoires. Surprisingly, for non-SEN students, there appears to be a general decrease in reported strategy use from Grade 7 to Grade 8. This could be a result of declining motivation, overconfidence, or strategies becoming more automatised and less consciously reported.

A comparison between students with and without learning difficulties reveals a primary trend: in most categories, students with SEN report a lower frequency of strategy use than their non-SEN peers. For example, in Grade 7, 88% of non-SEN students "*pay attention when someone is speaking English*," compared to only 50% of SEN students.

However, this trend has several noteworthy exceptions, where students with SEN reported using strategies more frequently. Most strikingly, both SEN groups reported 100% for *I have specific goals and objectives in learning grammar,* which could suggest that the individualised support they receive makes them highly aware of goal-setting. It could suggest that the individualised support SEN students receive makes them highly aware of the need for goal-setting, even if they do not apply other strategies as frequently. The other strategies that SEN students declare to use more often than their non-SEN peers include:

1. I look for opportunities to read as much as possible in English. I think about my progress in learning English.
2. preview the grammar structures to be covered in a lesson.
3. I pay attention to grammar structures when reading and listening.

Additionally, SEN students from Group 8E indicate that they schedule grammar reviews in advance and they look for opportunities to practice grammar structures in many different ways more often than their peers without learning difficulties.

Moreover, it can be observed that there is not a clear progression in strategy use from Grade 7 to Grade 8 among SEN students; some strategies are used more, others less. However, 8th-grade SEN students report much higher use of *scheduling grammar reviews in advance* (75%) compared to the 7th-grade (40%). This could be linked to the awareness of the students that end-of-primary-school exam is close, and they need to revise the material.

When analysing qualitative data, gathered from additional comments in questionnaires, an important methodological caveat must be made. A significant proportion of students omitted some open-ended questions or did not provide additional comments, which affected the final number of responses analysed. The presentation of the results therefore focused on the dominant response patterns that emerged in groups of students with and without SEN as well as without further distinction based on class affiliation.

Learners' stated goals diverged: pragmatic communication dominated among SEN students ("to communicate") [SEN=7; non-SEN=3], while non-SEN students more often mentioned school/ambition [SEN=0; non-SEN=3] or general proficiency [SEN=0; non-SEN=2]; non-response was rarer among SEN learners [SEN=1; non-SEN=8]. Motivation showed a similar split, with small cores of internally driven reasons [internal: SEN=2; non-SEN=2] and externally framed motives ("for grades") [external: SEN=1; non-SEN=2], alongside many blanks, especially among non-SEN learners [no answer: SEN=5; non-SEN=12]. Outside school, more SEN learners reported using English (chiefly in online

games), and fewer declared “no use” [SEN=2; non-SEN=7]. Input practices were uneven: listening to English music/songs led in both groups [SEN=5; non-SEN=6], while reading was sporadic [read any: SEN=3; non-SEN=7; non-readers/no answer: SEN=5; non-SEN=10].

Study techniques reflected this pattern. Active, form-linked work (translating, building sentences) appeared mainly in the SEN group [active: SEN=2; non-SEN=0], while passive/generic tactics were scarce overall [passive: SEN=1; non-SEN=3]; non-answers predominated among non-SEN students [no strategy: SEN=5; non-SEN=15]. Frequency and mode of study were irregular: several SEN students noted ad-hoc supports (tutoring; pre-test review), whereas many non-SEN students left the item blank [no answer: non-SEN=7] or pointed to apps/school-only learning. Grammar review was infrequent; non-SEN students very often skipped the item [no answer: non-SEN=12], while individual SEN learners mentioned textbook/Internet checks. Awareness of progress drew on tangible indicators among SEN students (tests/grades), whereas some non-SEN participants “didn’t know” [non-SEN=3].

On checking progress, SEN learners cited social/interactive checks (“with a sibling,” online quizzes), but many non-SEN learners offered no method or admitted not checking [no answer: non-SEN=8; “don’t check”: non-SEN=3]. Opportunities to practise were under-sought overall, with high non-response [SEN=6; non-SEN=10] and one explicit “I don’t look” from a non-SEN participant [non-SEN=1]. Metalinguistic indicators were uniformly low: few could name a recently noticed structure [no recall: SEN=8; non-SEN=14] or identify strengths/weaknesses [no identification: SEN=8; non-SEN=13]. Error treatment diverged: SEN students described concrete follow-ups (ask for explanation; memorise and correct), whereas many non-SEN students left the item blank or were nonspecific [no answer: non-SEN=8; “depends on importance”: non-SEN=2]. Self-editing of writing was more frequent among SEN learners [check: SEN=4] and rare among non-SEN learners [no check/blank: non-SEN=14]. Finally, both groups generally endorsed the importance of accuracy, though many non-SEN students gave no stance [no opinion: non-SEN=12], and a minority of SEN students relativised accuracy to comprehensibility.

Although the individual study plans were not collected for formal analysis (see Section 3.7.3.4.), the presentations by student volunteers during Session 7 provided valuable qualitative insights into the immediate impact of the metacognitive training on learners' approaches to planning. The observations revealed students' increased ambition as

the volunteer presenters articulated multi-step plans that demonstrated highly proactive learning. The most common elements present in the plans included:

1. Structured scheduling - students suggested a regular study schedule, planning sessions every day or every other day.
2. Use of various resources - students explicitly mentioned their intention to use a coursebook, notes, creating their own sentences, studying with friends or family members
3. Use of digital tools - several students incorporated digital resources such as Quizlet, Booklet, and Wordwall. Some students suggested watching YouTube videos explaining the given grammar structure.

The presented results indicate that learners develop an understanding of the importance of distributed practice over last-minute cramming. Moreover, the systematic, resourceful, and self-directed approach to their grammar test preparation points to their growing autonomy in seeking out more effective learning strategies

4.2.3. Session 8

The results from Training Session 8 were qualitative and consisted of the learning tasks designed by the student groups. These data provide insights into students' application of memory strategies and their learning preferences regarding learning irregular verbs. The complete list of designed tasks is presented in Table 22.

Table 22. Students' designed grammar tasks, session 8

Group	Offline idea 1	Offline idea 2	Online idea
7a1	**Prepare Flashcards -** make flashcards - write Polish version on one side and English on the reverse.	**Use flashcards to play with friends-** flashcards are cards in a game one person asks the other to translate and inflect the verb, if done properly, the person who answered gets the point	**Wordwall activities-** Just type into "irregular English verbs Wordwall" into the search engine and there are a lot of different games to choose from, matching, quizzes, etc.
7a2	**Make sentences about yourself in different tenses using different forms -** pick the most difficult verbs and create sentences e.g. I eat pizza every day, I ate pizza yesterday, I have just eaten pizza..	**Memory Pairs** - prepare pairs of flashcards Polish and English on separate pieces of paper. Play with friends and match polish & 3 forms	**Blooket** - play with your friends, gold quest, collect gold by answering to question in a quiz form

7a3	**Create a crossword** - use the most difficult verbs to make a crossword	**Prepare Flash-cards** - make flash cards - write polish version on one side and English on the reverse	**Kahoot! quiz** Find a quiz about irregular verbs and practice yourself or with friends
8b4	**Prepare Flashcards** - make flashcards - write Polish version on one side or draw the verb if you can and English on the reverse.	**Practice with friends or family** - ask someone to ask you questions about how to inflect verbs.	**Quizlet** - use Quizlet flashcards to revise the verbs, use test mode to practice them in different forms
8b5	**Divide verbs into groups** - find some common patterns, make lists of verbs that inflect similarly.	**Rewrite the verbs** - keep writing the verbs that are difficult for you, use different colours to highlight the changes	**Blooket** - play with your friends, gold quest, collect gold by answering to questions in a quiz form
8b6	**Prepare Flashcards** - make flashcards - write Polish version on one side and English on the reverse.	**Make a board game out of flashcards or a self**-made board; land on a square and give 3 forms to stay.	**Quizlet** - use Quizlet flashcards to revise the verbs, use test mode to practice them in different forms

The most significant pattern that emerges from the data analysis was a strong preference for gamified and interactive learning. Over half of the tasks designed by students (5 out of 9) were game-based, including suggestions for digital platforms like Quizlet, Wordwall, and Kahoot!, as well as offline games like Irregular Verb Memory, Card or Board Game. In addition to gamification, the results show evidence of students applying strategies that encourage deeper cognitive processing. For example, Group 7a2 designed a 'Mnemonic Story' task to create connections, while Group 8b4 proposed 'Drawing the Verbs,' a task that leverages visualisation and dual-coding by linking the words to non-linguistic images. Finally, the tasks also included established methods of active retrieval practice. The suggestion of 'Flashcards' and 'Gap-fill sentences' indicates an awareness of the importance of testing recall and using vocabulary in a meaningful context.

Notably, the types of learning tasks designed by students from both Class 7 and Class 8 do not vary much. Despite being two distinct groups, they independently created a remarkably similar portfolio of strategies. For instance, students from both classes proposed tasks rooted in digital gamification (Quizlet and Wordwall from Class 7; Kahoot! from Class 8) rather than websites with online exercises, creative elaboration (Mnemonic

Story from Class 7; Drawing the Verbs from Class 8), and established retrieval practice (Flashcards and Gap-fills). This consistency across the two different class groups indicates that learners prefer active, varied, and multi-sensory learning rather than the passive re-reading strategies.

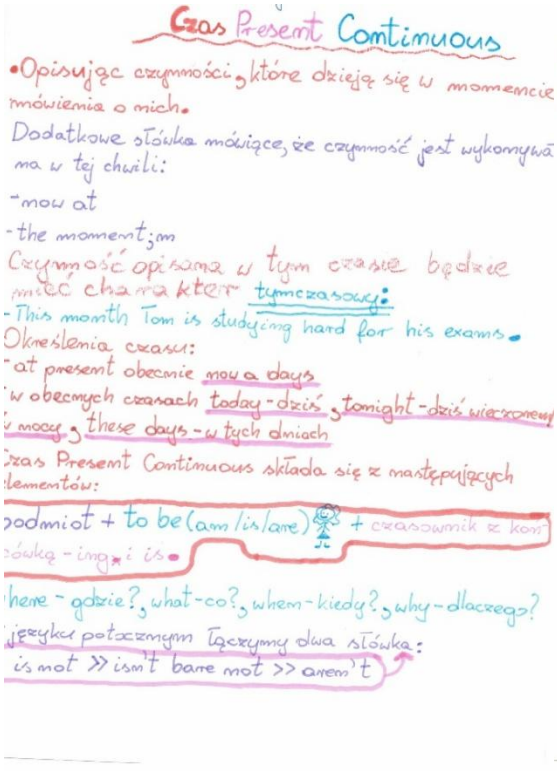
4.2.4. Session 9

The primary purpose of the ninth session was for students to apply the strategies they had been taught to a grammar-based activity. The analysis of the student-created artefacts revealed two primary observations. First, across both groups, 7E and 8E, students successfully transformed the provided text-based grammatical rules into a simplified, visual format. Second, there is an apparent variation in the specific organisational method chosen by each group.

The notes created by Group 7E were characterised by a linear and categorical structure, with a layout that was highly consistent across all tenses. While processing the handouts, the students in this group used markers to highlight the most important information. The main strategies included in created notes were: organising information into lists and bullet points, using cloud shapes to separate different rules, employing systematic colour-coding to differentiate grammatical function, and using a stick-figure icon for the subject. In contrast, Group 8E created notes that were non-linear and associative; there was a significant variation between different notes. Although the students did not make any notes on given handouts, the information in the notes was often organised as mind maps or spider diagrams. Some learners used structured tables to categorise vocabulary specific to a given tense.

Both groups adopted the same iconography for the subject and used their L1 as a scaffold for understanding. Furthermore, both groups used colour and graphics in ways that directly correspond to the strategies described in the Grammar Learning Strategy Inventory.

However, the application of color varied in its intentionality (See Figures 20 and 21)



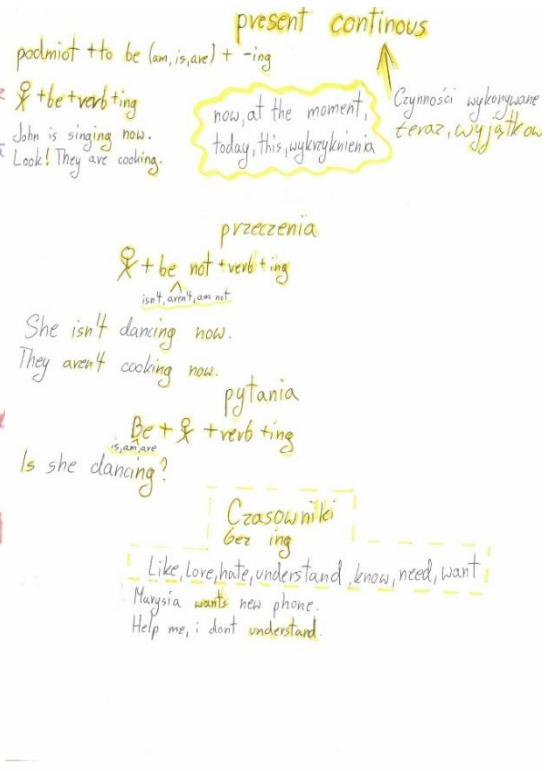


Figure 20. Unintentional colour use, session 9,

Figure 21. Intentional colour use, session 9

While many students used it systematically to differentiate grammatical functions, as shown in Figure 21, it was also noted that some learners applied colour without a clear organisational system (see Figure 20), seemingly to fulfil the task requirement rather than as a deliberate cognitive strategy. When creating the notes, the primary difference between the groups, lies in their choice of visual organisation. As illustrated in Figures X.1 and X.2, this contrast is evident in their work on the Past Simple tense. Group 7E organised the rules using a linear, list-based format (see Figure 22). In contrast, Group 8E created a spider mind map and presented the most important information in the form of questions and answers (see Figure 23).

