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How middle school students learn new words in their native language: an empirical study of vocabulary learning strategies

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Abstract

This study aimed to identify the strategies middle school students employ to learn vocabulary in their native language and to assess the extent of their strategy use. It also sought to explore whether variables such as gender, age, access to technology, number of books read, the presence of an older sibling, parents' educational background, and school location influence the frequency with which children aged 11-14 apply vocabulary learning strategies. To accomplish these objectives, the descriptive survey model, a quantitative research method, was utilized. Data were collected from a sample of 1620 middle school students during the 2022-2023 and 2023-2024 academic years through the administration of the Native Language Vocabulary Learning Strategies Scale (NLVLSS) and a personal information form. The analysis of the data revealed that middle school students use vocabulary learning strategies in their native language at a moderate level. It was observed that gender and the presence of an older sibling did not significantly affect the use of these strategies, whereas age, access to technology, number of books read, parental education level, and school location were found to influence the extent to which students employed vocabulary learning strategies. Moreover, the findings indicated that middle school students most frequently utilized confirmationoriented strategies, followed by reinforcement-oriented strategies, with learning-oriented strategies being used least frequently. The overall ranking of strategy use was determined as follows: *confirmation > reinforcement > learning-*oriented strategies. Based on these findings and in light of the relevant literature, several recommendations were proposed: providing awareness training to promote the use of vocabulary learning strategies; offering guidance specifically focused on learning-oriented strategies; revising curricula and textbooks to better support the application of such strategies; and developing and implementing educational policies aimed at fostering students' reading habits.

Keywords

Native language Vocabulary knowledge Vocabulary learning Vocabulary learning strategies Middle school students

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Introduction

The concept of language education comprises two subdimensions: instruction and learning. These two aspects necessitate approaching the issue of language education from two distinct perspectives—one from the standpoint of the instructor and the other from that of the learner. In terms of activities and responsibilities, the instructional dimension is associated with teachers, while the learning dimension pertains to students. Both dimensions are present in native language as well as second/foreign language education. In each of these processes, instructors take on the role of transmitting knowledge and providing guidance, while learners engage individually in the processes of acquiring, developing, and applying the language. Although instruction and learning are in constant interaction, they differ in terms of the tasks performed, the roles assumed, the responsibilities undertaken, and the mental processes involved. Members of both groups have specific responsibilities and tasks throughout the language education process. For instance, when the target outcome is a grammar topic, the instructor is expected to determine the appropriate teaching method, prepare a lesson plan and instructional materials, plan the strategies to be used, and implement them in class. Meanwhile, students are responsible for bringing necessary materials to class, following the lesson, taking notes, asking questions about unclear points, completing exercises and assignments, knowing and applying appropriate learning strategies during and after the lesson, reviewing what they have learned, and taking measures to retain this knowledge. This distinction also applies to vocabulary development. In this context, vocabulary enrichment activities involve both teachers and students carrying out instructional and learning tasks and responsibilities, respectively. All efforts related to vocabulary development that can be undertaken by teachers fall within the scope of instruction, while those carried out by students fall under the scope of learning. In relation to vocabulary development, this distinction is addressed in the literature (Krashen, 1981; Nation, 2001; Schmitt, 2008) through the concepts of incidental and intentional vocabulary instruction. Incidental vocabulary instruction refers to teaching activities in which learners encounter new words within natural language contexts, such as reading and listening/viewing materials used in the educational process, without a direct focus on vocabulary teaching. Intentional vocabulary instruction, on the other hand, involves the planned and deliberate teaching of target words through various methods (Ellis, 1994; Hulstijn, 2003). Learningoriented processes refer to the individual, conscious or unconscious, efforts and strategies used by students to enhance their personal vocabulary repertoire (Graves, 2006; Kaya, 2023; NICHD, 2000). However, the literature also acknowledges (Eckerth & Tavakoli, 2012; Van Den Broek et al., 2022) that classroom time is often too limited to provide sufficient opportunities for intentional and direct vocabulary learning.

When children reach an age and level of maturity that enable them to consciously direct their own vocabulary learning, understanding how they develop their personal vocabulary repertoire in their native language becomes a research area that has so far been largely overlooked in the literature. Vocabulary development activities in the native language are often limited to reading and listening to texts presented in formal language education courses and the related exercises aimed at improving basic language skills. As a result of this practice, most studies on vocabulary acquisition tend to focus on instruction-oriented factors within a narrow framework directed and managed by teachers. However, before reaching school age, children acquire a significant portion of their personal vocabulary in their native language not through formal instruction, but through acquisition - via social interaction, everyday experiences, exposure to various media content, and intra-family communication, all of which are unconscious or unstructured processes. Children also expand their vocabulary through their own learning initiatives, such as inferring meaning from conversational contexts, asking peers or parents, and guessing word meanings. Therefore, vocabulary acquisition research should increasingly focus on children's own efforts and strategies for vocabulary learning and explore the related factors within this broader and more learner-centered framework.

When the international literature is examined in this context, it becomes evident that vocabulary teaching activities are generally addressed within teacher-centered approaches, with vocabulary instruction largely limited to in-class practices (Boers & Lindstromberg, 2008; Graves, 2006; Marzano, 2004). Existing practices tend to emphasize textbook-based instructional methods, direct teaching techniques, and vocabulary activities guided by the instructor (Beck et al., 2013; Biemiller, 2010). This focus has led research on vocabulary instruction to concentrate predominantly on the controlled aspects of the teaching process, leaving insufficient attention to how students manage their own learning and which strategies they employ in doing so. Studies conducted within the context of native language education reveal that vocabulary teaching is largely carried out through textbooks and under the guidance of teachers (Graves, 2006; Kamil & Hiebert, 2005; Stahl & Nagy, 2006). This perspective significantly limits students' active involvement in the learning process and their ability to manage the development of their personal vocabulary repertoire independently (Snow et al., 2005). However, restricting vocabulary instruction solely to in-class activities may hinder students from acting autonomously in their learning processes and from employing strategies to expand their own vocabulary (Blachowicz & Fisher, 2014; Nagy & Scott, 2000; Perfetti & Stafura, 2014). In this regard, the international literature emphasizes the need to make vocabulary teaching practices more flexible and to adopt methods that support students' involvement in independent vocabulary learning processes (Kamil & Hiebert, 2005; Perfetti & Stafura, 2014). Along the same lines, the National Reading Panel Report (NICHD, 2000) highlights the necessity for students to play an active role in vocabulary development. The report advocates for a shift away from purely teacher-centered vocabulary learning, encouraging a focus on strategies that students can use to direct their own learning. It also points out that traditional textbook-based approaches to vocabulary instruction constrain the learning process and do not sufficiently support students in developing their vocabulary (Dickinson & Smith, 1994; Drevno et al., 1994; Sénéchal, 1997).

In the national literature as well, vocabulary development activities carried out in Turkish language classes within the framework of native language education have thus far been designed around a teacher-led and instruction-focused model. Studies on vocabulary development and vocabulary acquisition have similarly adopted a perspective that emphasizes the various methods, techniques, and strategies that can be utilized by teachers, without sufficiently considering the possibility that students can assume responsibility for their own learning and expand their vocabulary using a range of strategies. In this sense, the instructional dimension has been prioritized in the development of students' vocabulary in native language education, while the learning dimension has been largely overlooked. As in previous curricula, the current Turkish language curriculum (Ministry of National Education [MoNE], 2019, 2024) also adopts an instruction-oriented approach, relying on textbook-based teaching activities and teacher guidance for vocabulary development. Publications in the literature (Arı, 2006; Göçer, 2009; Karatay, 2007; Türkben, 2018) have placed significant emphasis on Turkish textbooks in enhancing students' vocabulary and have focused on the transmission—or rather, the teaching — of words presented in these books using various methods, techniques, and activities. This emphasis is also reflected in research conducted on vocabulary within native language education. Existing studies in the literature concentrate on topics such as identifying the vocabulary contained in textbooks (Baysal, 2007; Büyükhellaç, 2014; Doğan, 2016; Uluçay, 2011), determining students' active vocabulary based on their written productions (Cesur, 2005; Çiftçi, 1991; Eğilmez, 2010; Türkyılmaz, 2013), comparing textbook vocabulary with students' measurable active personal vocabulary (Aslan, 2013; Karadağ, 2005; Kurudayıoğlu, 2005), evaluating textbooks from the perspective of vocabulary instruction (Aru, 2013; Başdamar, 2010; Güzel, 2015), and enhancing students' vocabulary through various methods, techniques, and strategies (Bulut, 2013; Gülsoy, 2013; Koçkaya, 2014; Okur, 2007; Uluçay, 2016).

As a result, within the scope of vocabulary development activities in the native language, target words have generally been treated as items that must be taught to students, and both educational practices and academic research have been conducted within this framework. This approach has largely overlooked the fact that students may also acquire vocabulary in their native language independently—

either consciously or unconsciously—and that they may employ various strategies in doing so. A review of the literature on vocabulary learning reveals that studies focusing on learner-applied strategies are predominantly oriented toward foreign or second language acquisition; vocabulary learning strategies are commonly perceived as tools primarily applicable to the learning of words in a language other than one's native tongue. Both national (Baskin et al., 2017; Biçer & Polatcan, 2015; Kocaman et al., 2018; Memiş, 2018b; Şener, 2015; Tanyer & Öztürk, 2014; Tok & Yıgın, 2014) and international (Barcroft, 2009; Cook, 2001; Gu & Johnson, 1996; Lawson & Hogben, 1996; Lee, 2007; Oxford, 1990; Schmitt, 1997; Waldvogel, 2013) studies reflect this trend. The literature review conducted for this study revealed no empirical research examining the practices employed by school-aged children to develop their personal vocabulary in their native language.