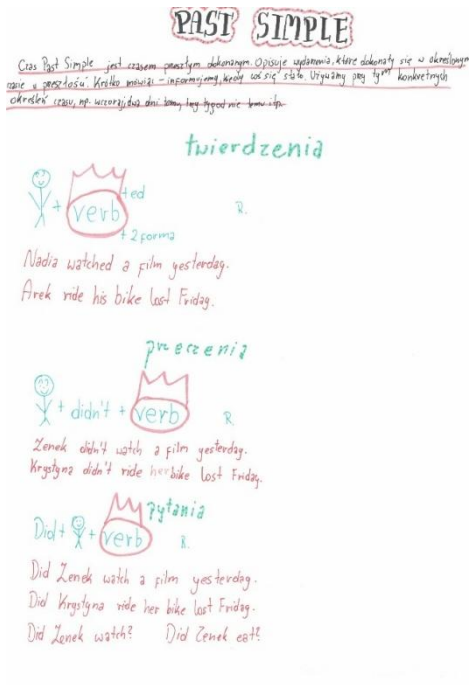


Figure 22. 7E past simple note, session 9

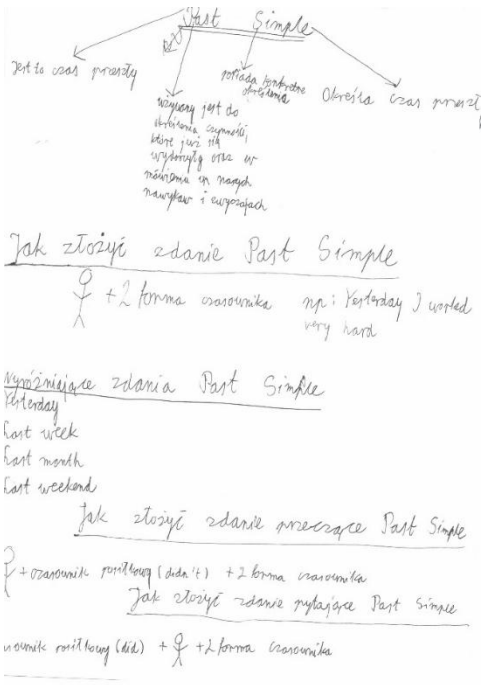


Figure 23. 8E past simple note, session 9

This pattern of varied strategy selection was consistent across other tenses; for instance, Group 8E also utilised elements of mind maps for the Present Perfect, a clear alternative to Group 7E's categorical lists (see Figures 24 and 25).

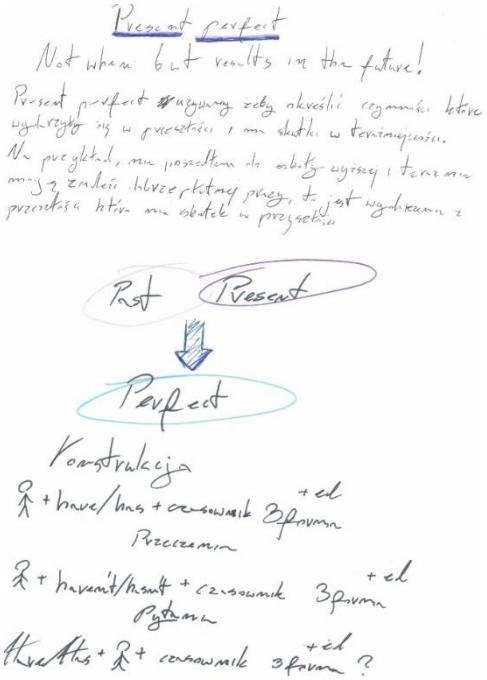


Figure 24. 7E present perfect, session 9

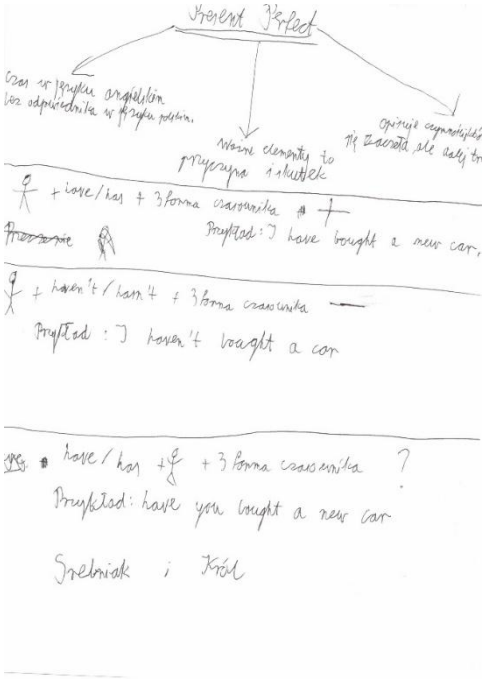


Figure 25. 8E present perfect, session 9

4.2.5. Session 10

Training Session 10 was the final, summative session of the programme. During this session, students were tasked with producing a list of grammar learning strategies appropriate for preparing for a test on the Past Simple tense and food-related vocabulary (see Appendix 5). The data gathered was qualitative, and the analysis of these lists provides insight into the range and type of strategies the learners were able to recall and recommend after the training programme was completed.

The analysis of the questionnaires from the 18 students in Group 7E revealed a total of 22 distinct learning strategies. This rich dataset highlights a diverse strategic repertoire within the group. Overall, the most frequently reported strategies for the entire group were *making notes* (n=15), *creating sentences* (n=13), and *oral/mental repetition* (n=13). This suggests a strong reliance on foundational cognitive and rehearsal strategies across the class. When the data is broken down by student profile, some interesting patterns emerge. The most popular strategies among the non-SEN learners (n=8) were *making notes* (n=7), *creating sentences* (n=6), and *watching l2 media* (n=5). The top strategies for the SEN learners (n=10) also included *making notes* (n=8), and *creating sentences* (n=7), but *oral/mental repetition* (n=8), was third most common strategy. The Table 23 below provides a comprehensive breakdown of all 22 strategies, classified according to Pawlak's (2012) framework, and details the frequency of their appearance in both the non-SEN and SEN subgroups in Group 7E.

Table 23. GLS listed by learners in Group 7E in relation to Pawlak's (2018) GLSI classification, session 10

Strategy (from student data)	**Type (Pawlak)**	**Group (Pawlak)**	**Frequency (non-SEN, n=8)**	**Frequency (SEN, n=10)**	**Frequency (Total, N=18)**
Avoid Distractions	Metacognitive	A1. Planning & organization	1	2	3
Self-Testing	Metacognitive	A2. Monitoring	1	2	3
Record Self	Metacognitive	A2. Monitoring	1	1	2
Use Online Quizzes/Games	Cognitive	B1. Formal practice	2	2	4
Use Learning Apps	Cognitive	B1. Formal practice	4	3	7
Speak English (Communicative)	Cognitive	B2. Functional practice	3	2	5
Watch L2 Media	Cognitive	B2. Functional practice	5	5	10

Create Sentences	Cognitive	B2. Functional practice	6	7	13
Use Real-World Context	Cognitive	B2. Functional practice	1	2	3
Make Notes	Cognitive	B3. Elaboration	7	8	15
Color-Code Notes	Cognitive	B3. Elaboration	2	0	2
Mind Mapping	Cognitive	B3. Elaboration	1	2	3
Use Flashcards	Cognitive	B5. Memorization	5	3	8
Mnemonic (Rhymes/Songs)	Cognitive	B5. Memorization	4	7	11
Kinaesthetic Learning	Cognitive	B5. Memorization	1	4	5
Label Objects	Cognitive	B5. Memorization	0	1	1
Repetition (Oral/Mental)	Cognitive	B6. Repetition	5	8	13
Repetition (Written)	Cognitive	B6. Repetition	2	2	4
Translate Sentences (L2->L1)	Cognitive	B7. Translation	2	1	3
Use L1 Subtitles/Support	Cognitive	B7. Translation	1	1	2
Peer Collaboration	Social	C1. Cooperation	3	3	6
Study with Family/Tutor	Social	C2. Asking for clarification	4	3	7

Moving from a granular view to a high-level summary, the 22 individual strategies were aggregated into their main theoretical categories: Metacognitive, Cognitive, and Social. In total, the 18 students of Group 7E mentioned 130 distinct strategic applications. The SEN subgroup (n=10) accounted for 69 of these mentions, while the non-SEN subgroup (n=8) accounted for 61.As detailed in the preceding table, the vast majority of strategies cited by both groups fall into the Cognitive category. To better visualise the proportional distribution of these strategy types within each subgroup's total strategic output, the data is presented as percentages in the chart below (see Figure 26).

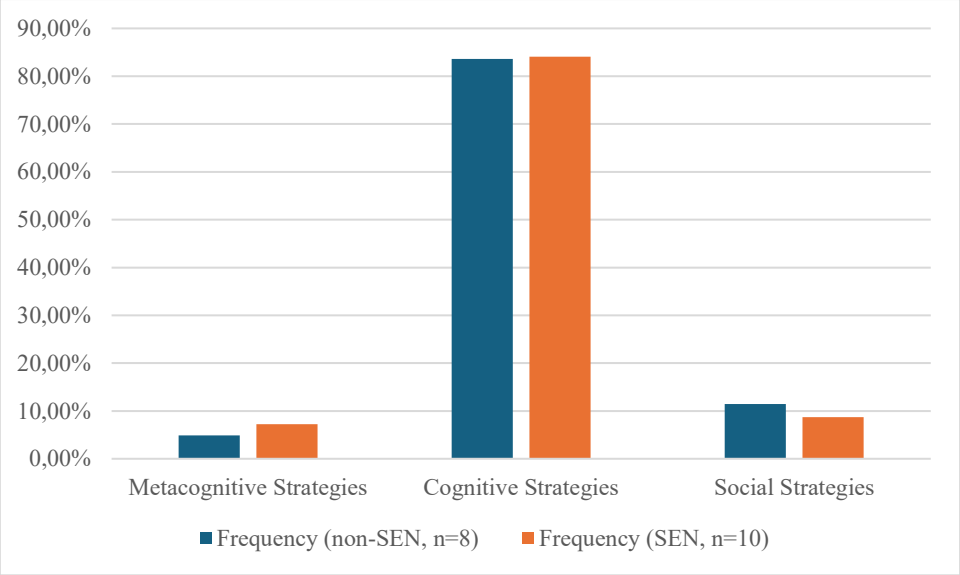


Figure 26. Distribution of strategies within the categories by SEN and non-SEN learners, group 7E, session 10

The chart clearly illustrates the profound dominance of cognitive strategies, which constitute approximately 84% of all strategies mentioned by both the SEN and non-SEN learners. This proportional similarity is a significant finding; it indicates that both groups rely on direct cognitive processing strategies to an almost identical degree.

The minor variations are visible in the other categories. SEN learners showed a slightly higher proportional use of Metacognitive strategies (7.2% vs. 4.9% for the non-SEN group), while non-SEN learners reported a slightly higher proportion of Social strategies (11.5% vs. 8.7% for the SEN group).

Overall, the data from Group 7E suggests that while the volume of articulated strategies may differ slightly, the fundamental strategic profile characterised by a heavy reliance on cognitive strategies is remarkably consistent across both SEN and non-SEN learners in this group.

The analysis of the questionnaires from the 18 students in Group 8E identified 27 distinct learning strategies, a slightly wider range than the 22 strategies found in Group 7E. Among these strategies, *watching l2 media* was the most frequently cited, mentioned by 14 students. This preference for media-based learning was complemented by strong traditional study habits, with *making notes* being the second most common strategy (13 mentions). A significant number of students also reported using strategiess focused on active practice and memorization, including *self-testing, using online quizzes/games*, and *using mnemonics (rhymes/songs),* each of which was mentioned 10 times. The full breakdown of all identified strategies and their frequencies is presented in the Table 24 that follows.