When the process of teaching Turkish as a native language is considered in terms of vocabulary development, it becomes clear that, due to factors such as curriculum adherence, limited class time, and the quality of textbooks used, an indirect vocabulary instruction approach has been predominantly adopted (Genç, 2021; Kaya, 2021). Vocabulary instruction has been largely dependent on reading texts and related activities, and this approach was sustained in Turkish language curricula prior to 2019 (Mert, 2015; Taga, 2018), with vocabulary development efforts carried out in a textbook-dependent and textbook-bound manner (Memiş, 2023). However, reviews of vocabulary instruction practices and the textbooks employed in native language education have identified a number of persistent issues (Aydın & Aydın, 2020; Kaya, 2021; Numanoğlu, 2021; Ömeroğlu & Hakkoymaz, 2022; Sarı, 2020; Şimşek & Demirel, 2020) that hinder students from attaining a sufficient and desirable level of personal vocabulary development. Indeed, studies conducted to determine the personal vocabulary of middle school students (Aydın, 2014; Göçen & Okur, 2015; Taga, 2018; Tok & Ünlü, 2014) have demonstrated that students possess a considerably limited vocabulary and, as a result, experience difficulties in comprehension and expression. These students are generally able to use only the words they encounter in daily life in their written and oral expressions. Based on this, it can be asserted that the instructioncentered practices and approaches adopted in Turkish language curricula prior to 2024 have failed to achieve the intended learning outcomes related to vocabulary development. To ensure the effective development of students' personal vocabulary and to improve the process of vocabulary enrichment, it is necessary to bring the currently neglected learning dimension into focus.

Factors such as the limited amount of time allocated to native language education courses, the portion of that time that can be dedicated to vocabulary development, and the number of words that can realistically be taught or learned within such a restricted period (Reilly, 2019; Stoewer & Musk, 2019) necessitate that students take personal responsibility for their learning by developing and employing various vocabulary learning strategies in order to build a rich personal lexicon. The literature emphasizes that vocabulary development is not solely the result of textbook-based instruction or teacher-led classroom activities and that students' personal vocabulary may remain limited if they do not adopt independent learning strategies. It has been widely acknowledged that restricting vocabulary development to in-class activities is insufficient (Beck et al., 2013; Nagy & Scott, 2000; NICHD, 2000). Therefore, for students to develop their vocabulary effectively and sustainably, they must take initiative and adopt independent vocabulary learning strategies (Biemiller, 2010). Vocabulary development is largely influenced by the learner's personal efforts and engagement in out-of-class learning processes. It is well-established that academic success is heavily dependent on independent learning skills, and that relying solely on classroom instruction is insufficient for achieving the desired levels of knowledge, skill, and academic performance. Moreover, the employment of learning strategies that enhance independent learning processes significantly contributes to the internalization and retention of acquired knowledge (Brahma & Saikia, 2023; Chickering & Gamson, 1987; Credé & Kuncel, 2008; Dunlosky et al., 2013; Karpicke & Blunt, 2011). Utilizing such strategies is also regarded as critical for fostering a sustainable understanding of learning over the long term. This necessity applies equally to the use of independent vocabulary learning strategies, just as it does to general learning strategies. In this framework, it is clear that students' use of vocabulary learning strategies outside the classroom is crucial for the sustainability of the vocabulary learning process, as well as for language development and

academic success. The independent use of vocabulary learning strategies by students plays a key role in making newly learned words permanent and in supporting the long-term development of language skills (NICHD, 2000). To acquire the rich vocabulary necessary for effective use of language skills especially reading, writing, listening, and speaking—the conscious use of vocabulary learning strategies is critically important (Snow et al., 2005; Stahl & Nagy, 2006). However, since vocabulary instruction in classrooms is often decontextualized, teacher-centered, and based on rote learning, students must actively use strategies to learn words (Diamond & Gutlohn, 2006; Kamil & Hiebert, 2005). Students who do not engage in independent vocabulary learning processes tend to struggle with long-term retention and practical application of newly learned words in varied contexts (Blachowicz & Fisher, 2014; Graves, 2006). In particular, the conscious use of strategies such as using contextual clues, performing morphological analysis, and examining word structure to infer meaning helps to consolidate vocabulary in long-term memory (Perfetti & Stafura, 2014). The view that students should expand their vocabulary not only through teacher guidance but also by employing personal learning strategies is considered a fundamental component of contemporary educational philosophy. Based on this understanding — that independent vocabulary learning strategies must be developed for effective lexical competence—various vocabulary learning strategies that encompass the methods, techniques, tactics, and practices students may use when learning words in their native language have been identified in the literature (Graves et al., 2017; Karadağ, 2022; Kaya, 2023; Memiş, 2023; NICHD, 2000; Ulper, 2023).

In the literature, research on the strategies students employ during vocabulary learning processes demonstrates that vocabulary acquisition occurs not only through teacher guidance but also through individual learning efforts. The National Reading Panel Report (NICHD, 2000), which comprehensively addresses the strategies used by students in their vocabulary learning processes, emphasizes that these strategies play a critical role in vocabulary development. The report identifies several effective strategies in learning new words in one's native language, including "using contextual clues, analyzing word structure, using dictionaries, learning through multiple exposures and repetition, semantic mapping, and independent reading". In their vocabulary learning strategy instruction program, Graves et al. (2017) classified the strategies students use to infer the meanings of unknown words into four main categories: "word parts strategy, context strategy, dictionary strategy, and combined strategy". Kaya (2023) categorized native language vocabulary learning strategies under five headings: "contextual clues strategy, word parts analysis strategy, memorization strategy, word associations strategy, and deliberate practice strategy". Karadağ (2022) grouped strategies for learning vocabulary in one's native language into three subcategories: "strategies used to infer the meaning of unfamiliar words, strategies used to clarify meanings and deepen vocabulary knowledge, and strategies used to learn or teach new words and concepts". Ülper (2023), without making a distinction between instruction and learning, classified relevant strategies into ten categories as follows: "strategies for internalizing words through listening, reading, writing, speaking, using word lists, focusing on morphological analysis, inference, keeping a word notebook, creating semantic networks, and using definitions". Memiş (2023), on the other hand, addressed strategies as a whole set of practices that children in the process of native language education can use during and outside of lessons to learn new words, reinforce learned vocabulary, and verify the accuracy of what they have learned. He grouped these strategies into three categories: "learning-oriented, reinforcement-oriented, and confirmationoriented strategies". Among all these taxonomies of vocabulary learning strategies mentioned in the literature, only the classification developed by Memiş (2023) is accompanied by an available scale. Since this scale was used as a data collection instrument in the present study, details of Memiş's (2023) classification of native language vocabulary learning strategies are provided below.

Vocabulary Learning Strategies in the Native Language Learning-Oriented Strategies

Learning-oriented strategies refer to a set of 19 techniques that children in the process of native language education can use both during and outside of class to expand their vocabulary. These strategies include: marking and noting unknown words encountered while reading, listening, or watching and then researching their meanings; using print and/or online dictionaries to learn the meanings of unfamiliar words; searching for unknown words on the internet and trying to learn them by viewing related images on Google; keeping a vocabulary notebook; recording newly learned words in this notebook by either copying their dictionary definitions or rewriting them in their own words; writing example sentences alongside new words in the vocabulary notebook; reading dictionaries to discover new words; reading idiom and proverb dictionaries as well as the origin stories of idioms to learn new expressions; learning the secondary, tertiary, and figurative meanings of newly acquired words along with the words they are frequently used with; learning the grammatical categories of new words; associating word meanings with mental imagery; making an effort to learn the Turkish equivalents of commonly used foreign words; and following social media accounts that share content related to word meanings to learn new vocabulary.

Reinforcement-Oriented Strategies

Reinforcement-oriented strategies consist of 10 techniques that children in the process of native language education can employ following classroom-based skill and vocabulary development activities or independent vocabulary learning efforts outside of class, with the aim of making the words they are trying to learn or have already learned more permanent. These strategies include: intentionally using newly learned words in speech or writing; pronouncing them aloud several times; recording new words in a vocabulary notebook and mentally associating them with their synonyms and/or antonyms; attempting to derive new words by adding derivational affixes to the newly learned ones; regularly reviewing the vocabulary notebook to aid in recall; solving vocabulary meaning questions in test books; practicing the correct usage of foreign-origin words adopted into Turkish; solving word puzzles; and playing word-based games such as Taboo.

Confirmation-Oriented Strategies

Confirmation-oriented strategies include 7 techniques that help children in native language education confirm and clarify the meanings of words they have learned during and after both in-class and out-of-class vocabulary learning activities. These strategies include: asking the teacher or classmates about the meaning of an unfamiliar word encountered during a lesson; asking a family member or friend about the meaning of an unfamiliar word encountered outside of class; confirming with the teacher or another adult whether the meaning of a word looked up in a dictionary has been correctly understood; asking the teacher or an adult whether a newly learned word has been used correctly when first applied in a sentence; checking whether a guessed meaning of an unknown word is accurate by asking someone or doing further research; consulting the vocabulary notebook when uncertain about the meaning of a newly learned word; and regularly checking mentally to recall whether newly learned words have been remembered.