Table 24. GLS listed by learners in group 8E in relation to Pawlak's (2018) GLSI classification, session 10

Strategy (from student data)	Type (Pawlak)	Group (Pawlak)	Frequency (non-SEN, n=10)	Frequency (SEN, n=8)	Frequency (Total, N=18)
Self-Testing	Metacognitive	A2. Monitoring	7	3	10
Metacognitive Reflection	Metacognitive	A2. Monitoring	2	0	2
Use Online Quizzes/Games	Cognitive	B1. Formal practice	6	4	10
Use Apps	Cognitive	B1. Formal practice	3	1	4
Create Sentences	Cognitive	B2. Functional practice	7	2	9
Watch L2 Media	Cognitive	B2. Functional practice	9	5	14
Speak English (Communicative)	Cognitive	B2. Functional practice	4	2	6
Real-World Context	Cognitive	B2. Functional practice	4	2	6
Play L2 Games	Cognitive	B2. Functional practice	3	2	5
Listen to Podcasts	Cognitive	B2. Functional practice	3	1	4
Make Notes	Cognitive	B3. Elaboration	7	6	13
Mind Mapping	Cognitive	B3. Elaboration	4	5	9
Color-Code Notes	Cognitive	B3. Elaboration	1	1	2
Use Flashcards	Cognitive	B5. Memorization	4	6	10
Use Mnemonics (Rhymes/Songs)	Cognitive	B5. Memorization	6	4	10
Mental Rehearsal	Cognitive	B5. Memorization	3	2	5
Kinaesthetic Learning	Cognitive	B5. Memorization	1	1	2
Environmental Structuring	Cognitive	B5. Memorization	1	1	2
Associate with/ Humor	Cognitive	B5. Memorization	1	0	1
Label Objects	Cognitive	B5. Memorization	0	1	1
Oral Repetition	Cognitive	B6. Repetition	5	4	9
Written Repetition	Cognitive	B6. Repetition	4	4	8
Translate Sentences	Cognitive	B7. Translation	1	4	5
Peer Collaboration	Social	C1. Cooperation	1	2	3
Study with/ Family/Tutor	Social	C2. Asking for clarification	2	1	3

When the data is examined by subgroup, distinct patterns of strategic preference become evident. The non-SEN learners (n=10) showed a strong preference for active, output-oriented strategies. *watching l2 media* was their most popular choice (9 mentions),

followed by a cluster of strategies including *self-testing*, *creating sentences*, and *making notes*, each cited 7 times. At the same time, the SEN learners (n=8) placed a different emphasis on their preferred strategies, leaning more towards structured and visual tools to support the learning process. Their most common strategies were *use flashcards* and *making note*s (n=6 each), followed closely by *watching l2 media* and *mind mapping* (n=5 each). This comparison highlights some interesting differences. While both groups value media and note-taking, the non-SEN group's profile is characterised by active output and testing (*creating sentences, self-testing*). In contrast, the SEN group showed a stronger inclination towards structured, visual, and memory-based tools like *flashcards and mind mapping.*

Aggregating the individual strategies for Group 8E into broader categories reveals that a total of 138 strategic applications were identified. A notable observation is the difference in strategic volume between the subgroups: the non-SEN learners (n=10) accounted for 82 total mentions, while the SEN learners (n=8) accounted for 56. Figure 27 below provides a visual representation of the proportional distribution of these strategy types for each subgroup.

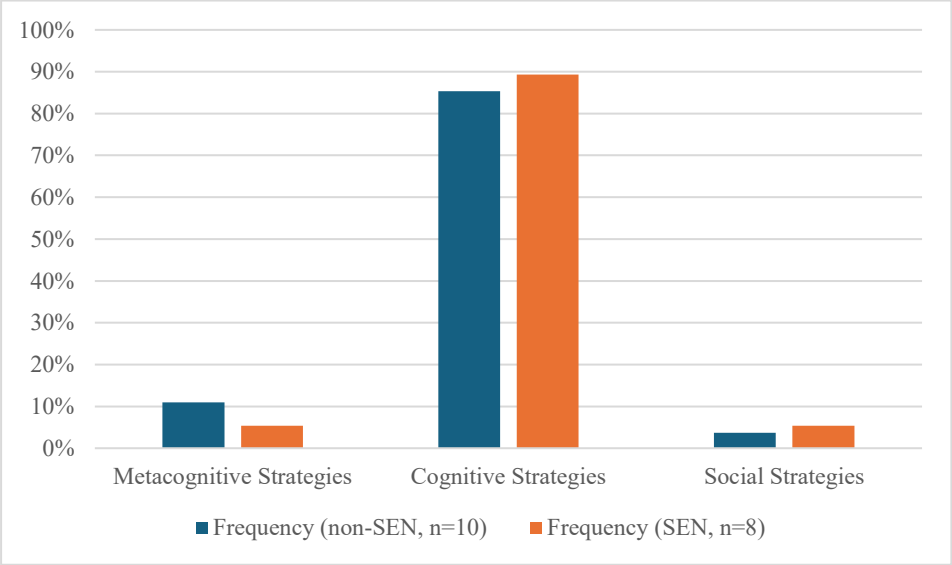


Figure 27. Distribution of strategies within the categories by SEN and non-SEN learners, group 8E, session 10

Cognitive strategies were by far the most dominant category for both subgroups, comprising 85% of all strategies mentioned by non-SEN learners and 89% by their SEN peers. A significant proportional difference was observed in the Metacognitive category. Strategies related to planning and self-monitoring constituted 11% of the non-SEN group's total strategic output, more than double the 5% reported by the SEN group. Social strategies

represented the smallest proportion for both subgroups, accounting for only 4% of mentions from non-SEN learners and 5% from SEN learners.

A comparison of the two class groups 7E and 8E reveals that the most striking similarity is the profound dominance of Cognitive strategies, which constituted over 80% of all mentioned strategies in both Group 7E and Group 8E. This indicates a shared, foundational reliance on direct methods of processing information, such as note-taking and media consumption, across all learners. However, a crucial difference lies in the strategic volume reported by the SEN subgroups. In Group 7E, the SEN learners mentioned slightly more strategies than their non-SEN peers (69 vs. 61). Conversely, in Group 8E, the SEN learners mentioned significantly fewer strategies than their non-SEN peers (56 vs. 82). The SEN learners in Class 7E reported a proportionally higher use of both Metacognitive strategies (7% vs. 5%) and, more significantly, Social strategies (9% vs. 5%). In fact, the emphasis on social learning strategies was nearly double in the 7E group compared to the 8E group. This reversal suggests that while the types of preferred strategies are broadly similar, factors specific to each class group may significantly impact the quantity of strategies that SEN learners can articulate.

4.3. Pre and Post-test results

4.3.1. Comparison between Experimental Groups (7E and 8E)

The primary goal of this initial analysis was to determine if a statistically significant difference existed in the learning gains between the two experimental groups, 7E and 8E. A lack of significant difference would suggest that the strategy training was equally effective in both groups, permitting them to be combined for subsequent analyses. The descriptive statistics for the gain scores of each group are presented in Table 25.

Table 25. Descriptive statistics for post- test gain scores goups 7E and 8E,

Group	Count	Mean Gain	Standard Deviation	Minimum Gain	Maximum Gain
7E	18	2,72	5,04	-7,0	15,0
8E	18	3,67	5,08	-2,0	18.0

On average, students in group 8E showed a slightly higher learning gain (M = 3.67) compared to group 7E (M = 2.72). However, the standard deviations were very similar, indicating a comparable spread of scores. This observation was confirmed by an independent samples t-test, which yielded a non-significant result (p=0.579). As this p-value is substantially greater than the conventional alpha level of.05, it indicates no statistically significant difference between the mean learning gains of the two groups. This conclusion was further corroborated by the Mann-Whitney U test (p=0.812), a non-parametric alternative employed because the assumption of normality was not met for group 8E.

Furthermore, the practical significance was assessed using Cohen's d. The resulting effect size (d=−0.1867) is considered negligible, confirming that the magnitude of the difference is not practically meaningful. The alignment of these results strengthens the conclusion that the observed minor differences in mean gains are attributable to random chance rather than a systematic effect of the intervention being different across the groups.

Despite the similar central tendencies, an examination of the score distributions reveals considerable variability within both groups. In group 7E, individual gain scores ranged widely from a minimum of -7 to a maximum of +15. Similarly, group 8E exhibited a wide dispersion of outcomes, with scores ranging from a minimum of -2 to a maximum

of +18. This demonstrates a high degree of variation in how individual participants responded to the intervention.

4.3.2. Performance of SEN students in experimental groups

To further investigate the intervention's impact, a more granular analysis was conducted to compare the performance of SEN and non-SEN students within each experimental group separately. The results revealed minor, non-significant trends that differed between the two classes.

In group 7E, the ten SEN students achieved a higher mean gain (M=3.50, SD=5.34) than the eight non-SEN students (M=1.75, SD=4.80). However, this difference was not statistically significant, as determined by a Mann-Whitney U test (p=0.788). Conversely, in group 8E, the ten non-SEN students showed a slightly higher mean gain (M=4.10, SD=5.93) compared to the eight SEN students (M=3.13, SD=4.09), a difference that was also found to be not statistically significant (p≈1.00).

The complete statistical breakdown for this intra-group comparison is presented in the Table 26. The results clearly show that while minor fluctuations in performance exist between SEN and non-SEN students in each class, these differences are not statistically significant and do not suggest a consistent pattern.

Table 26. Comparison of mean gain scores between SEN and non-SEN students within each experimental group

Class Group	Student Subgroup	N	Mean Gain	Standard Deviation (SD)	p-value*	Cohen's d
7E	SEN Students	10	3,50	5,34	0,788	0,34
	Non-SEN Students	8	1,75	4,80		
8E	SEN Students	8	3,13	04,09	~1,000	-0,19
	Non-SEN Students	10	4,10	5,93		

Taking the group of all SEN learners together from both experimental groups and juxtaposing their results with students without learning difficulties, it is visible that the mean gain for the combined eighteen SEN students (M=3.33) was nearly identical to that of the combined eighteen non-SEN students (M=3.06), and the effect size was negligible (d=0.0547). This broader analysis revealed no statistically significant difference in the learning gains between the two cohorts (p=0.871).

4.3.3. Comparison of experimental vs. control groups

A pivotal analysis was conducted to evaluate the overall effectiveness of the intervention by comparing the learning gains of the combined experimental group (N=36) with the combined control group (N=36). The detailed analysis is shown in Table 27.

Table 27. Descriptive statistics of gain scores for the experimental and control groups.

Group	Count	Mean Gain	Standard Deviation	Minimum Gain	Maximum Gain
Experimental	36	3.19	5.01	-7.0	18.0
Control	36	2.25	3.99	-9.0	15.0

The descriptive data reveal a positive trend in favour of the students who received the strategy training. Specifically, the experimental group achieved a higher mean gain (M=3.19, SD=5.01) than the control group (M=2.25, SD=3.99), indicating a greater average improvement. However, when this trend was tested for statistical significance, the difference was found to be not significant. The non-parametric Mann-Whitney U test, chosen as the primary measure due to a violation of the normality assumption in the control group data, confirmed this ($p=0.534$). Furthermore, the practical significance of this positive trend was minimal, as indicated by a small effect size of Cohen's $d = 0.21$. Therefore, despite the positive trend suggested by the mean scores, the central conclusion is that the strategy training did not produce a statistically significant improvement in grammar learning gains when compared to the control group.

4.3.4. The Combined Effect of Strategy Training and SEN Status

To conduct the most comprehensive analysis, the participants were divided into four distinct groups based on two factors: whether they received the strategy training (Experimental vs. Control) and their learning status (SEN vs. Non-SEN). This approach allows for an examination of the main effects of each factor as well as their potential interaction. The descriptive statistics, including the mean gain scores and standard deviations for each of these four groups, are presented in the Table 28 below.

Table 28. Descriptive statistics of gain scores by training group and SEN status.

Group	SEN Status	N	Mean Gain	Standard Deviation (SD)
Experimental	SEN	18	3,33	4,69
	Non-SEN	18	3,06	5,44
Control	SEN	16	1,44	2,19
	Non-SEN	20	2,90	4,95

The descriptive data reveals a potentially interesting trend. The highest average learning gain was observed in the SEN Experimental group (M=3.33), while the lowest was observed in the SEN Control group (M=1.44). This suggests that the intervention may have had its most pronounced positive effect on the SEN learners. In contrast, the mean gains for the two non-SEN groups were very similar to each other, with the Non-SEN Experimental group (M=3.06) performing almost identically to the Non-SEN Control group (M=2.90). The subsequent two-way ANOVA will determine if these observed differences are statistically significant.

It is important to note that while the assumption of homogeneity of variances was met, the ANOVA model's residuals were not normally distributed, which suggests the results should be interpreted with a degree of caution. The ANOVA results showed that there was no significant main effect for the type of training [F(1, 68) = 0,823, p = 0,367], indicating that, overall, the experimental group did not perform significantly differently from the control group. Similarly, there was no significant main effect for SEN status [F(1, 68) = 0,296, p = 0,588]. The full statistical results are detailed in the Table 29 below.

Table 29. Two-way ANOVA results for the effects of training and SEN status on gain scores

Effect	F-statistic	p-value	Eta Squared (η2)
Training (Main Effect)	0,823	0,367	0,012
SEN Status (Main Effect)	0,296	0,588	0,004
Training * SEN (Interaction)	0,651	0,423	0,009

Most critically for the research question, the analysis revealed no significant interaction effect between the training and SEN status [F(1, 68) = 0,651, p = 0,423]. This lack of interaction indicates that the effect of the strategy training was not significantly different for SEN students compared to their non-SEN peers.

4.4. Qualitative Analysis of Strategy Use in the SEN Cohort

As the preceding quantitative analysis did not yield statistically significant results, a qualitative approach was employed to uncover more nuanced patterns and potential correlations between the self-reported strategies and the students' learning outcomes. The primary objective is to investigate which strategic behaviours appear to be associated with higher learning gains.

To achieve this, the students were segmented into three performance-based groups: High, Mid, and Low-Gain based on their progress scores, allowing for a detailed comparative analysis of their strategy preferences (see Table 30).

Table 30. Segmentation of SEN participants into performance-based groups by gain score.

Group Name	Gain Score Criteria	Number of Students
High-Gain	Score >= 7	5
Mid-Gain	Score from 2 to 6	6
Low-Gain	Score <= 1	7

4.4.1. Gain scores and metacognitive strategy preferences

The analysis of metacognitive strategies, based on data collected in session 7, reveals distinct patterns of behaviour across the three performance groups(see Figure 28). A general overview indicates that students in the High-Gain group not only employed a wider range of strategies but also favoured those related to active self-monitoring and reflection. In contrast, the Low-Gain group's strategy use was more limited and less focused on productive language use.

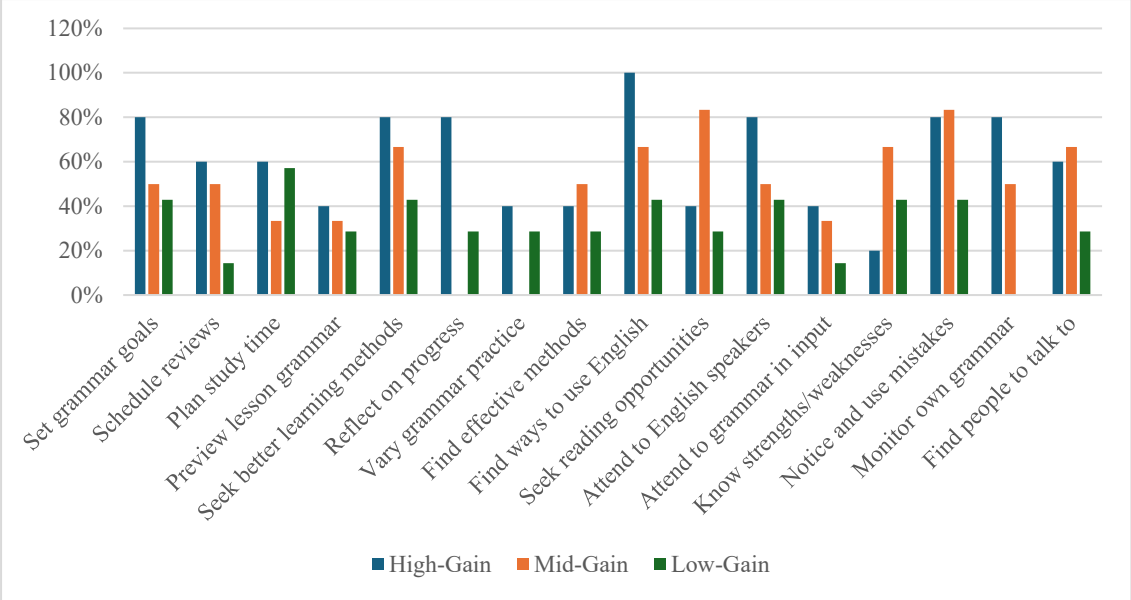


Figure 28. Reported use of metacognitive strategies by SEN learners across performance groups.

A detailed examination shows that specific strategies are particularly characteristic of the High-Gain students. Most notably, 100% of the students in this group reported that they 'try to find as many ways as they can to use their English'. Moreover, 80% of this group reported thinking about their progress in learning (Reflect on progress) a behaviour entirely absent in the Mid-Gain group. Similarly, 80% of high-achievers actively monitored their own speech and writing for grammatical accuracy (Monitor own grammar), a strategy that no student in the Low-Gain group reported using. This suggests a strong link between high achievement and the metacognitive capacity for self-reflection and self-correction. Furthermore, some foundational strategies exhibit a step-progression, with their usage increasing incrementally from the Low- to the High-Gain group. This is evident in behaviours like setting specific goals (Low: 43% → Mid: 50% → High: 80%) and actively seeking ways to be a better learner (Low: 43% → Mid: 67% → High: 80%). This pattern suggests that developing these planning and orientation strategies may be a key pathway to improving learning outcomes.

Interestingly, the Mid-Gain group displayed a unique focus on strategies related to input and error analysis. They reported the highest usage rates for seeking opportunities to read (83%) and noticing their own mistakes (83%), even surpassing the High-Gain group in these areas. This may indicate a transitional phase where learners are actively gathering knowledge and correcting errors but have not yet fully developed the productive, self-monitoring habits of the highest achievers.

To further investigate the linear relationship between the frequency of use of a given strategy and the learning outcomes, a Pearson correlation analysis was conducted. This analysis provides a coefficient for each strategy, indicating the strength and direction of its association with the students' gain scores (See Figure 29).

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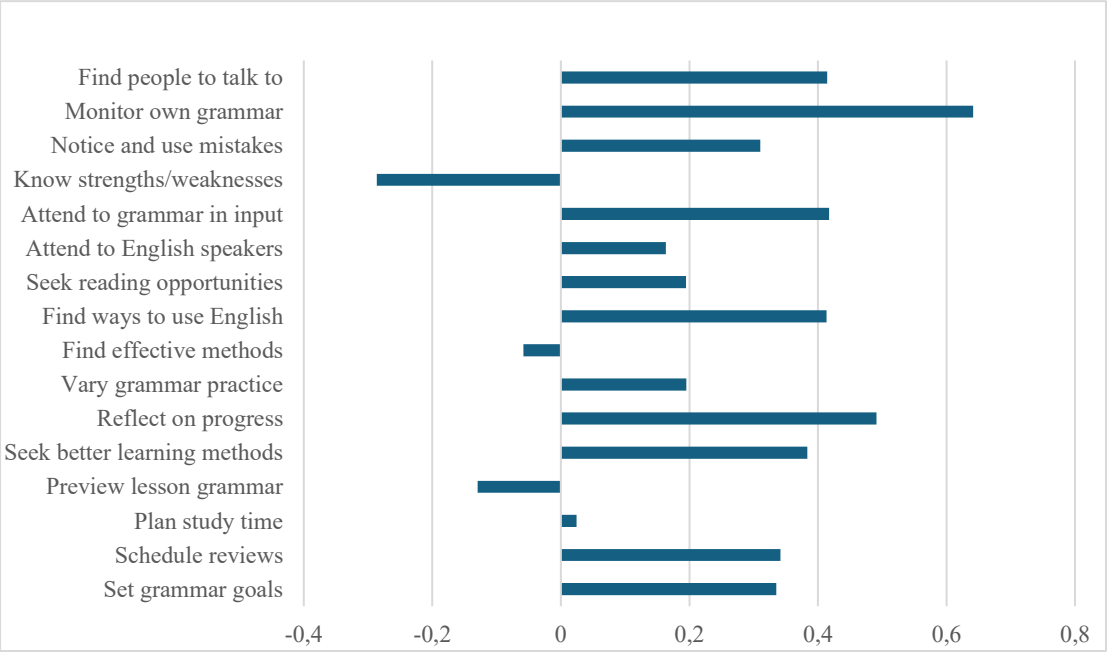

Figure 29. Pearson correlation coefficients for metacognitive strategy use and gain scores, for SEN learners

The strongest positive correlation was found for the strategy *Monitor Own Grammar* (r=0.64), which refers to paying attention to grammar in one's own speaking and writing. This may suggest that the act of self-monitoring language production is more closely associated with progress than any other single behaviour. Following this, *Reflect on Progress* (r=0.49) and *Attend to Grammar in Input* (r=0.42) also showed notable positive correlations. This cluster of highly correlated strategies underscores the importance of a conscious, analytical, and reflective approach to the language learning process.

Conversely, a few strategies showed near-zero or weak negative correlations, implying they have little to no linear relationship with the measured learning gains in this cohort. For example, *Know Strengths/Weaknesses* (r=−0.29) had a negative correlation, which may suggest that simply being aware of one's weaknesses, without applying active strategies to address them, is not sufficient for progress. The results indicate a clear correspondence between the level of learning gain and the types of strategies employed. High-Gain learners were consistently associated with a greater use of active, self-monitoring strategies like *Monitor Own Grammar* and *Reflect on Progress*. The

correlational analysis further substantiated these observations, confirming that these specific behaviours had the strongest positive association with the students' final gain scores.

4.4.2. Gain scores and learner-generated strategies

Building on the preceding analysis of metacognitive strategies, this section delves into the specific learning strategies students generated during the final training session. When asked to propose effective methods for grammar acquisition (see Section 4.2.5), the learners' suggestions were diverse, naturally falling into several categories, primarily cognitive, social, and metacognitive strategies. The primary objective of the following analysis is to investigate the relationship between these learner-generated strategies and their subsequent learning outcomes. To facilitate this comparison, students were again segmented into the High-Gain, Mid-Gain, and Low-Gain groups based on their performance scores. The distribution of these learner-generated strategy proposals across the three performance groups is visually delineated in Figure 30 below.

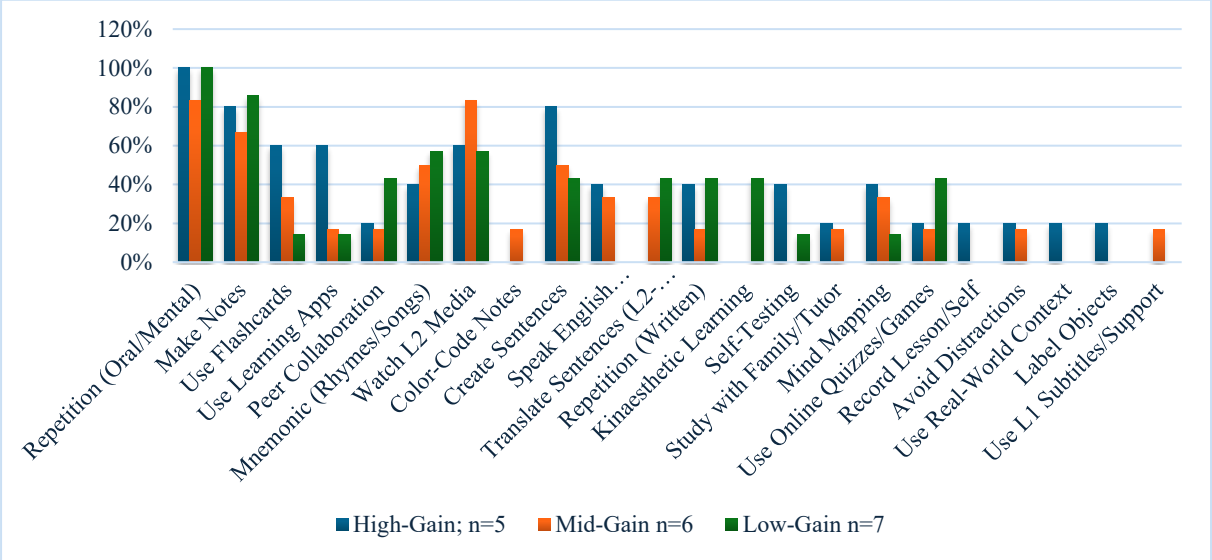

Figure 30. Frequency of learner-generated strategies across performance groups.

A primary observation from the data is the existence of a core set of foundational strategies. Most notably, *repetition (oral/mental)* was endorsed by 100% of students in both the High-Gain and Low-Gain groups, establishing it as a universally accepted method within the cohort. The strategy of *making notes* also showed high prevalence, endorsed by 86% of the

Low-Gain group, 80% of the High-Gain group, and 67% of the Mid-Gain group, suggesting it is another common component of the students' perceived effective learning process.

The most significant divergences emerge when examining strategies that require more active cognitive engagement. A pronounced trend is visible in the High-Gain group's preference for constructive and technology-assisted learning. For instance, 60% of High-Gainers proposed using *flashcards* and *learning apps*, a rate substantially higher than the 14% reported by the Low-Gain students. Similarly, the crucial strategy of *Creating Sentence'* was cited by 80% of High-Gainers, compared to just 43% of low-gainers. Furthermore, communicative practice, represented by *speak english*, was suggested by 40% of High-Gainers but was entirely absent from the Low-Gain group proposals.

Certain strategies were notably more prevalent among students in the Low-Gain cohort. The most visible example, *kinaesthetic learning'* was endorsed by 43% of the Low-Gain group but was completely absent in both the Mid- and High-Gain cohorts. A similar, stark pattern was observed for *translating sentencess (L2->L1),* which was proposed by 43% of low-gainers but was entirely absent from the High-Gain group's suggestions. The selection of these two strategies is therefore a distinctive characteristic of the Low-Gain group's proposals.