Research Rationale and Significance

A review of the existing literature within the scope of native language education (Beck et al., 2013; Biemiller, 2010; Boers & Lindstromberg, 2008; Graves, 2006; Kamil & Hiebert, 2005; Marzano, 2004; Nagy & Scott, 2000; Stahl & Nagy, 2006) reveals that vocabulary instruction is generally approached through teacher-centered processes, while vocabulary learning is largely discussed in the context of second or foreign language acquisition. It is particularly noteworthy that empirical studies focusing on how individuals consciously manage their vocabulary learning in their native language and what strategies they adopt in this process are extremely limited. Existing studies (Gu & Johnson, 1996; Hedge, 2000; Nation, 1990, 2008; Oxford, 1990; Schmitt, 1997) predominantly focus on vocabulary learning

strategies in foreign language contexts and do not provide a comprehensive analysis of how such strategies are used in native language contexts. This gap in the literature hinders a clear understanding of how students regulate their vocabulary learning in their native language and how awareness of strategies relates to the development of their personal vocabulary. As previously stated, factors such as the limited time allocated to native language education courses (Arslan, 2013; Eğilmez, 2024; Mutlu et al., 2019; Reilly, 2019; Stoewer & Musk, 2019), the amount of time that can be dedicated solely to vocabulary development within this timeframe, the limited number of words that can be taught or learned during this restricted period, and the quality of available instructional materials and activities all create a necessity for students to benefit from the vocabulary learning strategies mentioned above in the process of learning words in their native language. Determining the extent to which this necessity is being met, and identifying potential shortcomings or gaps in this area in order to develop appropriate interventions, is of critical importance.

To date, there appears to be no data-driven research within the scope of native language education aimed at identifying the actual vocabulary learning strategies that children employ while learning words in their native language. Existing studies that have attempted to identify strategies directly used by individuals during vocabulary learning or that highlight the learning dimension in the context of vocabulary development (Al Zahrani & Chaudhary, 2022; Gu, 2018; Kocaman & Kızılkaya, Cumaoğlu, 2014; Labontee, 2019; Linda & Shah, 2020; Memiş, 2018b) have been conducted predominantly in second or foreign language learning contexts. Therefore, it can be said that there is a significant research gap in the literature regarding the identification of vocabulary learning strategies used in native language learning. Just as learners are expected to assume personal responsibility for vocabulary development in second/foreign language learning processes, children in native language education are also responsible for fulfilling similar obligations through the use of various strategies. This situation clearly demonstrates the need for research that emphasizes the learning dimension in native language education, just as in second/foreign language instruction. Given that the failure to support personal vocabulary development within native language education through learning-centered approaches may result in students with limited vocabulary growth and without the ability to independently manage their own vocabulary learning processes, it is essential to determine whether students possess adequate awareness of vocabulary learning strategies. Doing so represents a critical step toward addressing deficiencies encountered in this area. In this context, the present study is the first to examine vocabulary learning strategies in native language education within a holistic framework by categorizing these strategies and investigating their levels of use across a large sample group. At the same time, the study aims to reveal not only the levels at which these strategies are employed but also the key individual and environmental factors that shape these processes. Accordingly, the findings are expected to contribute to the development of learning-centered vocabulary teaching policies in native language education and to provide a methodological framework for future research. In addition, the study is anticipated to offer insights into practices that support the development of students' independent vocabulary learning skills within the native language education process.

Research Aim

This study aims to identify the vocabulary learning strategies used by children aged 11-14 who are enrolled in middle school and to determine the extent to which they use these strategies when learning new words in their native language. The study further aims to examine whether variables such as gender, age, access to technology, number of books read, the presence of an older sibling, parents' educational background, and the location of the school have any impact on the level of strategy use. These variables were selected based on factors identified in the relevant literature as having the potential to influence children's vocabulary learning processes. Specifically, prior studies have highlighted the effects of gender (Bölükbaş, 2010; McKean et al., 2015), age (Cain & Oakhill, 2011), access to technology (Korat, 2010), number of books read (Sullivan & Brown, 2015; Stanovich & Cunningham, 1992), presence

of an older sibling (Hoff-Ginsberg, 1998), parents' educational background (Dollaghan et al., 1999; Gelbal, 2008; Hoff, 2003), and school location (Hoff, 2006; Pace et al., 2017).

Accordingly, the research questions were formulated as follows:

- 1. What are the levels of vocabulary learning strategy use among middle school students?
- 2. Does the level of vocabulary learning strategy use differ by gender?
- 3. Does the level of vocabulary learning strategy use differ by age?
- 4. Does the level of vocabulary learning strategy use differ by access to technology?
- 5. Does the level of vocabulary learning strategy use differ by the number of books read?
- 6. Does the level of vocabulary learning strategy use differ by having an older sibling?
- 7. Does the level of vocabulary learning strategy use differ by parents' level of education?
- 8. Does the level of vocabulary learning strategy use differ by the location of the school?

Method

Research Design

This study was designed using the descriptive survey model, which is one of the quantitative research methods deemed most suitable for the research objectives. This model aims to describe an existing situation in all its reality without intervention in the environment, using a large sample group capable of representing the population and thereby enabling generalizations about a universe involving numerous variables (Büyüköztürk et al., 2014; Can, 2014; Creswell, 2012; Fraenkel et al., 2012; Karasar, 2013). The primary rationale for selecting this model lies in its ability to uncover, in a multidimensional and non-intrusive manner, how students currently employ vocabulary learning strategies and how the level of strategy use varies across different individual and environmental variables. In this regard, the descriptive survey model was deemed the most appropriate design, as it enables the direct observation of the current state and allows for generalization based on large samples. Accordingly, considering the data collected from a sample group of 1620 students, this model was assessed to be best suited for making objective, comprehensive, and generalizable inferences regarding students' tendencies in using vocabulary learning strategies.

Population and Sample

The population of this research consists of students aged 11–14 who are enrolled in middle schools. According to official statistical data from the MoNE (2022), there are 4.948.410 students enrolled in public middle schools. In the literature, for populations with a known total size of 100.000 or more, a sample size of 378 (Cohen et al., 2000), 384 (Krejcie & Morgan, 1970), or 400 (Israel, 1992; Neuman, 2014) participants is considered sufficient when assuming a 95% confidence level and a sampling error of 0.05. Based on these reference values, a sample size exceeding 400 is considered adequate to represent the population. Accordingly, the sample for this study was composed of a total of 1620 students using a convenience sampling method, with a minimum of 400 students selected from each grade level within the 11–14 age range.

The variables examined within the scope of this study and the demographic details of the middle school students included in the sample are presented in the following table:

Table 1. Participant demographics

Age	Female	N/-1-	Location of		Level of Parental		Ole	Older		ber of	Acces	s to
	гешате	Maie	Scho	ol	Education		Sibling		Books Read		Technology	
11	225	179	Village	F27	Primary	839	Yes	902	0	52	Yes	378
12	209	198	Village	327	School	039	res	902	1-6	665	168	3/6
13	203	205	District	652	High School	656	Mo	718	7-12	588	Limited	435
14	218	183	City	441	University	125	No	/18	13 ≥	315	No	807

An examination of the data presented in Table 1 reveals that 404 students in the sample (24.93%) were in the 11-year-old age group (fifth grade), 407 students (25.12%) were in the 12-year-old group (sixth grade), 408 students (25.18%) were in the 13-year-old group (seventh grade), and 401 students (24.77%) were in the 14-year-old group (eighth grade). Of the participants, 855 were female (52.8%) and 765 were male (47.2%). A total of 527 students (32.53%) attended schools located in villages, 652 students (40.25%) in district centers, and 441 students (27.22%) in city centers. In terms of parental education levels, the parents of 839 students (51.79%) had completed primary education, those of 656 students (40.49%) had completed high school, and those of 125 students (7.72%) were university graduates. Regarding sibling status, 902 students (55.68%) reported having an older sibling, while 718 students (44.32%) did not. In terms of reading habits, 52 students (3.21%) reported not reading any books in a year, 665 students (41.06%) reported reading 1–6 books, 588 students (36.29%) read 7–12 books, and 315 students (19.44%) read 13 or more books annually. Concerning access to technology, 378 students (23.34%) reported having direct access to technological tools such as personal phones, computers, or wireless internet; 435 students (26.85%) had limited access; and 807 students (49.81%) had no direct access to such technologies.

Data Collection Tools

In this study, data were collected using the Native Language Vocabulary Learning Strategies Scale (*NLVLSS*). As part of the validity and reliability evaluation of the scale (Memiş, 2023), the Kaiser-Meyer-Olkin (KMO) test and Bartlett's Test of Sphericity (BTS) were conducted to assess the suitability of the data for exploratory factor analysis (EFA). The results indicated a KMO value of .901 and a BTS significance level of .001, confirming that the data were appropriate for performing EFA.

For the EFA, the varimax rotation method was employed, and the scree plot, factor loadings, and variance ratios were analyzed. The findings revealed a three-factor structure for the scale, with at least three items loading onto each factor. The factor loadings ranged between 0.53 and 0.82; and the total variance explained by the scale was calculated as 59.66%. Based on these results and references from previous literature (Costello & Osborne, 2005; Field, 2009), the factors and the explained variance were considered acceptable in terms of validity.

To verify the factor structure obtained from the EFA, a confirmatory factor analysis (CFA) was subsequently conducted. The CFA results were as follows: $X^2/df = 2.13$; RMSEA = 0.05; SRMR = 0.05; GFI = 0.93; AGFI = 0.91; CFI = 0.98; and NNFI = 0.98. When compared against established benchmarks in the literature (Anderson & Gerbing, 1984; Goodwin, 1999; Hooper et al., 2008), these results supported the three-factor structure of the 36-item scale and demonstrated a high level of model fit.

Furthermore, to assess the reliability of the scale, Cronbach's alpha coefficient was calculated to evaluate the internal consistency of the items. The analysis yielded a result of α = 0.96, indicating that the scale is "highly reliable" (Domino & Domino, 2006; George & Mallery, 2003).

The NLVLSS is a 5-point Likert-type scale consisting of 36 items distributed across three dimensions: *learning-oriented strategies* (19 items), *reinforcement-oriented strategies* (10 items), and *confirmation-oriented strategies* (7 items). The minimum total score attainable on the scale is 36, and the maximum is 180. The score ranges for each subdimension are as follows: 19 to 95 for *learning-oriented strategies*, 10 to 50 for *reinforcement-oriented strategies*, and 7 to 35 for *confirmation-oriented strategies*. To determine the overall level of vocabulary learning strategy use, the total score (x) obtained from the

scale is divided by the number of items (36). The resulting numerical value falls between 1 and 5 and reflects the level of native language vocabulary learning strategy use. According to this scoring system, scores between 1.0 and 2.5 indicate "low" strategy use, scores between 2.6 and 3.9 indicate "moderate" use, and scores between 4.0 and 5.0 indicate "high" use.

Data Collection and Analysis

The data for this study were collected from a total of 1620 middle school students during the 2022-2023 and 2023-2024 academic years, forming the research sample. Data collection was carried out using the *Native Language Vocabulary Learning Strategies Scale* (NLVLSS), a 36-item instrument comprising three dimensions, along with a personal information form. Participation was voluntary, and the process was conducted with the support of the teachers responsible for the students' classes. Normality analyses indicated that the data followed a normal distribution; therefore, parametric tests were employed. In this context, descriptive statistics were utilized to determine students' levels of native language vocabulary learning strategy use. Independent samples t-tests were conducted to examine the effects of gender and the presence of an older sibling on strategy use levels. Additionally, one-way analysis of variance (ANOVA) was applied to assess whether variables such as age, access to technology, number of books read, parents' educational background, and school location significantly influenced students' use of vocabulary learning strategies.

Ethical Approval

Ethical approval indicating that the data collection process posed no ethical concerns was obtained from the Social and Human Sciences Ethics Committee of Bartin University on 16.03.2023 under protocol code 2023-SBB-0143. No personal information or identifiable data were collected from the participants, who voluntarily took part in the study, and ethical principles were rigorously adhered to throughout all stages of the research.

Findings

This study aimed to identify the vocabulary learning strategies employed by middle school students aged 11-14 in acquiring words in their native language and to evaluate the extent of their strategy use. Additionally, it sought to investigate whether variables such as gender, age, access to technology, number of books read, the presence of an older sibling, parental education level, and school location influence students' levels of vocabulary learning strategy use. The findings derived from the analysis are presented in the following sections:

		Learning Oriented	Reinforcement	Confirmation	0 0
Grade	N	Strategies		Oriented Strategies	Overall Usage Level
5	404	2,05	2,40	3,71	2,44
6	407	2,26	2,70	4,14	2,69
7	408	2,53	2,90	4,42	3,03
8	401	2,84	3,20	4,86	3,39
Total	1620	2,42	2,80	4,29	2,89

Table 2. Descriptive analysis of middle school students' use of vocabulary learning strategies

1,0-2,5 = Low Level; 2,6-3,9 = Moderate Level; 4,0-5,0 = High Level

The data presented in Table 2 indicate that middle school students' overall use of vocabulary learning strategies is at a *moderate level*. Among the subcategories of strategies, *confirmation-oriented strategies* emerged as the most frequently used, whereas *learning-oriented strategies* were the least frequently employed. According to the findings, students utilized confirmation-oriented strategies at a *high level*, reinforcement-oriented strategies at a *moderate level*, and learning-oriented strategies at a *low level*. In terms of grade level, eighth-grade students were found to use vocabulary learning strategies most frequently, while fifth-grade students reported the lowest frequency of use. The order of strategy use by grade level, from highest to lowest, was as follows: *eighth grade* > *seventh grade* > *sixth grade* > *fifth grade*.

Further analysis of the subdimensions and individual items within the scale revealed that the most frequently used vocabulary learning strategy was "asking the teacher or classmates about the meaning of an unknown word", while the least frequently used was "learning other words that frequently co-occur with newly learned words, including their secondary, tertiary, and figurative meanings".

Among learning-oriented strategies, the most commonly used was "marking and researching the meaning of an unknown word encountered while reading", whereas the least used was "learning other words that frequently co-occur with newly learned words, including their secondary, tertiary, and figurative meanings".

In the category of reinforcement-oriented strategies, the most frequently used was "solving vocabulary meaning questions in test books", while the least used was "adding derivational affixes to newly learned words to generate new ones".

For confirmation-oriented strategies, the most preferred strategy was "asking the teacher or classmates about the meaning of an unknown word", and the least preferred was "consulting the vocabulary notebook when uncertain about the meaning of a newly learned word".

Table 3. Independent samples t-test results for differences in strategy use by gender

Gender	N	\overline{X}	SD	df	t	p
Female	855	2,86	31,103	1618	-1,229	,219
Male	765	2,92	32,616			

As presented in the Table 3, the data obtained from the study indicate that gender does not have a statistically significant effect on the frequency of vocabulary learning strategy use among middle school students.

Table 4. One-Way ANOVA and Tukey Test results for differences in strategy use by age

	One-Way ANOVA										Tukey Test					
Age	N	\overline{X}	SD	\mathbf{SV}	SS	df	MS	p	Age	Age	MD	p				
11	404	2,44	26,33	Between	263960,5	3	97096 9			12	-8,97	,00				
12	407	2,69	31,63	Groups	203900,3	3	87986,8		11	13	-21,04	,00				
13	408	3,03	31,60	Within	1389272,4	1616	859 <i>.</i> 7	00		14	-34,00	,00				
14	401	3,39	27,25	Groups	1369272,4	1616	639,7	,00	10	13	-12,07	,00				
Total	1620	2 00	21.05	Total	1652222.0	1610			12	14	-25,04	,00				
Total	1620	2,89	31,95	Total	1653232,9	1619			13	14	12,96	,00				

The results of the analysis in Table 4 show that age has a statistically significant effect on students' use of vocabulary learning strategies. This effect increases with age between 11 and 14, suggesting that older students tend to use vocabulary learning strategies more frequently than younger ones.

Table 5. One-Way ANOVA and Tukey test results for differences in strategy use by access to technology

	One-Way ANOVA										Tukey Test			
A.T.	N	\overline{X}	SD	SV	SS	df	MS	p	A.T.	A.T.	MD	р		
Yes	378	3,59	18,5	Between Groups	383356,7	2	191678,4		Vaa	Limited	23,8	,00		
Limited	435	2,94	31,4	Within Groups	1249336,1	1617	772,6	,00	Yes	No	38,5	,00		
No Total	807 1620	2,53 2,89	29,3 31,8	Total	1632692,9	1619			Limited	l No	15,0	,00		

As shown in Table 5, students' access to technology has a statistically significant effect on their frequency of using vocabulary learning strategies. The difference is in favor of the group with access to technology, indicating a positive impact of technology availability on strategy use.

Table 6. One-Way ANOVA and Tukey Test results for differences in strategy use by number of books read by participants

			Or	Tukey Test								
Number of Books	N	\overline{X}	SD	sv	SS	df	MS	p	Number of Books	Number of Books	MD	p
0	52	2,16	18,28	Between	165769,6	3	55256 F			1-6	-17,1	,01
1-6	665	2,64	30,17	Groups	103/09,0	3	55256,5		0	7-12	-31,1	,00
7-12	588	3,03	31,17	Within	1486233,3	1616	010.6	00		13 ≥	-40,1	,00
13 ≥	315	3,28	30,59	Groups	1486233,3	1010	919,6	.00	1 6	7-12	-14,0	,00
Total	1620	2,89	31,94	Total	1652002,9	1619			1-6 7-12	13 ≥ 13 ≥	-9,0 -9,0	,00, ,00,

The results in Table 6 show that the number of books read significantly affects the frequency of vocabulary learning strategy use among middle school students. The more books students read, the more frequently they tend to use vocabulary learning strategies.

Table 7. Independent samples t-test results for differences in strategy use by having an older sibling

Older Sibling	N	\overline{X}	SD	df	Т	p
Var	902	2,85	31,79	1618	-1,869	,062
Yok	718	2,93	31,82			

As shown in Table 7, the presence or absence of an older sibling does not result in a statistically significant difference in the frequency of vocabulary learning strategy use.

Table 8. One-Way ANOVA and Tukey Test results for differences in strategy use by parental education level

			Tukey Test									
Education Level	N	\overline{X}	SD	sv	SS	df	MS	p	Education Level	Education Level	MD	p
Primary School	839	2,59	29,41	Between Groups	301766,1	2	150883,1		Primary	High School	-16,9	,00
High School	656	3,06	30,86	Within Groups	1374498,9	1617	850,1	,00	School	University	-48,6	,00
University Total	125 1620	,	14,28 32,17	Total	1676264,9	1619			High School	University	-31,6	,00

The analyses in Table 8 indicate that parental education level significantly influences students' use of vocabulary learning strategies. As the education level of the parents increases, the students' frequency of strategy use also increases significantly.