To supplement the qualitative observations, a quantitative analysis was conducted to ascertain the statistical relationship between students' strategy endorsements and their learning outcomes. A point-biserial Pearson correlation was used to measure the association between a continuous variable (the students' gain scores) and a dichotomous variable (proposing a strategy vs. not proposing it). The results, presented in Figure 31, reveal a wide range of associations, from moderately positive to moderately negative correlations.

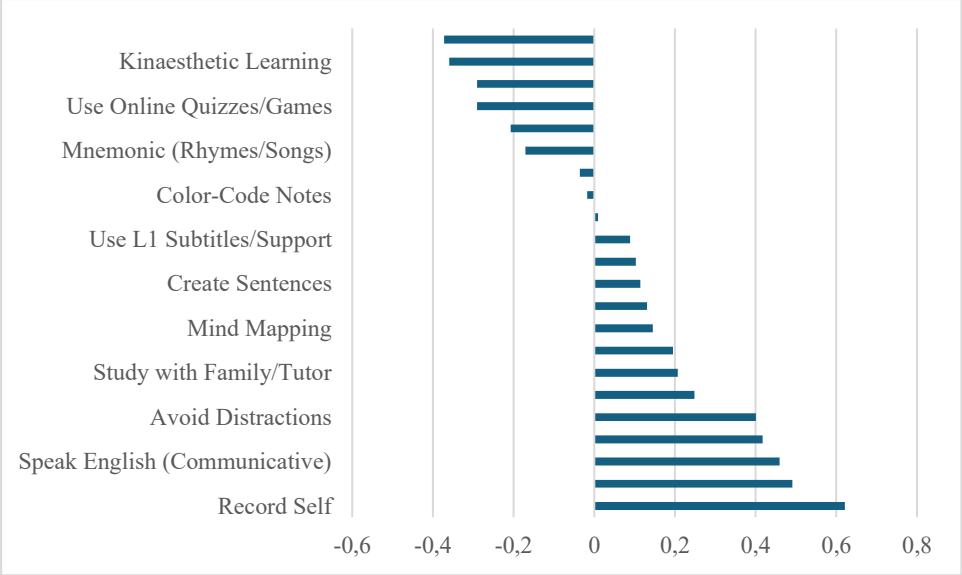

Figure 31. Pearson correlation coefficients for learner-generated strategies and gain scores

The correlation coefficients largely reinforce the patterns identified in the qualitative analysis. Strategies requiring active, self-driven learning demonstrated the strongest positive relationship with higher gain scores. The highest correlation was observed for *record self* (r = 0.62), although this result must be viewed with extreme caution as the strategy was proposed by only one student who happened to be a High-Gainer (Gain = 15). More robustly, strategies such as *use flashcards* (r = 0.49*), speak English* (r = 0.46), and *use learning apps* (r = 0.42) all showed moderate positive correlations with learning gains. This quantitative evidence supports the hypothesis that behaviours associated with active recall, communicative practice, and technology-enhanced learning are linked to better outcomes for this cohort of SEN learners.

In contrast, strategies that may involve a more passive or potentially less focused approach to grammar learning showed negative correlations. The strongest negative association was found for *translate sentences* (L2->L1) (r = -0.37), followed by *kinaesthetic learning* (r = -0.36). This suggests that students who rely on L1 translation or more general, less task-specific activities may be less likely to achieve high gains in grammar acquisition.

Interestingly, some of the most universally endorsed strategies, including *repetition (oral/mental)* (r = -0.04) and *make notes* (r = 0.01), exhibited a correlation coefficient very close to zero. This indicates that while these strategies are common, their use alone does not have a linear relationship with the learning outcomes measured in this study. They may

be necessary, foundational activities, but they are not sufficient differentiators of high and low performance.

Summary

This chapter presented the quantitative and qualitative results obtained in the empirical study. The analysis started with the presentation of data from the baseline grammar learning strategy questionnaire, which identified the initial strategic profiles of the participants, including a comparison between grades and SEN and non-SEN learners. Subsequently, a qualitative analysis of the training sessions was provided, documenting the intervention process and student-generated artefacts. The chapter then detailed the statistical analysis of the pre- and post-test results to measure grammar learning gains across the experimental and control groups. The final section was devoted to a qualitative analysis that juxtaposed the SEN students' post-intervention strategy preferences with their individual learning outcomes. As a result, the participants were categorised into high-, mid-, and low-gain performance groups.

Chapter 5. Discussion

Introduction

This chapter is devoted to the interpretation of the results of the present study elaborated on in Chapter 4. The discussion is organised around the four research questions that guide this inquiry. The first subsection involves a discussion about the intuitive use of grammar learning strategies by SEN learners. The following subsection is devoted to establishing the effect of strategy training on SEN students' English grammar learning outcomes. Subsection 5.3. explores the relationship between the SEN students' grammar learning outcomes and GLS preferences. The final subsection discusses whether the effects of strategy training for SEN students are the same or different from those obtained by students without learning difficulties. Concurrently, an attempt will be made to compare the results of the present study with other research studies described in Chapter 3 (see Section 3.2.).

5.1. The intuitive use of learning strategies in SEN students' educational practice

RQ 1: Do students with special educational needs intuitively use learning strategies in their educational practice? If so, which strategies do they use?

Based on the baseline questionnaire (Section 4.2.), it can be stated that students with SEN, prior to any intervention, intuitively and actively employ a range of language learning strategies in their educational practice. They mostly employ cognitive strategies focused on immediate, task-based actions, such as error monitoring and processing corrective feedback. On the other hand, it is visible that SEN learners do not often report the use of metacognitive strategies related to planning and organisation, as well as affective strategies for managing the emotional aspects of learning.

The results gained from the questionnaire (Section 4.2.) clearly illustrate this profile. At a general level, the overall descriptive frequency of strategy use shows an interesting, though not statistically significant, interaction between grade level and SEN status. In Grade 7, SEN learners reported a higher overall extent of strategy use than their

non-SEN peers. In Grade 8, this pattern reverses, with non-SEN students reporting slightly higher use. The analysis of particular strategies shows a clear preference for immediate, concrete actions.

The analysis of particular strategies shows a clear preference among SEN learners for immediate, concrete actions. Their most frequently reported strategies were reactive and task-focused, such as monitoring their own errors and seeking clarification online. In contrast, proactive strategies involving abstract planning, like creating study schedules or using mnemonic devices, were the least utilised. This pattern was consistent when strategies were grouped into broader categories: learners favoured routines related to processing teacher feedback and direct communication over less tangible affective and social strategies. A comparison with their non-SEN peers further highlighted this profile; SEN learners reported a higher inclination towards using grammar for communication but a significantly lower use of social strategies for collaborative learning. This suggests that while SEN learners are motivated to use the language, they are less likely to initiate or engage in peer-based learning to achieve that goal.

The specific strategic profile of SEN learners can be understood as the result of an interplay between several key factors discussed in the theoretical part of this dissertation: the cognitive profile of SEN learners, the prevailing instructional context, the students' developmental stage, and their motivational orientation.

First, SEN learners exhibit a cognitive profile that can explain their strategy preferences. As detailed in Sections 1.5.5. and 3.6., the cognitive functioning of these students is often marked by difficulties in areas governed by executive functions. Jankowska and Bogdanowicz (2012), for instance, note that learners with non-specific difficulties often show a low ability to plan and organise their activities. This can be linked directly to the neurological processes of learning outlined in Section 1.4. Metacognitive planning requires significant engagement of the brain's frontal lobes, which are responsible for higher-order thinking. When these processes are less efficient, learners naturally settle towards strategies that place fewer demands on their cognitive structures. Furthermore, the central role of working memory in language aptitude, as described in Baddeley's (2007) multi-componential model (Section 1.5.1.2.), is critical here. Deficits in the phonological loop, responsible for temporarily holding and rehearsing speech-based information, pose a challenge for SEN learners. They may encounter difficulties in mental manipulation of grammatical rules or retention of complex sentence structures long enough to analyse them. As a consequence, abstract, future-oriented metacognitive tasks become more challenging,

and SEN students rarely resort to actions like creating long-term study plans or other metacognitive strategies. Instead, learners choose more concrete, immediate, and externally scaffolded strategies such as reacting to a teacher's correction or noticing an error in a written task. Such tangible actions support learners in releasing the cognitive burden from a strained working memory system. A significant body of research highlights that SEN learners benefit from explicit, structured support. Nijakowska (2010), for example, emphasised that rule explanation, step-by-step practice and raising metalinguistic awareness are particularly beneficial for dyslexic learners. Similarly, the work of Tribushinina et al. (2022) demonstrated the effectiveness of an intervention based on explicit, strategy-based grammar instruction for enhancing the metalinguistic awareness of children with language disorders. The research findings reinforced the need for direct pedagogical guidance for SEN learners. This need for explicitness can be understood from a neurobiological perspective: learners with neurological differences may struggle with weakened cognitive processing. Therefore, structured instruction provided by teachers helps their brains to form and strengthen the necessary synaptic connections for new learning, supporting learners in making progress.

Second, the instructional context within the Polish educational system significantly shapes learners' attitudes towards the strategies they perceive as valuable and decide to develop. As described in Section 2.5.1., the curriculum and the high-stakes nature of the eighth-grade exam place a strong emphasis on grammatical accuracy. This environment naturally fosters what Long (1991) called a "focus on forms" approach, where correctness is a highly valued feature. SEN learners, being aware of these expectations, prioritise strategies that directly address this demand, namely, error detection and correction. This finding is highly consistent with previous research conducted in the Polish context. Studies by Pawlak (2008; 2012) and Mystkowska-Wiertelak (2008) also found that learners tend to rely on a limited set of traditional, cognitive strategies and underuse metacognitive and affective ones. The present study confirms that this pattern also applies to younger students.

Third, the participants' developmental stage is a crucial factor. As adolescents, the learners in this study are undergoing what Harklau (2022) describes as a massive reorganisation of their neurological structures. This period is characterised by what Steinberg (2014) calls heightened brain plasticity, which creates a critical window for learning and skill development. These ongoing neurological changes help to explain the apparent paradox in their strategy use: learners' capacity for abstract thought and metacognitive reflection is developing, but it is not yet fully mature. Consequently, they

are capable of some metacognitive actions like self-monitoring ("I know my strengths and weaknesses"), but struggle with more complex, higher-order planning that requires more developed executive functions. The provision of structured support, such as strategy training, can accelerate the development of these emerging metacognitive skills and help students to establish effective routines for lifelong learning.

Finally, the students' motivational orientation, viewed through the lens of Dörnyei's (2005) L2 Motivational Self System (Section 1.5.3.4.), has a significant influence on their choice of strategies. A strong focus on correcting mistakes and meeting teacher expectations may suggest that their motivation is driven more by an "ought-to self", the desire to fulfil obligations and avoid negative consequences (e.g., failing a test), than by an "ideal L2 self" associated with intrinsic goals like fluent communication. This external pressure reinforces the use of strategies that ensure accuracy over those that might foster communicative fluency or emotional well-being.

In conclusion, SEN learners vary in their intuitive use of grammar learning strategies. It can be assumed that their strategic profile is a logical consequence of the interaction between their internal cognitive predispositions and the external demands of their educational environment. Learners' cognitive limitations, accuracy-focused instructional context, their developmental stage, and a likely performance-driven motivation may determine their reliance on reactive, feedback-oriented cognitive strategies and the rare use of proactive metacognitive and affective strategies.

5.2. The effect of strategy training on SEN students' English grammar learning outcomes

RQ 2: What is the effect of strategy training on SEN students' English grammar learning outcomes?

Based on the quantitative analysis of pre- and post-test scores, the intervention did not yield a statistically significant improvement in grammar test performance. A two-way ANOVA revealed no significant interaction effect between the training and SEN status; thus, the null hypothesis could not be rejected on these grounds.

However, a purely quantitative analysis fails to capture the full scope of intervention impact. A descriptive look at the data reveals a positive trend, with SEN students in the

experimental group showing noticeably more improvement than their peers in the control group. Furthermore, this group's average masks the highly variable nature of the outcomes within the SEN experimental cohort itself. The participants who received the training demonstrated a wide spectrum of progress, falling into distinct high-, mid-, and low-gain subgroups.

The qualitative results from the intervention phase clearly show a shift from passive learning to active strategic engagement among SEN students. The training sessions 6 and 7 enhanced SEN learners' metacognitive awareness and planning. A visible effect was observed in Session 6, where learners demonstrated a notable ability to self-assess their grammatical knowledge, accurately identifying specific grammar areas that were challenging for them. They also articulated concrete, strategic actions to address these gaps, with the most commonly suggested strategies being *taking notes* and *doing extra grammar exercises*. Following Session 7, which aimed at fostering metacognitive strategies, a striking number of students in both SEN groups reported having *specific goals and objectives in learning gramma*r, a clear indicator of their increased engagement. This observation was further substantiated by qualitative feedback, which indicated that SEN learners frequently responded to errors with concrete follow-up actions and engaged in self-editing of their written work.