		,							0,	J		
'			Tukey Test									
School Location	N	\overline{X}	SD	sv	SS	df	MS	p	School Location	School Location	MD	p
Village	527	2,56	28,29	Between Groups	162361,7	2	81180,8		V:11- ~-	District	-12,2	,00
District	652	2,89	31,44	Within Groups	1480287,2	1617	915,4	,00	Village	City	-26,0	,00
City Total	441 1620		30,72 31,85	Total	1642648,9	1619			District	City	-13,7	,00

Table 9. One-Way ANOVA and Tukey Test results for differences in strategy use by school location

The analysis results in Table 9 demonstrate that the location of the school significantly affects students' frequency of using vocabulary learning strategies. This effect is positive, increasing from rural to urban areas, indicating that students in urban schools tend to use these strategies more frequently than those in rural schools.

Discussion and Conclusion

This study aimed to identify the vocabulary learning strategies used by middle school students when acquiring new words in their native language, as well as the extent to which they utilize these strategies. The findings of the research can be summarized as follows:

Students enrolled in middle schools use vocabulary learning strategies at a *moderate level* in their efforts to expand their vocabulary both during and outside of class through independent study. Among the different types of strategies that guide their learning activities, *confirmation-oriented strategies* were the most preferred, while *learning-oriented strategies* were the least used. Specifically, confirmation-oriented strategies were employed at a *high level*, reinforcement-oriented strategies at a *moderate level*, and learning-oriented strategies at a *low level*. The student group that used vocabulary learning strategies the most was at the eighth-grade level, whereas the fifth-grade students reported the lowest usage. The frequency of strategy use increased with grade level in the following order: *eighth grade* > *seventh grade* > *sixth grade* > *fifth grade*.

In a related study that focused on the use levels of vocabulary teaching strategies employed by instructors within the scope of native language education (Memiş, 2024), it was similarly found that Turkish language teachers—parallel to the findings on students in the present study—use vocabulary teaching strategies at a moderate level. This parallel suggests that neither the teachers, who guide the instructional process, nor the students, who are active agents in the learning process, currently use vocabulary strategies at an optimal level for developing personal vocabulary. In the aforementioned study (Memiş, 2024), the frequency of teachers' use of vocabulary teaching strategies followed the order: control > reinforcement > explanation > skill development > teaching > guidance. The fact that teachers most frequently employed control strategies, while students most frequently used confirmation strategies, and that both teachers and students least frequently used guidance and learning strategies respectively, indicates a notable alignment between the two findings. The tendency of teachers to focus more on monitoring rather than guiding the learning process may have contributed to students gravitating toward strategies centered on confirmation and reinforcement rather than those oriented toward learning. This situation suggests that in the absence of instructional guidance, students may struggle to develop their own learning strategies and instead manage the process primarily by trying to consolidate existing knowledge. When the results of both studies are considered together, it becomes evident that there is a strong interaction between the strategy use habits of teachers and students; the strategies preferred by teachers in teaching influence the strategies students adopt in learning. Both groups appear to prioritize controlling and reinforcing strategies, while falling short in terms of guiding the process and employing conscious, strategic learning approaches. In this context, increasing teachers' use of guidance strategies may support students in more actively employing independent vocabulary learning strategies. Considering that teaching and learning are complementary processes, it can be asserted that there is a direct relationship between the teacher's guiding role and the student's development of active learning strategies. Therefore, teachers need to enhance their awareness of vocabulary teaching strategies and restructure their instructional approaches—not merely to transfer knowledge and monitor its acquisition—but also to promote the development of students' strategic learning skills.

In order to raise middle school students' moderate level of vocabulary learning strategy use to a high level, it is essential first to ensure that Turkish language teachers working in schools are adequately informed about vocabulary learning and teaching strategies. This can be achieved through in-service training programs and seminars held throughout the academic year. Following this, students should be informed about vocabulary learning strategies that they can use not only during Turkish language class activities but also in managing their own independent vocabulary learning outside the classroom. It is important to raise students' awareness on this matter and to provide training that enables them to apply these strategies naturally—without the need for external guidance from teachers or parents. In this context, involving English language teachers and adopting a shared understanding in the language education process—across both native and foreign language instruction—may further support the development of students' use of vocabulary learning strategies. Although native language education and foreign language teaching are distinct fields, they share common ground in terms of vocabulary learning strategies. Certain strategies—particularly the use of contextual clues, morphological analysis, and word mapping—can be effectively employed in both native and foreign language learning (Blachowicz & Fisher, 2014; Stahl & Nagy, 2006). This highlights the potential for these two subject areas to complement one another in helping students grasp the fundamental principles of vocabulary learning strategies. Considering that most existing research on vocabulary learning strategies has been conducted in the context of foreign or second language instruction, it is reasonable to assume that foreign language teachers have greater access to academic knowledge and resources on this topic. Therefore, collaborative efforts among teachers-particularly through interdisciplinary cooperation between native and foreign language educators-can help develop a shared awareness of vocabulary teaching and learning among both teachers and students. This proposal can be practically implemented through regular departmental meetings and in-service training seminars already held at the beginning, middle, and end of each academic term.

The high level of use of confirmation-oriented strategies, which are the most frequently employed by students, reflects their need to verify word meanings and reinforce their learning. This tendency suggests that students seek a reliable confirmation mechanism in the process of vocabulary learning and that they often depend on feedback from others to strengthen their understanding (Blachowicz & Fisher, 2014; Nagy & Scott, 2000). Especially given that students in this age group have not yet fully developed abstract thinking skills, they may prefer seeking validation rather than inferring word meanings independently (Cain & Oakhill, 2011). The frequent use of confirmation-oriented strategies in students' independent vocabulary development efforts suggests that they often encounter new words, attempt to learn them, and feel the need to verify the accuracy of their understanding. This pattern also implies that middle school students may experience a lack of confidence in their independent vocabulary learning processes, thereby necessitating a confirmatory and supervisory mechanism. The moderate use of reinforcement-oriented strategies indicates that students do engage in repeating newly learned words to some extent; however, such repetitions may not be systematic or consistent. Existing literature (Graves, 2006; Perfetti & Stafura, 2014) emphasizes that reinforcement strategies play a critical role in supporting long-term vocabulary retention. Nonetheless, for students to apply these strategies consciously and sustainably, teacher support is often essential. These findings highlight the need for greater guidance and scaffolding to help students consolidate and make their word knowledge more permanent. The low level of preference for learning-oriented strategies, on the other hand, points to

students' limited awareness of independent vocabulary learning (Kaya, 2023), insufficient time spent on vocabulary study outside of class, lack of knowledge about such strategies, and uncertainty about how to use them effectively. The emphasis on direct instruction in the current educational system may also hinder students from acting independently in vocabulary learning (Marzano, 2004; Stahl & Nagy, 2006). Furthermore, the low usage of learning strategies may be associated with students not viewing vocabulary learning as a personal responsibility (Snow et al., 2005). Given that learning-oriented strategies represent the most critical type of strategy for managing one's own vocabulary learning and development, this insufficient and low level of usage should be addressed through explicit instruction, awareness-raising, and skills training focused on these strategies. Such instruction is particularly important given the limited time allocated to native language courses, the restricted time available for vocabulary teaching, and the finite number of words that can be directly taught within a lesson (Memiş, 2019b; Reilly, 2019; Stoewer & Musk, 2019). Enhancing students' knowledge and application of learning strategies can help compensate for these instructional limitations, while also supporting their ability to independently acquire vocabulary outside the classroom. When learners develop greater awareness within the framework of language education and take responsibility for their own learning processes, it is well documented that they not only use language skills more effectively but also experience improved academic achievement (Dafei, 2007; Oxford, 2016; Wong & Nunan, 2011). Therefore, providing students with education on vocabulary learning strategies can significantly contribute not only to academic success, but also to the development of literacy skills and the acquisition of a broader and more functional vocabulary in their native language (Beck et al., 2013; Graves, 2006; Wright & Cervetti, 2017). All these findings point to the need for greater awareness-raising among students regarding vocabulary learning strategies and, in particular, the promotion of learning-oriented strategies. In this context, studies in the literature (Beck et al., 2013; Biemiller, 2010) emphasize that explicit instruction in vocabulary strategies by teachers significantly improves students' vocabulary learning habits. Accordingly, it is essential for educators to guide students in the effective use of these strategies and to provide supportive learning environments conducive to strategic vocabulary acquisition.

Among the confirmation-oriented strategies - identified as the most frequently preferred strategy group - "asking the teacher or classmates about the meaning of an unknown word" was found to be the most commonly used strategy. This strategy also ranked as the most preferred across all vocabulary learning strategies. On the other hand, the least frequently used confirmation-oriented strategy was "consulting a vocabulary notebook when uncertain about the meaning of a newly learned word". In this context, when middle school students encounter an unfamiliar word, their tendency to seek clarification from individuals they perceive as more knowledgeable or experienced-such as teachers, older peers, or family members-can be considered highly functional in preventing incorrect learning during independent vocabulary acquisition and avoiding potential misuse of words in the future. Moreover, the fact that school-level Turkish dictionaries, which are often the first and most accessible resource for students, are not adequately designed to enable independent and accurate understanding of word meanings plays a critical role in this reliance. Research has shown (Baskın, 2017; Baş, 2013; Boz, 2006; Can & Deniz, 2016; Karadağ, 2011; Okur, 2011; Taga, 2022) that these dictionaries generally provide only the primary, surface-level meanings of words, with limited or no contextualization, minimal definitions, and often no example sentences, making them unsuitable for independent use by students at this developmental stage. Consequently, students are often compelled to seek human assistance when clarifying word meanings, especially in the earlier years of middle school. This need is further reinforced by students' developing cognitive maturity, limited world knowledge, and difficulty understanding abstract vocabulary, all of which complicate their ability to interpret definitions without support. When these challenges are coupled with limited dictionary skills and the inadequacy of available dictionary resources, students increasingly rely on external support. While this reliance on asking others may be considered normal, useful, and functional during the first two years of middle school, it is important

that students gradually shift in the later years to independent vocabulary research using reliable sources. It is the responsibility of native language teachers to equip students with the skills necessary to independently search for, find, and verify word meanings (Chi, 1998). Therefore, it is essential to provide awareness training and skill-building instruction, followed by monitoring whether students are applying these skills. Studies in the literature (Arı, 2006; Göçer, 2001; Maden & Durukan, 2019; Melanlıoğlu, 2013; Sarıgül, 1999) also emphasize the responsibility of teachers in guiding students to investigate word meanings and underline the importance of explicitly teaching dictionary skills to middle school students.