During training sessions 8 and 9 students were able to practice and develop a broader cognitive strategy repertoire. In Session 8, SEN students participated in mixed-ability groups, and actively contributed to designing a variety of engaging and gamified tasks for learning irregular verbs, moving beyond simple rote memorisation to suggest activities like creating flashcard games and using online platforms like Blooket. This reflects a direct internalisation of the memory strategies presented in Session 5. Similarly, in Session 9, they successfully applied cognitive strategies to deconstruct complex tense rules, transforming dense text into simplified visual formats using strategies like systematic colour-coding and mind maps, which directly correspond to the strategies modelled during training.

The results of the final summative session revealed Students' new strategy repertoires. The lists generated by SEN learners uncovered a blend of both established classroom practices and, more importantly, strategies indicating a shift from passive reception to active learning. While widespread cognitive strategies like *making notes* and *oral/mental repetition* were still commonly listed, the crucial development was the emergence of more active strategies. The frequent suggestion of *creating sentences* shows

that learners now understand the need to apply grammatical rules productively. Likewise, the importance of *use flashcards* and *mind mapping*) indicates that learners have internalised specific methods for active recall and the visual organisation of their knowledge. Therefore, the training did not just add more strategies to their list; it qualitatively changed how they conceptualise grammar learning, equipping them with the tools to manipulate and internalise information actively.

The qualitative success of the intervention, despite the lack of statistically significant quantitative gains, can be interpreted through several theoretical and empirical lenses. The observed development aligns with the central goal of strategy-based instruction, which is to foster learner autonomy and self-regulation. The intervention successfully guided students through the stages of O'Malley and Chamot's (1990) CALLA model (see Section 2.4.5.), upon which it was based. The qualitative results show a clear progression from the Preparation and Presentation stages (awareness-raising) to active Practice, Evaluation, and Expansion as learners applied and reflected on the strategies. O'Malley and Chamot (1990) identified that the students' ability to plan, self-assess, and select appropriate cognitive tools is a characteristic of the metacognitive development that is crucial for effective learning.

This process also mirrors Macaro's (2001) strategy training cycle, which posits that learners move from declarative knowledge ("knowing what" a strategy is) to procedural knowledge ("knowing how" to use it) through scaffolded practice. The intervention provided the declarative input in Sessions 2-5, and the subsequent practice sessions (6-10) initiated the proceduralisation process. The lack of significant gains on the post-test may indicate that this proceduralisation was not yet fully automatised, a process that, according to skill acquisition theory (Anderson, 1983), requires extensive and prolonged practice.

Furthermore, the existing difference in gain scores strongly suggests that the effectiveness of the strategy training was not uniform, but a complex interplay of individual differences mediated it. The SEN learners are heteorogeneus groups and their individual differences likely include cognitive factors, such as working memory capacity (Section 1.5.1.2.) and underlying language aptitude, particularly their grammatical sensitivity (Section 1.5.1.1.) Additionally, non-cognitive traits such as grit (Section 1.5.2.) and affective variables like self-efficacy and foreign language anxiety (Section 1.5.3.3.) also influence how each student engages with and benefits from the intervention. Finally, the specific combination and severity of a student's diagnosed learning difficulties, such as deficits in phonological analysis or visuomotor coordination (Section 1.5.5), also determine

learners' response to the training. It is in line with the Complex Dynamic System Theory (Larsen-Freeman, 1997) as discussed in Section 1.5.3.1. The theory posits that language development is an inherently non-linear and emergent process, characterised by significant intra-learner variability over time. From this perspective, it is expected that a uniform pedagogical intervention would produce non-uniform results As each learner's dynamic system responds to the training uniquely. As the present study participant analysis showed, the SEN learners displayed a complex constellation of co-occurring cognitive, processing, and affective difficulties, the number of diagnosed deficits ranging from three to nine per student. Previous research by Helland and Kassa (2005) empirically confirmed such intra-group diversity and demonstrated that even within a cohort of dyslexic learners, L2 performance varied significantly based on their underlying comprehension skills. Furthermore, prior intervention studies have also documented how initial learner profiles mediate training outcomes. Macaro and Erler (2008), for example, found that their strategy training had the most substantial impact on learners who began with the weakest strategic repertoires, illustrating that the potential for gain is not uniform across all participants. Thus, it can be concluded that the varied gains observed in the present study are not an anomaly, but rather an authentic reflection of how individual differences shape the language learning process

Acknowledging this crucial role of individual differences, the intervention was intentionally tailored to the specific environment of a mixed-ability second language class in a Polish primary school. The emphasis on explicit instruction, teacher modelling, visual aids (colour-coding, mind maps), and structured, step-by-step tasks directly addresses the challenges associated with weaker executive functions and working memory deficits often found in SEN learners in this population. The success of these strategies aligns with the recommendations of Bogdanowicz (2011) and Nijakowska (2010), who advocate for multisensory, cumulative, and explicit approaches to teaching grammar to students with dyslexia and other learning difficulties. The training provided the "explicit, strategy-based grammar intervention" that Tribushinina et al. (2022) found to be effective in enhancing metalinguistic awareness in children with language disorders.

Finally, the finding that a short-term intervention produced qualitative but not quantitative effects is consistent with some prior research. For instance, Ismail & Dedi (2021) also found that an eight-week SBI programme led to a modest rise in reported strategy use but no significant improvement in grammar test scores. It indicates that a longer period is needed for strategic behaviours to translate into measurable proficiency

gains. The qualitative progress observed in the present study, however, echoes the findings of Goh & Tabi (2006), who demonstrated that even young, lower-achieving learners can gain significantly in confidence and metacognitive awareness from explicit strategy training, irrespective of immediate test score improvements.

In summary, while the strategy training did not result in a statistically significant effect on SEN students' grammar test scores within the present study, it had a clear and positive impact on their grammar learning outcomes. It successfully initiated a shift towards more active, reflective, and self-regulated learning by equipping students with the metacognitive and cognitive tools necessary to better manage their own learning process. This may be treated as a foundational step towards long-term academic success and learner autonomy.

5.3. The effect of strategy training on SEN vs. non-SEN students

RQ 3: Are the effects of strategy training for SEN students the same or different from those obtained by students without learning difficulties?

The research results indicate that the effects of the strategy training were indeed different for SEN and non-SEN students. However, this difference manifested as a nuanced trend rather than a statistically significant gap in overall test scores. A direct comparison of the learning gains within the experimental group showed no significant difference between the two cohorts. However, a more revealing analysis emerges when comparing the performance of the experimental and control groups for each student type separately. As was outlined in the previous section, the strategy training appeared to have a more pronounced positive effect on SEN learners, who showed a substantial descriptive gain over their peers in the control group. In contrast, the non-SEN students who received the training performed almost identically to their non-SEN peers in the control group. This suggests that while the training provided a visible (though not statistically significant) boost for SEN learners, it did not offer a comparable advantage for non-SEN learners beyond regular classroom instruction.

Qualitative data from the baseline questionnaire and the intervention sessions help to contextualise this differential impact. The two groups entered the study with distinct strategic profiles (Section 4.2.). For example, the baseline survey showed that non-SEN

students in Grade 8 reported significantly higher use of social strategies. In contrast, SEN students in both grades reported a stronger focus on cognitive strategies related to processing teacher feedback. These pre-existing differences in strategic orientation influenced how each group responded to the training. During the intervention, it became clear that the training was addressing different needs for each group. For instance, in Session 7, a striking 100% of SEN students reported having 'specific goals and objectives', suggesting the training helped them to structure their learning in a way they previously had not. In contrast, non-SEN students already reported higher baseline use of general monitoring strategies. This indicates the training provided a fundamental organisational scaffold for SEN learners that was perhaps less critical for their non-SEN peers.

A deeper theoretical interpretation for this differential impact can be found in the way L2 knowledge emerges, particularly concerning the relationship between explicit and implicit knowledge (Section 1.3.4.1.). For non-SEN learners, who typically possess stronger cognitive abilities, including working memory and processing speed, the path to proceduralising and automatising grammatical knowledge is more direct. Regular, meaning-focused classroom exposure (as received by the control group) is often sufficient for them to continue developing their implicit knowledge through subconscious processes of noticing and intake. For this group, the explicit, conscious nature of the strategy training may not have added significant value beyond their already effective, and increasingly implicit, learning mechanisms.

On the other hand, SEN learners often find the development of implicit, automatised knowledge challenging due to underlying cognitive constraints (Section 1.5.5.). Therefore, these students rely more heavily on explicit knowledge and the conscious application of rules, referred to as the "learned system" in Krashen's (1982) Monitor Model (Section 1.3.4.4.). The strategy training, focused on direct modelling of metacognitive (e.g., planning, self-monitoring) and cognitive (e.g., using mnemonics, colour-coding) strategies, was perfectly aligned with this explicit learning pathway. It provided SEN learners with the very tools they needed to manage and compensate for their learning difficulties consciously, thus explaining the more pronounced positive trend in their performance compared to the SEN control group.

The findings from the present study align with previous research that has documented the differential effects of instruction on diverse learner groups. Ikeda & Takeuchi (2003) found that the high-proficiency learners benefited more from their strategy instruction programme than the low-proficiency ones. Macaro and Erler (2008) discovered

that their training had the most substantial impact on students who began with the weakest strategic repertoires. Depending on the examined group, undoubtedly the initial profile of learners has an impact on the results of the study. It is also visible within the present study, as the intervention was most beneficial for the SEN group, who likely had a greater need for such explicit support.

In conclusion, the effects of the strategy training were different for SEN and non-SEN students. The intervention served as an essential scaffold for the explicit learning by SEN students. The participation in ten training sessions and placing more focus on metacognitive aspects of learning resulted in a positive performance trend. For non-SEN students, whose learning is likely supported by more robust implicit mechanisms, the added value of this explicit training was not apparent in their grammar test scores.

5.4. The relationship between the SEN students' grammar learning outcomes and GLS preferences

RQ 4: What is the relationship between the SEN students' grammar learning outcomes and GLS preferences?

On the basis of correlation between the strategies listed by SEN learners and their gain scores from pre- and post-tests, it can be stated that some GLS preferences are more likely to determine the grammar learning success than others. It can be observed that higher learning gains are strongly associated with the use of active, metacognitive, and output-oriented strategies that promote deep cognitive processing. On the other hand, students with lower gains tend to use more passive, L1-reliant, or less cognitively demanding strategies. The qualitative and quantitative analysis of the SEN cohort, segmented into High-Gain, Mid-Gain, and Low-Gain groups based on their pre-test to post-test progress, provides clear evidence for this conclusion.

Data gathered in Session 7 on metacognitive strategies revealed that the focus and proactivity of strategic behaviours differentiated the groups. The High-Gain Learners were characterised by a strong preference for active self-monitoring of and reflection on their own language production. A remarkable 80% of these students reported actively monitoring their own grammar in speech and writing, a practice absent in the Low-Gain group. This specific strategy, *monitor own grammar*, exhibited the strongest positive

correlation with learning gains in the entire SEN cohort. Furthermore, 100% of High-Gain Learners reported that they *try to find as many ways as they can to use their English*, and 80% reported that they *think about their progress*, demonstrating a clear orientation towards active engagement and self-assessment. In contrast, Low-Gain Learners' strategy repertoires were more limited and less focused on productive language use. The strategy *know strengths/weaknesses,* commonly listed by Low-Gain Learners showed a negative correlation with progress. This suggests that passive awareness of one's limitations, without the application of active, corrective strategies, is insufficient and may even be associated with a lack of progress. Mid-Gain Learners reported the highest usage rates for strategies related to input and error analysis, such as seeking opportunities to read and noticing their own mistakes. This may indicate a transitional phase where learners are actively building knowledge but have not yet fully developed the productive, self-monitoring habits of the highest achievers.

During the final session, students generated effective strategies for grammar acquisition, and the divergence between performance groups became even more visible, highlighting a clear split between active, constructive approaches and more passive, compensatory ones. High-Gain Learners overwhelmingly suggested strategies requiring active cognitive engagement and the use of learning tools. For instance, the crucial strategy of *creating sentences* was cited by 80% of High-Gainers, compared to just 43% of Low-Gainers. Similarly, the use of *flashcard*s and *learning apps* was substantially higher in this group than in the two remaining ones. Low-Gain Learners again endorsed strategies that may involve a more superficial level of processing or a heavy reliance on L1. The strategies of *kinaesthetic learning* and *translating sentences* (L2->L1) were each proposed by 43% of Low-Gainers but were entirely absent from the High-Gainers' suggestions.

To move beyond descriptive frequencies and quantify the relationship between specific behaviours and learning outcomes, a Pearson correlation analysis was conducted. This analysis reveals which strategies are statistically associated with higher or lower progress, providing a clear map of effective versus ineffective practices within this SEN cohort. The strongest predictor of success was the metacognitive strategy *monitor own grammar*. It indicates that students who consciously paid attention to the accuracy of their own speech and writing made the most significant progress. Other metacognitive behaviours, such as *reflect on progress* and *attend to grammar in input*, supported this pattern, underscoring the importance of a conscious, analytical approach to learning. Other strategies involving active recall and technological aids were also highly effective. *use*

flashcards, communicative practice like *speak English,* and the use of *learning apps* all demonstrated moderate positive correlations with learning gains. In contrast, the analysis highlighted several strategies that were associated with lower learning gains.