Among the reinforcement-oriented strategies, which were found to be used at a moderate frequency, the most commonly employed was "solving vocabulary-related questions in test books". The fact that middle school students rely on test books even in their personal vocabulary development activities may be interpreted as a reflection and indicator of the test- and exam-oriented nature of the Turkish education system, which exerts pressure on all stakeholders—including teachers, students, parents, and school administrators—and leads to various negative consequences (Büyüköztürk, 2016; Çetin & Ünsal, 2019; Gümüş, 2018; Özer Özkan & Turan, 2021; Turkish Education Association, 2010). In essence, the goal of vocabulary development is to enhance students' language skills and promote their effective use, not merely to improve exam performance. A broad and functional vocabulary is essential-not for scoring high on tests—but for developing and internalizing comprehension and expression skills, which serve vital functions in real-life communication. Although this aim is clearly stated in the "specific objectives" section of the Turkish language curriculum (MoNE, 2019, 2024), it often remains in the background due to the exam-focused identity of the Turkish education system. This system tends to prioritize gaining admission to prestigious schools, obtaining quality diplomas, and ultimately securing high-paying jobs—all of which are perceived as contingent on achieving high test scores. As a result, students tend to focus on solving vocabulary questions in test books, rather than pursuing the curricular goals of "enriching their personal vocabulary to cultivate language awareness and aesthetic appreciation, and to expand their emotional, cognitive, and imaginative worlds" (MoNE, 2019, 2024), as revealed in this study. However, a well-developed, extensive, and in-depth vocabulary equips individuals from an early age with critical skills such as complete and nuanced comprehension, comparison, inference-making, evaluation, and analytical thinking (Karadağ, 2022; Karatay, 2007; Maden, 2021; Memiş, 2018a; Özbay & Melanlıoğlu, 2008; Schmitt, 2014). These abilities, in turn, increase students' potential to perform well not only during the school term but also in national exams. Due to the strong positive correlation between vocabulary knowledge and reading comprehension (Beck & McKeown, 1991; Cain & Oakhill, 2011; Elleman et al., 2009), many exam questions in subjects such as science and social studies — outside the scope of Turkish language classes — can be solved solely through reading comprehension. This has been demonstrated in numerous studies (Bayat et al., 2014; Ceran & Deniz, 2015; Tatar & Soylu, 2006; Yazıcı, 2006). Therefore, rather than encouraging students to solve vocabulary questions in test books solely for the purpose of exam preparation, it would be much more appropriate to guide them toward activities that develop their foundational language skills, which will ultimately support both their academic performance and long-term literacy.

Among the reinforcement-oriented strategies, the least frequently used by students was "attempting to generate new words by adding derivational affixes to newly learned words". The fact that middle school students do not sufficiently benefit from this practice—which could reinforce their understanding and help expand their vocabulary -- indicates a lack of knowledge and awareness regarding the functional use of derivational affixes. Although the current Turkish language curriculum (MoNE, 2019, 2024) includes learning outcomes related to explaining and distinguishing the functions of derivational affixes and understanding the logic of word formation within vocabulary development activities, textbooks offer few activities that actually support these objectives. Moreover, there is no clear guidance on how to deliver instruction that fosters awareness and understanding of affix functions and word formation principles. As a result, teachers often address derivational affixes through a grammar-based, examoriented approach, aligned with how such topics appear in midterm exams or secondary school entrance assessments. This limits students' opportunities to engage with one of the core structural features of the Turkish language, namely the functional use of derivational affixes. In contrast, research has consistently shown that morphological knowledge and morphological awareness training contribute significantly to the development of vocabulary through new word learning (Bowers, 2012; Good, 2011; Larsen & Nippold, 2007; Maag, 2007; Memis, 2018c), as well as to the ability to infer meanings of unfamiliar words (Bertram et al., 2000; Memiş, 2018d; Muse, 2005; Onan, 2014), and to improvements in reading comprehension (Carlisle, 2000; Foorman et al., 2012; Katz, 2004; Loudermill, 2014; Silva & Martins-Reis, 2017). While languages share structural similarities across categories, each has its own unique morphological system, which can either facilitate or hinder vocabulary learning and reading comprehension depending on how well learners are equipped to handle that structure. Given that Turkish is a morphology-driven, agglutinative language, incorporating strategies related to derivational affixes can help students engage more effectively with vocabulary by analyzing word meanings, decoding structurally complex words, and attending to grammatical and contextual clues within texts. As emphasized in the literature (Bowers et al., 2010; Carlisle, 2010; Memiş, 2019c; Stahl & Nagy, 2006), morphological knowledge and awareness enhance memory retention and word recall. The findings of a study examining morphological awareness among middle school students in Turkey (Memiş, 2019a) align with the current study's results concerning the low use of derivational affix strategies. That study reported that fifth and sixth grade students exhibited low levels of morphological awareness, whereas seventh and eighth grade students demonstrated moderate levels. Considering students' current low proficiency in using derivational affixes and their overall low-to-moderate morphological awareness, targeted efforts are needed to enhance these areas. To address this, Turkish language classes at the middle school level should frequently incorporate activities that demonstrate the functions of derivational and inflectional affixes. Students should be provided with explicit instruction that builds awareness and a solid foundation in these structures (Onan, 2009). Additionally, instructional strategies based on the root-affix-stem relationship should be taught, considering Turkish's characteristic of maintaining semantic transparency between derived words. This will not only improve vocabulary learning but also help students develop a deeper understanding of the structural logic of their native language.

Among the *learning-oriented strategies*, which were identified as the least frequently used overall, the most commonly employed was "marking an unfamiliar word while reading and researching its meaning". This suggests that students primarily rely on their reading skills to develop and expand their personal vocabulary, and that their acquisition of new words is largely based on encounters with unfamiliar vocabulary during reading. Indeed, in efforts to develop vocabulary in the native language, an approach based on extensive reading and incidental vocabulary acquisition is often adopted, with the aim of fostering vocabulary growth through exposure to texts (Cunningham, 2005; Lightbown & Spada, 2006; McCarthy et al., 2010; Nation, 2008; Pressley et al., 2007; Schmitt, 2000). Due to the limited time allocated to native language instruction, and the resulting focus on developing core language skills, this approach assumes that words will be incidentally learned—particularly through independent reading. However,

for incidental vocabulary acquisition to be effective, students must engage in extensive and consistent reading, and research shows that only high-proficiency readers are able to significantly grow their personal vocabulary through this method, whereas students with poor reading comprehension benefit much less (Nagy et al., 1985; Nation, 2004; Pellicer-Sánchez & Schmitt, 2010; Swanborn & de Glopper, 1999). Given these disparities, issues such as ensuring equivalent vocabulary size and richness across students of the same age and grade level, and ensuring equal access to similar quality and quantity of reading material, become critical. To guarantee a more equitable vocabulary development through reading, one of the key steps education policymakers can take is to identify or commission grade-appropriate books at the national level and ensure their free and universal distribution to students across the country. If vocabulary learning through reading remains limited to textbook content, students' personal lexical wealth is likely to remain insufficient, and it becomes nearly impossible to establish a common minimum standard of essential vocabulary that all students are expected to know.

Among the learning-oriented strategies, the least preferred by students was "learning other words with which newly learned words are used, including their secondary, tertiary, and figurative meanings". This strategy also ranked as the least utilized across all vocabulary learning strategies. This finding suggests that, in their efforts to expand their vocabulary, middle school students tend to neglect two of the three core dimensions of lexical knowledge: depth and density. These dimensions, which constitute the subcomponents of vocabulary knowledge, are defined (Anderson & Freebody, 1981; Göğüş, 1978; Schmitt, 2014) as follows: knowing multiple meanings of a word relates to the *depth* dimension; knowing a large number of words across various topics pertains to breadth; and knowing many words related to a specific subject reflects the *density* dimension. The low frequency of use of this strategy may stem from students' lack of awareness about multiple meanings of newly acquired words, their uncertainty about how to explore these meanings, and the absence of such content in commonly used reference materials such as school dictionaries. To address the limited development of the depth and density dimensions of students' vocabulary knowledge - as revealed by the findings of this study - teachers should incorporate not only the primary meanings of target words but also their secondary and figurative meanings, as well as common collocations and word pairings, during direct vocabulary instruction. Students should be made aware that words often possess multiple meanings and that these meanings can shift depending on the context. Moreover, students should be encouraged to pay attention to this aspect while engaging in independent vocabulary learning. In addition to these pedagogical strategies, student reference materials - particularly dictionaries designed for middle school learners - should be revised and enriched by their authors to better reflect the semantic depth and density dimensions of vocabulary. Providing students with more comprehensive tools would enhance their ability to understand the nuances and contextual uses of the words they encounter.