The strongest negative association was found for *translate sentences (L2->L1),* which may suggest that a heavy reliance on L1 translation as a primary learning tool may hinder the development of L2 grammatical competence *kinaesthetic learning* and the metacognitive strategy *know strengths/weaknesses* were also negatively correlated with progress. The latter finding is particularly insightful, as it suggests that passive awareness of one's difficulties, without the corresponding application of active, corrective strategies, is not a marker of a successful learner.

Crucially, some of the most frequently endorsed strategies showed a correlation coefficient very close to zero, indicating no linear relationship with the learning outcomes measured in this study. *Repetition (oral/mental*) and *make notes* despite being cited by a majority of students, demonstrated no statistical link to progress. This finding does not mean that these strategies are useless; instead, it suggests that they are foundational, everyday practices that, by themselves, do not differentiate high-achievers from low-achievers.

In summary, the correlational data make it visible that progress for SEN learners is not tied to everyday study habits but to a specific suite of active, metacognitive, and generative strategies. The statistical evidence strongly supports the conclusion that the quality and function of a strategy are far more important than its mere presence in a learner's repertoire.

The strong link between high gains and strategies such as self-monitoring and reflection is best understood as a function of metacognitive self-regulation, which forms the foundation of learner autonomy. As established in Section 1.5.4. of this dissertation, the ultimate goal of strategic learning is to foster learners' ability to manage their own learning processes independently. The strategies chosen by the High-Gain SEN students in the present study align closely with the classic profile of the "Good Language Learner" as described by Rubin (1975). Rubin's research identified key behaviours of successful learners, including a strong drive to communicate, a focus on form, and, most critically, the practice of self-monitoring. The High-Gain Learners listed strategies such as *monitor own grammar* and *reflect on progress*, which indicates that they were actively overseeing, evaluating, and adjusting their own language use. Such capacity for self-regulation is the very essence of what Tseng et al. (2006) describe as a process of managing one’s

motivation, effort, and actions to achieve a goal. High-Gain Students were not just learning grammar; they were learning how to learn grammar effectively.

The Low-Gain Students' profile suggests deficits in this crucial metacognitive sphere. The students engaged mainly in common activities, such as note-taking, and failed to employ active monitoring and reflective strategies, indicating that they were not strategically guiding their own development. Their learning remained less purposeful and, consequently, less effective. This aligns with the theoretical premise discussed in Section 1.5.4., which states that language learning strategies are purposeful mental actions (Oxford et al., 2018) that learners use to regulate their learning. The absence of self-regulatory actions in the Low-Gain Learners' strategy repertoires appears to be a key factor limiting their progress as they lack the tools that High-Gain Learners use to overcome challenges and advance their proficiency.

The strategies favoured by high-achievers, such as creating sentences, using flashcards for active recall, and engaging in communicative practice, promote deep and meaningful processing. This directly reflects Ausubel's (1963) distinction between meaningful and rote learning (Section 1.3.2.). When learners construct new sentences, they do not only repeat a form but also integrate it into their existing cognitive structures in a meaningful way. This active engagement is also the core principle of Larsen-Freeman's (2001) concept of "grammaring" (Section 2.2.7.), which posits that grammar is a skill to be developed through active use, not a set of rules to be memorised.

In contrast, the Low-Gain group's reliance on L1 translation may represent a more superficial level of processing that fails to build robust L2 representations. Those students may experience a higher cognitive load associated with grammar learning and employ strategies such as translation and kinesthetic activities to manage their difficulties. As detailed in the discussion of SEN characteristics and SEN participants of the present study (Sections 1.5.5. and 3.6.), some SEN students often struggle with abstract rules and sequential processing. Translation into L1 can serve as a secure scaffold, and physical activity can seem to aid focus. However, the negative correlation between these strategies and learning outcomes suggests that they may be maladaptive compensation tools. They might reduce immediate cognitive strain but at the same time, they may prevent the deeper cognitive engagement required for proceduralising grammatical knowledge. The High-Gainers employed more effective load-management tools, such as flashcards and learning apps, which help them structure their practice through active recall and spaced repetition, thereby supporting working memory more productively.

The results of the present study both confirm and add important nuance to previous research on Grammar Learning Strategies. A well-established body of literature has consistently demonstrated that more proficient learners are also more strategic, a finding confirmed across diverse contexts by researchers such as Oxford & Nikos (1989), Green and Oxford (1995), and Griffiths (2003). Viewed through this lens, this study findings are particularly illuminating as the High-Gain SEN Students began to adopt the very profile of these successful learners. Their embrace of active self-monitoring and self-regulation directly mirrors the features of "a Good Language Learner" first identified by researchers like Naiman et al. (1978). This may suggest that the intervention was successful precisely because it helped them to close the "strategic gap" that often separates them from their more proficient peers. However, this study also refines the findings of researchers like Pawlak (2008, 2012), who noted a general reliance on traditional cognitive strategies in the Polish context. The key contribution here is demonstrating that for SEN learners, success is not just about using cognitive strategies, but about their quality and function. It has been shown that generative practices are beneficial for learners, whereas passive and reproductive ones do not enhance grammar learning. This is further supported by interventionist studies, such as Trendak's (2015), which demonstrated the effectiveness of mnemonic-rich instruction. The strong positive correlation between flashcard use and progress in this study provides powerful evidence that equipping SEN learners with structured, active-recall tools moves them beyond common but less impactful habits toward the self-regulatory behaviours that define autonomous learners. Ultimately, the relationship between GLS preferences and learning outcomes for SEN students is powerfully discriminating; success is not a matter of chance or innate ability alone but is strongly linked to the adoption of an active, metacognitively aware mindset focused on using grammar to create meaning.

5.5. Limitations of the study

The study had several limitations deriving from the nature of investigating the use of learning strategies in an educational context. Firstly, the intervention was conducted in a single primary school in western Poland, and the number of participants was limited. These factors limit the generalizability of the results as the observed effects may be influenced not only by the procedures but also by the unique school culture, the specific curriculum and local socio-economic context. Additionally, the study employed a quasi-experimental

design, which, due to the practical constraints of a school environment, did not allow for the random assignment of participants. This introduces a potential for selection bias, meaning that pre-existing differences between the groups may have influenced the outcomes.

Furthermore, the intervention spanned over eight months, which may not have been sufficient for the newly learned strategies to become fully automatised. The lack of a statistically significant difference in test scores between the experimental and control groups might be a reflection of the duration of the intervention rather than its ineffectiveness. Longer and more intensive training might be required for the training effects to manifest themselves in measurable proficiency gains. Such a view is confirmed by researchers such as Macaro (2001), Ismail & Dedi (2021), Macaro and Erler (2008), Nijakowska (2008, 2010), and Grenfell and Harris (1999), who also emphasised that long-term training brings more visible effects. The third limitation of this study stems from the nature of the research procedure, which is action research where the researcher also served as the teacher for the experimental groups. The researcher's personal investment in the intervention success and the established rapport with the students could have unintentionally influenced classroom dynamics, student motivation, and the interpretation of qualitative data.

The final weakness of the study lies in the data-gathering tool used. Self-report questionnaires, as emphasised by Dörnyei (2007), Gillham (2000) and Moser & Kalton (1971), suffer from several inherent limitations that may have influenced the results of the present study. Students' responses can be influenced by social desirability bias, leading them to report what they believe is the "right" answer, or they may simply lack the self-awareness to accurately report on their own internal cognitive processes. These challenges were likely amplified for the SEN learners in this study, for whom difficulties with attention or reading comprehension could have further affected the accuracy of their responses on the questionnaire. Therefore, while triangulated with qualitative data from student work, the core findings about strategy preferences are based on what students report doing, which may not perfectly align with their actual behaviour in real-time learning situations.

5.6. Pedagogical implications and conclusions

The primary purpose of the present dissertation was to examine whether the strategy training has a positive impact on SEN students' grammar learning outcomes. Although the results did not show statistical significance, the descriptive and qualitative analyses of the gathered data clearly suggest that introducing explicit strategy training is beneficial for mixed-ability L2 classrooms with SEN learners.

The first and most crucial recommendation for educators is to implement elements of explicit strategy training into regular foreign language classes. As this study demonstrates, the benefits of such an approach are substantial. The core benefit is the creation of a more effective learning environment, where the focus shifts from simply teaching grammar rules to teaching students how to learn grammar effectively. When learners master strategies, especially metacognitive ones like self-monitoring and reflection, they become more responsible for their own learning process. As highlighted by strategy instruction models, such as those proposed by O'Malley and Chamot (1990) and Macaro (2001), students are then better equipped to plan their work, analyse learning tasks, and evaluate their own performance to overcome the specific difficulties they face. The strong positive correlation between the strategy 'Monitor Own Grammar' (r=0.64) and learning gains provides powerful evidence that fostering these self-regulatory skills should be a primary pedagogical goal.

Furthermore, the results of this study demand a re-evaluation of the types of tasks used in grammar instruction. There should be a deliberate move away from passive or compensatory strategies toward active, generative practice. The negative correlation found for L1 translation (r=-0.37) suggests that an over-reliance on this standard tool may be counterproductive for SEN learners. Instead, teachers should prioritise activities that require students to actively use and manipulate the language, such as creating their own sentences, a strategy overwhelmingly favoured by the High-Gain students in this study. As Larsen-Freeman (2001) emphasises in her concept of "grammaring," grammar is a skill to be developed through active use. This is reinforced by the success of tools like flashcards (r=0.49), which, in line with Ausubel's (1963) theory of meaningful learning, promote active recall and deeper cognitive processing rather than passive repetition.

Another key issue that should be considered is the need for differentiated and multisensory instruction. The present research showed that a "one-size-fits-all" approach is ineffective, as the SEN cohort was highly heterogeneous. Teachers should therefore offer

a "menu" of various strategies helping students to find what works best for them, which aligns with the principles of Gardner's (1983) Multiple Intelligences Theory. Integrating digital and visual tools is essential here. The students themselves, during the intervention, demonstrated a strong preference for gamified platforms and visual aids, such as mind maps. Incorporating colour-coding, interactive quizzes, and visual organisers makes abstract grammar concepts more concrete and accessible, which is crucial for supporting learners with diverse cognitive profiles, as recommended by Bogdanowicz (2011) and Nijakowska (2010) for working with students with dyslexia.

Ultimately, the role of the teacher is to act as a facilitator of strategic learning. By explicitly teaching, modelling, and providing structured practice in effective metacognitive and cognitive strategies, educators can help SEN students to move beyond their difficulties. This approach not only builds grammatical competence but, more importantly, fosters the confidence and autonomy that are indispensable for lifelong learning.

In conclusion, the findings of this study provide a dual contribution to the field of EFL pedagogy for learners with special educational needs. First, they map the strategic profile of these learners, revealing an intuitive reliance on reactive, task-based strategies and an underuse of metacognitive planning. Second, they demonstrate that a targeted intervention can foster a crucial shift towards more active, self-regulated learning, even though immediate gains in test performance are not statistically significant. Ultimately, this study argues that the value of strategy training for SEN learners lies not merely in improving grammatical accuracy, but in fundamentally altering the learning process itself. By equipping students with the tools to manage their own learning, such an approach provides a vital foundation for building the confidence, resilience, and autonomy necessary for their long-term academic success and well-being.

Summary

This chapter provided a discussion of the findings of the study, organised around the four guiding research questions. Regarding the first question, the analysis revealed that students with SEN did employ a range of learning strategies intuitively, although their repertoire was dominated by concrete, feedback-oriented cognitive strategies rather than metacognitive planning or affective regulation strategies. In response to the second research question, the study found that while the strategy training led to observable qualitative

improvements in learners' strategic awareness and a positive descriptive trend in their test scores, it did not produce a statistically significant effect on their grammar learning outcomes. Addressing the third question, the effects of the training were found to be different for the two cohorts; the intervention showed a more pronounced positive trend for SEN learners when compared to their peers in the control group, whereas it offered no clear advantage for non-SEN students over regular classroom instruction. Finally, concerning the fourth research question, a clear relationship was identified between learning outcomes and strategy preferences within the SEN group: higher gains were strongly associated with active, self-monitoring, and generative strategies, while lower gains correlated with more passive or L1-reliant options. In light of these results, the primary research hypothesis (H1) could not be confirmed on statistical grounds; however, the descriptive and qualitative data strongly suggest that the intervention had a positive impact on the strategic learning behaviours of the SEN participants.