The study also explored whether the use of vocabulary learning strategies varied according to the variables of gender, presence of an older sibling, age, access to technology, number of books read, parental education level, and school location. The findings indicated that gender and the presence of an older sibling had no significant impact on the frequency of vocabulary strategy use. In contrast, age, access to technology, number of books read, parental education level, and school location were found to significantly influence students' use of vocabulary learning strategies.

Although gender was not identified as a significant factor in this study, existing literature suggests that gender may exert a limited influence on native language acquisition and vocabulary development. Research examining the role of gender in language development and vocabulary learning (Eriksson et al., 2012; Rinaldi et al., 2023) indicates that girls generally display earlier and more rapid language development compared to boys. Similarly, other studies (Bornstein et al., 2004; Lange et al., 2016) report that girls tend to use more communicative gestures, possess larger vocabularies, and consistently perform better in language-related tasks. These differences have often been attributed to biological factors, such as variations in brain structure, memory systems, and socialization patterns

(Kaushanskaya et al., 2013). However, researchers also highlight that gender exerts only a small effect on language acquisition, with individual differences playing a more substantial role in explaining the observed variations (Eriksson et al., 2012). In this context, the finding that gender does not significantly influence middle school students' use of vocabulary learning strategies suggests that individual cognitive strategies and personal differences may be more decisive in vocabulary learning processes. Some studies (Hyde & Linn, 1988; Marjanovic-Umek & Fekonja-Peklaj, 2017) have shown that gender-related differences are more pronounced during early childhood but tend to diminish as formal education progresses. While it is acknowledged that girls may possess certain advantages in early language development (Bornstein et al., 2004), it can be argued that factors such as individual awareness, reading habits, and cognitive flexibility have a more critical impact on the use of vocabulary learning strategies (Cain & Oakhill, 2011). Therefore, the limited influence of gender on vocabulary learning strategies underscores the importance of enhancing strategy awareness to support students' individual vocabulary development skills. Accordingly, guidance and training programs designed to raise students' awareness of vocabulary learning strategies are likely to be beneficial regardless of gender.

Another variable found to have no statistically significant effect on the use of vocabulary learning strategies in this study was having an older sibling. However, the literature does contain various findings suggesting that sibling relationships can influence language acquisition, development, and vocabulary learning. In particular, within a sociocultural context, older siblings are often described as linguistic models for their younger siblings during the processes of language acquisition and vocabulary development (Bridges & Hoff, 2014; Hoff-Ginsberg, 1998; Hoff, 2006; Shatz & Gelman, 1973). The fact that older siblings typically possess more advanced language skills during early childhood and frequently offer explanations to their younger siblings may create either direct or indirect interactions that support vocabulary learning. Within this framework, younger siblings may benefit from asking older siblings about word meanings, learning new vocabulary through passive exposure to their conversations, or verifying inferred meanings-all of which can be considered forms of learning and consolidation strategies. Nonetheless, the current study found that having an older sibling does not significantly affect the frequency of vocabulary learning strategy use. These findings suggest that individual learning habits, cognitive development, and other sources of social interaction involved in the vocabulary learning process – such as parents, teachers, and peers – (Pancsofar et al., 2010; Saracho, 2017) may play a more decisive role. Furthermore, they imply that the contributions of older siblings to the vocabulary development of younger siblings are likely to occur indirectly rather than through deliberate strategy use. Indeed, some studies (Gleason & Ratner, 2016; Song et al., 2014) have demonstrated that, although older siblings may act as linguistic models, younger siblings' language development is more significantly shaped by factors such as parental language input, academic environments, and individual reading habits. In this regard, to gain a better understanding of whether the linguistic input provided by older siblings meaningfully affects vocabulary learning strategy use, future research should examine the duration, intensity, and content of these interactions in greater detail. Moreover, the finding that having an older sibling does not significantly enhance strategy use highlights the importance of making training programs aimed at raising awareness of vocabulary learning strategies equally accessible to all students, regardless of their familial interaction backgrounds.

According to the findings, age was found to significantly influence the frequency of vocabulary learning strategy use, with strategy use increasing as students advanced in age within the 11–14 age range. This outcome may be attributed to the fact that, as students grow older, they develop greater awareness of how to utilize vocabulary learning strategies and, due to the advancement of their abstract thinking skills, become more confident in managing their own learning without the need for constant guidance. In this context, Cain and Oakhill (2011) also emphasize that as children age, they tend to

become more active participants in the vocabulary learning process, and with increasing cognitive flexibility, their potential to use vocabulary strategies more effectively expands. Thus, the impact of age on vocabulary strategy use can be linked to both cognitive and metacognitive development, as well as a growing understanding of how to approach vocabulary learning. Previous studies (Chen, 2014; Pintrich & De Groot, 1990; Weil et al., 2013; Zimmerman, 2002) have demonstrated that as students mature, they engage more consciously in learning activities and tend to adopt more complex methods and strategies. Specifically, within the context of vocabulary learning, it is recognized that older students are more proficient than their younger counterparts at employing techniques such as analyzing word parts, interpreting contextual clues, and forming word associations (Biemiller & Boote, 2006; Carlisle, 2000; Nagy et al., 1985). Moreover, research suggests that as students age, they are more likely to develop intrinsic motivation for vocabulary learning and assume a more independent role in expanding their personal vocabularies (Anderson & Freebody, 1981; Biemiller & Boote, 2006; Graves, 2006). Altogether, these findings suggest that with increasing age, students tend to use vocabulary learning strategies in a more systematic and intentional manner. Nevertheless, for this process to reach its full potential, structured guidance aimed at fostering conscious awareness of strategy use remains essential.

Another key finding of the study is that access to technology significantly influences middle school students' frequency of vocabulary learning strategy use. Students who have access to technological tools benefit more from these strategies compared to their peers without direct access to technology. Considering that access to technology is closely linked to family income levels (Korat, 2010), and that socioeconomic well-being positively impacts overall learning and academic achievement (Akan, 1994; Dinçer & Kolaşin-Uysal, 2010 Keskin & Sezgin, 2009; Kocaman, 2008; Öksüzler & Sürekçi, 2010; Şirin, 2005; Türkoğlu, 2008), it becomes evident that ensuring equal educational opportunities for students with limited or no access to technology is a fundamental responsibility of the government and the Ministry of National Education. To reduce the academic achievement gap between students from low-income families and their more advantaged peers, and to support the principle of equal opportunity in education as a core tenet of the social welfare state, policy measures must be taken without exception. These should include the establishment of technology rooms or centers in every school, the free provision of educational technologies and internet access to students on an individual basis, and infrastructure investments to improve access to technology in rural areas and village schools. Such measures should be implemented not as optional initiatives but as mandatory state policies, ensuring that every student, regardless of background, can benefit equally from digital tools that support vocabulary learning and broader educational development.

The study also found that the number of books read has a statistically significant effect on middle school students' use of vocabulary learning strategies. Specifically, as the number of books read increases, so does the frequency of strategy use. Book reading, which was found to enhance the use of vocabulary learning strategies, is also known to improve academic achievement (Ateş, 2008; Gallik, 1999; Kızgın & Baştuğ, 2020; Özçelik, 2011; Stanovich & Cunningham, 1992; Sullivan & Brown, 2015; Yılmaz, 2012). Furthermore, it positively influences numerous factors associated with academic success, such as reading and learning speed linked to reading comprehension (Radović & Vuković, 2024), study habits (Iheakanwa et al., 2021), world knowledge (Merga, 2016), and learning motivation (Bakkaloğlu & Pilten, 2023). For this reason, it is essential that parents, teachers, and educational policymakers make a greater effort to increase the number of books middle school students read and to cultivate habitual, sustained reading practices that support vocabulary growth. Within this scope, teachers should work in cooperation with families to identify and provide appropriate books, guide and motivate students, and closely monitor reading activities. In addition, in order to eliminate the lack of access to appropriate books—especially for students with limited resources—there must be a national policy of ensuring a library in every school. Locally-driven book donation campaigns should be supported with increased

nationwide visibility, and the Ministry of National Education should fulfill its responsibility as a book provider by allocating a dedicated annual budget for books to schools. As of 2025, the continued need for education faculty students to establish libraries in various urban, rural, and village schools under the framework of "community service courses" clearly reveals that many public schools still lack basic library infrastructure. Consequently, students from low-income families continue to face barriers in accessing books. Solving this issue—one that could be resolved with effective planning and financial support—requires immediate action from the responsible institutions.

According to the data obtained in this study, 52 students (3.21%) reported reading no books in the past year, 665 students (41.06%) read between 1 and 6 books, 588 students (36.29%) read between 7 and 12 books, and 315 students (19.44%) read 13 or more books. The fact that 1,305 students reported reading fewer than 13 books in a year is quite thought-provoking, as it indicates that 80.56% of all participants fall into this category. According to widely accepted standards in the literature on reading habits, individuals who read at least 21 (ALA, 1978; Şirin & Soylu, 2003) or 24 (Yılmaz, 2000) books per year are classified as high-level readers, those who read between 6–20 (ALA, 1978; Şirin & Soylu, 2003) or 12–24 (Yılmaz, 2000) books are considered moderate-level readers, and those who read fewer than 6 books annually are regarded as low-level readers. However, it is important to note that these classifications were developed without accounting for age groups and during a time when television, computers, and social media were not yet widespread. Therefore, these criteria may no longer fully reflect present-day realities. In particular, the unique circumstances of today's children necessitate the development of updated benchmarks for reading frequency, which would provide a more accurate basis for evaluation in contemporary educational contexts.

Nevertheless, when the aforementioned criteria for assessing reading habits are applied to the participants in this study, it is observed that 19.44% of the students demonstrate a high-level reading habit, 36.29% fall within the moderate level, 41.06% have a low-level reading habit, and 3.21% have no reading habit at all. Based on these findings, it can be inferred that at least 44.27% of middle school students are in need of support to develop regular reading habits. In a study (MoNE, 2007b) conducted by the Turkish Ministry of National Department of Research, Development and Projects in 2007, it was reported that 33.53% of primary and middle school students either owned fewer than 10 books or could not specify a number. Another study conducted in 2015 (Deniz, 2015) found that 46.9% of middle school students read fewer than 10 books per year. According to the Ministry's official performance indicators, the average number of books read in 2019 was 24 for primary school students, 9 for middle school students, and 4 for high school students. These findings confirm the urgent need for measures and solution-oriented strategies to improve reading habits, particularly at the primary and middle school levels. Indeed, the data collected over the past 15 years suggest that when a reading habit is not cultivated in the early years of schooling, it tends to decline progressively due to factors such as adolescence, increasing exposure to external stimuli, shifting interests, and the pressure of high-stakes exams for secondary and higher education. Consequently, unless this issue is addressed, it is inevitable that many students will complete 12 years of compulsory education without developing a strong reading habit. Numerous studies also point out that only 15-20% of middle school students qualify as high-level readers (Balcı, 2009; Gönen et al., 2004; Mete, 2012), highlighting the necessity for immediate interventions. Moreover, considering the positive correlation between vocabulary learning strategies, vocabulary size, and reading comprehension (Akaydın, 2018; Chun et al., 2012; Rahayuningsih, 2020; Santi et al., 2021; Yıldız, 2013), it becomes evident that reading habits influence not only academic performance but also the process of word acquisition and vocabulary development. Regular reading increases the frequency with which individuals encounter new words, facilitating comprehension, contextual usage, and long-term retention. Additionally, reading practices enhance the ability to effectively apply vocabulary learning strategies, thereby supporting the development of personalized word-learning methods. In this regard, encouraging strong reading habits from an early age should be

considered a critical priority for expanding students' vocabularies and enhancing their linguistic competence.

The findings of this study reveal that parents' educational level has a significant impact on middle school students' use of vocabulary learning strategies. Specifically, as the education level of the mother and/or father increases, students' use of these strategies also increases significantly; conversely, students whose parents have lower levels of education tend to use these strategies less frequently. This suggests that, as in many other academic areas, more educated parents tend to support and guide their children more actively in developing their vocabulary, and that children from such families are generally more diligent and attentive in vocabulary learning compared to those from less-educated households. Numerous previous studies have also shown a positive correlation between parental education levels and students' academic achievement, particularly in native language courses (Bölükbaş, 2010; Gelbal, 2008; MoNE, 2007a), as well as in other subject areas (Anıl, 2009; Aslanargun et al., 2016; Elmacıoğlu, 1998; İpek, 2011; Metin, 2013; Pala, 2008; Şirin, 2005; Vural, 2004; Yıldırım, 2006). These differences in achievement are often attributed to the willingness of educated parents—especially at the primary and secondary levels—to engage in their children's schoolwork, support their reading habits, assist in problem-solving, and foster an overall positive educational environment. A study by Davis-Kean (2005) emphasized that the educational attainment of parents significantly influences children's academic success, mainly through their expectations and the learning environments they create at home. Similarly, Iwaniec (2018) found that parents' educational background influences students' motivation in language learning, with those from more educated families exhibiting higher levels of motivation. These findings from the literature indirectly underscore the critical role of family support in the development of students' vocabulary and their use of learning strategies. Given that parents with higher educational backgrounds tend to provide greater cognitive and emotional support to their children (Hart & Risley, 1995; Sénéchal & LeFevre, 2002), it can be argued that this support helps students become more aware of and more effective in applying vocabulary learning strategies. Moreover, studies have shown that parents' attitudes toward academic achievement significantly shape their children's attitudes toward learning (Dotterer & Wehrspann, 2016; Fan & Chen, 2001; Porumbu & Necşoi, 2013). Therefore, it should be considered that children of less-educated parents may receive less support during the vocabulary learning process. In this context, language education policies and teacher training programs should be structured to encourage families to take a more informed and active role in supporting their children's vocabulary development (Wasik & Hindman, 2011). Particularly, support programs tailored for parents with lower educational backgrounds could enhance students' ability to manage their vocabulary learning more effectively. Implementing literacy development programs for parents may not only improve children's vocabulary learning skills but also contribute to their overall academic achievement.

The study further revealed that the location of the schools attended by middle school students had a statistically significant effect on the frequency with which they employed vocabulary learning strategies. This effect followed a positive trajectory from rural to urban areas. Specifically, students attending schools situated in city centers were found to use vocabulary learning strategies more frequently and at a higher level during their vocabulary acquisition processes. In contrast, students enrolled in village schools utilized these strategies to a noticeably lesser extent compared to their urban peers. Over the long term, this disparity may contribute to differences in vocabulary breadth between children educated in urban areas – where access to educational and developmental resources is greater – and those studying in rural areas, where such resources are more limited. Consistent with previous research on education and academic achievement (Arifoğlu, 2019; Çiftçi & Çağlar, 2014; Dinçer & Uysal, 2009; Öksüzler & Sürekçi, 2010; Suna et al., 2021), the current study also found that factors such as parental education level, school location, access to technology, and the closely related variable of family socioeconomic status exert both positive and negative influences on students' use of vocabulary learning strategies. In particular, for children continuing their education in rural areas, it is considered essential that the schools themselves provide free access to opportunities that are otherwise inaccessible or

difficult to obtain in their immediate environments—such as extracurricular activities, academic support programs, supplementary learning materials, technological tools, and internet access.

Recommendations

Based on the findings and discussions presented in this study, the suggestions previously outlined can be distilled into the following action-oriented recommendations for relevant stakeholders:

- To increase the currently moderate use of vocabulary learning strategies, middle school students should receive awareness-raising instruction, be guided appropriately, and be taught various techniques and methods for independent vocabulary acquisition.
- Given that vocabulary development practices are still largely textbook-dependent, students who are unable to utilize independent vocabulary learning strategies effectively—especially those who show low levels of engagement with learning-oriented strategies—should be informed and encouraged to use such strategies more actively.
- Rather than directing students toward multiple-choice test practices motivated by exam performance concerns, vocabulary enrichment and reinforcement activities should emphasize tasks that foster the development of core language skills.
- The technological infrastructure of schools should be improved to support the use of vocabulary learning strategies through increased availability of digital tools and internet access. To that end, a standard technology room/center should be established in every school; individual students should be granted free access to educational technologies and internet connectivity; investments should be made to enhance technology access in rural schools; and all such provisions should be adopted as state policy and implemented unconditionally.
- The Turkish language curriculum and textbooks should be revised to support the implementation of vocabulary learning strategies, with a particular focus on fostering high-level reading habits as a complementary factor. In this context, teachers should collaborate with families on book selection and procurement, student encouragement, and the monitoring of reading activities at home. A nationwide "one library per school" policy should be adopted, level-appropriate books should be made widely available, campaigns supporting schools in need of books should gain increased visibility, and the Ministry of National Education should fulfill its responsibility as a book provider by allocating a dedicated annual budget to schools for this purpose.
- If vocabulary learning through reading is restricted solely to textbook texts, students' personal
 word banks will remain insufficient, and a shared standard of essential vocabulary among
 students cannot be established. To ensure that middle school students across the country
 develop their personal lexicons to an equitable standard, nationally curated and levelappropriate reading books should be identified and distributed to all students free of charge.
- Considering the observed effects of parental education level, school location, access to
 technology, and the related variable of family socioeconomic status on both general academic
 achievement and, specifically in this study, on vocabulary learning strategy use, it is imperative
 that children living in rural areas be provided with free access to extracurricular activities,
 academic support programs, supplementary learning materials, technological tools, and
 internet services through their schools, in order to mitigate existing disparities.

In addition to the recommendations outlined above, the following suggestions can be made for future research based on the findings of this study:

- As the first study to identify the vocabulary learning strategies used by middle school students
 in the context of mother tongue education, this research may be replicated using the current
 classification and scale or with new measurement tools developed for alternative vocabulary
 learning taxonomies, thereby contributing further to the relevant body of literature.
- Future studies may explore whether there is a relationship between middle school students' use of individual vocabulary learning strategies and their proficiency in core language skills as well as their long-term achievement in Turkish language courses.
- A new study may be conducted utilizing qualitative data collection tools to examine in greater depth the vocabulary learning strategies employed by students.
- Innovative research efforts can be directed toward developing new vocabulary acquisition methods to support students in using vocabulary learning strategies more effectively.
- Applied studies may be conducted to examine the relationships between students' vocabulary depth, breadth, and weight, and both their use of vocabulary learning strategies and their reading habits.

Limitations

This study, which is considered significant as the first empirical research in the literature to collect data on vocabulary learning strategies employed by middle school students during their native language education process, has several limitations. Due to the quantitative nature of the measurement tool used in the study, the influence of the data collected from the sample on the findings could not be examined through a qualitative instrument that would directly elicit students' responses. Instead, the findings were interpreted and discussed in light of existing literature and the author's academic expertise. Another limitation stems from the absence of previous pioneering or comparable studies investigating the vocabulary learning strategies employed by middle school students in their native language context. This gap in the literature limited the opportunity for direct comparisons of the findings from various perspectives. To address this limitation, secondary results from existing studies conducted with middle school students within the broader context of vocabulary instruction and learning were taken into account, and the relevant comparisons and discussions were built accordingly.

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