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Appendix 1

Kod ucznia _____ Grupa _____		nigdy	zwykle nie	czasem	zwykle tak	zawsze
1	Zastanawiam się, jak połączyć nowe wiadomości z języka obcego z tym, co już o tym języku wiem.	1	2	3	4	5
2	Aby lepiej zapamiętać słowa w tym języku, buduję z nimi zdania.	1	2	3	4	5
3	Często powtarzam materiał, którego się nauczyłam/nauczyłem z języka angielskiego	1	2	3	4	5
4	Próbuję znaleźć jak najwięcej okazji do używania języka angielskiego	1	2	3	4	5
5	Zauważam moje błędy i staram się je eliminować	1	2	3	4	5
6	Ciągle sprawdzam moje postępy w nauce języka.	1	2	3	4	5
7	Proszę, aby inni mnie poprawiali, jeśli mówię źle.	1	2	3	4	5
8	Staram się poznać obyczaje i kulturę ludzi mówiących w tym języku.	1	2	3	4	5
9	Planuję naukę angielskiej gramatyki z wyprzedzeniem	1	2	3	4	5
10	Zwracam uwagę na struktury gramatyczne podczas czytania i słuchania.	1	2	3	4	5
11	Poszukuję możliwości ćwiczenia struktur gramatycznych na wiele różnych sposobów.	1	2	3	4	5
12	Staram się znaleźć bardziej efektywne sposoby nauki gramatyki.	1	2	3	4	5
13	Znam swoje mocne i słabe strony, jeśli chodzi o gramatykę.	1	2	3	4	5
14	Mam określone cele i zadania w nauce gramatyki.	1	2	3	4	5
15	Zwracam uwagę na struktury gramatyczne w tym, co mówię i piszę.	1	2	3	4	5
16	Staram się używać w komunikacji określonych struktur gramatycznych (np. opowiadanie historii).	1	2	3	4	5
17	Czytając w języku angielskim lub oglądając filmy i seriale w tym języku, staram się poszerzyć swoją znajomość gramatyki.	1	2	3	4	5
18	Zauważam (lub pamiętam) struktury, które sprawiają mi problemy ze znaczeniem lub komunikacją	1	2	3	4	5
19	Zauważam (lub pamiętam) struktury, które często się powtarzają w tekście.	1	2	3	4	5
20	Porównuję swoje wypowiedzi (ustne i pisemne) z wypowiedziami osób bieglejszych językowo, by zobaczyć, co mogę poprawić.	1	2	3	4	5
21	Korzystam z Google lub innych wyszukiwarek, aby zobaczyć, jak konkretna struktura gramatyczna jest używana w znaczących kontekstach.	1	2	3	4	5
22	Zwracam uwagę na zasady podane przez nauczyciela lub podręcznik.	1	2	3	4	5

23	Staram się zrozumieć każdą regułę gramatyczną.	1	2	3	4	5
24	Zapamiętuję zasady dotyczące często używanych form/struktur językowych	1	2	3	4	5
25	Graficznie zaznaczam nowe struktury gramatyczne (np. kolory, podkreślenia).	1	2	3	4	5
26	Parafrazuję podane mi zasady, ponieważ lepiej rozumiem je, gdy ujmę je własnymi słowami.	1	2	3	4	5
27	Wykonuję wykresy, diagramy lub rysunki ilustrujące zasady gramatyczne.	1	2	3	4	5
28	Zapamiętuję informacje gramatyczne według miejsca na stronie w książce.	1	2	3	4	5
29	Używam rymów lub piosenek, aby zapamiętać nowe zasady gramatyczne	1	2	3	4	5
30	Powtarzam lekcje gramatyki, aby lepiej zapamiętać zasady.	1	2	3	4	5
31	Korzystam z podręczników gramatycznych, działów gramatycznych podręczników lub informacji gramatycznych w słownikach.	1	2	3	4	5
32	Używam języka ojczystego lub innych języków, które znam, aby zrozumieć i zapamiętać zasady gramatyczne.	1	2	3	4	5
33	Staram się odkrywać reguły gramatyczne analizując przykłady.	1	2	3	4	5
34	Współpracuję z innymi, aby odkryć zasady gramatyczne	1	2	3	4	5
35	Zapamiętuję całe frazy zawierające określone formy językowe.	1	2	3	4	5
36	Powtarzam przykłady podane przez nauczyciela lub przepisuję je wielokrotnie.	1	2	3	4	5
37	Wykonuję wiele ćwiczeń gramatycznych (np. parafraza, tłumaczenie, wielokrotny wybór).	1	2	3	4	5
38	Używam nowo poznanych reguł do tworzenia własnych zdań (np. w pracach pisemnych lub w rozmowie)).	1	2	3	4	5
39	Uważnie słucham wszelkich informacji zwrotnych od nauczyciela na temat stosowanych przeze mnie struktur.	1	2	3	4	5
40	Zwracam uwagę na korektę nauczyciela, kiedy wykonuję ćwiczenia gramatyczne i staram się powtórzyć poprawną wersję.	1	2	3	4	5
41	Ćwicząc gramatykę, staram się zauważać i samodzielnie poprawiać swoje błędy.	1	2	3	4	5
42	Zauważam, kiedy jestem poprawiany z gramatyki w spontanicznej komunikacji (np. podczas wydawania opinii).	1	2	3	4	5
43	Staram się zauważyć, czym poprawna wersja różni się od mojej, i na tej podstawie koryguję swoją wypowiedź.	1	2	3	4	5

44	Staram się zrelaksować, gdy mam problemy ze zrozumieniem lub używaniem struktur gramatycznych.	1	2	3	4	5
45	Zachęcam się do ćwiczenia gramatyki, gdy wiem, że mam problemy z jakąś strukturą.	1	2	3	4	5
46	Staram się używać struktur gramatycznych nawet wtedy, gdy nie mam pewności, czy są poprawne.	1	2	3	4	5
47	Zauważam, kiedy czuję się spięty lub zdenerwowany podczas nauki lub używania struktur gramatycznych.	1	2	3	4	5
48	Rozmawiam z innymi ludźmi o tym, jak się czuję, ucząc się gramatyki	1	2	3	4	5
49	Proszę nauczyciela o powtórzenie lub wyjaśnienie zagadnienia gramatycznego, jeśli czegoś nie rozumiem..	1	2	3	4	5
50	Proszę nauczyciela lub bardziej biegłych uczniów o pomoc w zakresie struktur gramatycznych.	1	2	3	4	5
51	Lubię być poprawiany, gdy popełniam błędy w strukturach gramatycznych.	1	2	3	4	5
52	Ćwiczę struktury gramatyczne z innymi uczniami	1	2	3	4	5
53	Staram się pomagać innym, gdy mają problemy ze zrozumieniem lub użyciem gramatyki.	1	2	3	4	5

Appendix 2

Pre- and Post- test

Kod Ucznia _____ Pkt: _____ / 45

1. Wybierz poprawne odpowiedzi - otocz je pętlą. (_____ / 20)

1. My family and I are from China, but **our / us** home is in Canada.
2. Are there **a / any** lions in India?
3. He **have got / has got** curly hair.
4. The boys **swim / swims** fast.
5. **Eva / Eva's** eyes are blue, not brown.
6. She **will play / plays** football next Saturday.
7. We **haven't got / hasn't got** small ears.
8. I think spiders are ugly and I hate **they / them**!
9. Jim and Beth **am / is / are** classmates.
10. Fred and I **are / was / were** in Paris last year.
11. Your brother **sing / sings** well.
12. They **have got / has got** big feet.
13. This cat is brown, but **that / those** cats are white.
14. It **was / were** a present for Mum.
15. What time **does Jim get / is Jim getting** up every morning?
16. Dad **leaves / left / leaved** the office a few minutes ago.
17. **I try / I'm trying** to do this exercise, but I don't understand it.
18. I can't come with you tomorrow. **I play / I'm playing** tennis with Paula.
19. She **didn't water / doesn't water** the plants yesterday, so please water them now.
20. We **were exploring / explored** the old town when we got lost.

2. Ułóż słowa w poprawnej kolejności, aby utworzyć pytania. (_____ / 5)

1. they / are / twelve years old / ? _____
2. Betty's dog / run fast / can / ? _____
3. got / the camera / Dan / Has / ?_____
4. go / do / your friends / to school / ? _____
5. name / What / your / is / ? _____

3. Uzupełnij tekst czasownikami z nawiasów w odpowiedniej formie. (_____ / 5)

My name is Jenny. Tina and Henry are my best friends, but we like different activities. Tina and I often (0) **go** (go) to the beach, but Henry never (1) _____ (go) there. He hates (2) _____ (sit) in the sun. He (3) _____ (walk). I often ride my bike, but Tina (4) _____ (not like) cycling and she (5) _____ (not have got) a bike.

4. Uzupełnij pytania dopasowując je do odpowiedzi. (_____ / 5)

V: Hi, Ellie. What (0) are you doing?
E: Hi Victor. I'm tidying my room. And Ricky is cooking pasta for lunch.
V: (1) _____ every day?
E: No, he doesn't cook lunch every day.
V: Where (2) _____ yesterday?
E: I was at the football stadium yesterday. There was a football match.
V: (3) _____ the match?
E: No, my team didn't win the match. The score was 1-0.
V: What (4) _____ on TV last night?
E: I watched a programme about wild animals.
V: (5) _____ for the English test tomorrow?
E: No, I'm not going to study for the English test tomorrow.

5. Przetłumacz fragmenty zdań. (_____ / 5)

1. I'll take _____ (sześć cebul) and eight carrots.
2. I don't know _____ (ile sera) I should add - there is no information in the recipe.
3. _____ (Przestańcie mówić) at the same time. I don't understand you!
4. When we are on holiday we _____ (uwielbiamy odwiedzać) art museums.
5. I _____ (mam nadzieję zobaczyć) you soon, Charles.

6. Wybierz odpowiednią formę: a, b or c. (_____ / 5)

1. I _____ some new shoes on Saturday.

   A. buying B. bought C. buy
2. Did they _____ their swimming costumes?

   A. brings B. brought C. bring
3. I _____ breakfast this morning.

   A. didn't ate B. didn't eat C. not eat
4. What _____ you doing at 3 p.m. yesterday?

   A. are B. was C. were
5. She _____ a blue jacket and grey trousers when I saw her.

   A. wore B. was wearing C. were wearing

Appendix 3

Worksheet 1

Kod ucznia _____

1. Wykorzystaj zeszyt, podręcznik. Czego uczymy się na angielskim w tym roku szkolnym? Uzupełnij tabelkę głównymi zagadnieniami oraz oceń w skali od 1-6, jak dobrze znasz poszczególne elementy.

Gramatyka	Samoocena

2. Które z tematów poznanych do tej pory sprawiły Ci najwięcej trudności?
    a. _____
    b. _____
    c. _____

Worksheet 2

Kod ucznia _____

Co, twoim zdaniem, powinieneś robić w przyszłym roku szkolnym by lepiej rozumieć przerabiane tematy oraz osiągać postępy w nauce języka? Podaj 4-5 przykładów

1. _____
2. _____
3. _____
4. _____
5. _____

Appendix 4

	Kod ucznia_____	TAK/NIE	
1	Mam określone cele i zadania w nauce języka angielskiego i gramatyki.		Mój cel to:
2	Planuję naukę języka i powtórki gramatyczne z wyprzedzeniem		Dlaczego?
3	Tak planuję swój czas, aby starczyło go na uczenie się mojego pierwszego języka obcego		Jak często się uczysz? Co dokładnie robisz?
4	Przeglądam struktury gramatyczne, które zostaną omówione na lekcji.		Jak często to robisz? Jak? Gdzie sprawdzasz gramatykę?
5	Staram się robić postępy w tym języku.		Skąd wiesz, że zrobiłeś/aś postępy?
6	Ciągle sprawdzam swoje postępy w nauce języka.		Jak dokładnie je sprawdzasz?
7	Poszukuję możliwości ćwiczenia struktur gramatycznych na wiele różnych sposobów.		Gdzie szukasz możliwości ćwiczenia języka? Podaj konkretne przykłady
8	Staram się znaleźć bardziej efektywne sposoby nauki gramatyki.		Jakie ćwiczenia najczęściej robisz ucząc się angielskiego?
9	Próbuję znaleźć jak najwięcej okazji do używania mojego pierwszego języka obcego.		Jak używasz angielskiego poza szkołą?
10	Szukam okazji, aby jak najwięcej czytać w moim pierwszym języku obcym.		Co czytasz?
11	Słucham uważnie, jak ktoś inny mówi w moim pierwszym języku obcym.		Czego słuchasz w języku angielskim?
12	Zwracam uwagę na struktury gramatyczne podczas czytania i słuchania.		Czy możesz dać przykład często słyszanej/ widzianej konstrukcji gramatycznej?
13	Znam swoje mocne i słabe strony jeśli chodzi o gramatykę.		Jakie są twoje mocne strony? Co twoim zdaniem idzie Ci najsłabiej?
14	Zauważam swoje błędy i staram się je eliminować.		Co robisz, gdy widzisz swoje błędy po sprawdzianie? Jak starasz się nadrobić braki?
15	Zwracam uwagę na struktury gramatyczne we własnym mowie i piśmie		Czy sprawdzasz to co piszesz w języku angielskim? Jak to robisz?
16	Szukam kontaktu z ludźmi, z którymi mogę rozmawiać w tym języku.		Jak ważna jest poprawność gramatyczna w kontakcie z innymi osobami?

Appendix 5

Co Twoim zdaniem należy robić żeby zapamiętywać materiał z lekcji języka angielskiego efektywnie?

Korzystając z poznanych strategii napisz listę 7-10 rad dla swojej koleżanki, która nie może zapamiętać zasad dotyczących czasu Past Simple oraz słówek o gotowaniu, a w następnym tygodniu ma sprawdzian.

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____

∇ _____