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Uncovering language learning strategies of digital native EFL students in a Turkish EFL context

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Highlights

- The study highlights gender differences in the utilization of affective strategies among digital native language learners in the Turkish EFL context.
- Proficiency levels significantly impact the use of compensatory strategies, emphasizing the necessity of tailored language learning approaches based on students' language proficiency.
- The positive correlation between digital strategies and various language learning strategies underscores the importance of integrating technology effectively into English language instruction for improved learning outcomes.

Article Info: Research Article

Keywords: Digital natives, language learning strategies, English language teaching, EFL students

Abstract

The pervasive influence of technology crosses borders, reshaping personal, professional, and social realms globally, with education notably transformed in schools and communities. This study aims to uncover language learning strategies among digital natives in the Turkish EFL context through a quantitative research design. The study revealed that gender differences arose in the utilisation of affective strategies, with females exhibiting significantly higher scores. Conversely, the use of metacognitive strategies was observed to be a consistently preferred approach among both genders. Proficiency levels affected compensatory strategy use, highlighting the impact of educational context. Digital strategies reflected a strong tendency towards gratification and rewards, with gender differences evident in multitasking. Using technology correlated positively with memory, cognitive, metacognitive, and social strategies. Multitasking correlated significantly with cognitive strategies, while graphic communication and gratification and rewards showed various relationships with memory, compensatory, affective, and social strategies. The findings suggest implications for English teachers, policymakers, and authorities. The policymakers should take students' needs and characteristics into consideration in forming technology-related educational policies. Besides, teachers should provide their students with new experiences utilizing digital tools to learn English. Accordingly, activities should be arranged appropriately based on such student characteristics rather than sticking to the conventional teaching methodologies. It is therefore recommended that EFL teachers receive professional training in order to enable them to cater effectively to digital native learners.

1. Introduction

The extensive impact of technology has crossed geographical boundaries, connecting individuals across nations through various digital devices. Moreover, technology has deeply permeated the personal, professional, and social aspects of our lives. Notably, education has been significantly influenced by technology, permeating schools, workplaces, and communities globally. Consequently, teachers cannot overlook its impact on education (Rideout et al., 2010; Sadiku et al., 2022).

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This prevalence of technology has led to the emergence of a new generation called digital children. The development of these children's brains has dramatically changed as they were born and grew up in the era of globalization surrounded by smartphones, digital devices, social media, and the Internet (Kristy et al., 2022; Sadiku et al., 2022). In a similar vein, Prensky (2001) asserted that the brains of digital natives evolved to function in the digital environment due to their early exposure to technological devices. Thus, this generation, characterized by distinct, robust technological profiles (Koumachi, 2019; Lee, 2012; Liu et al., 2019; Sundqvist & Sylvén, 2014; Yáñez & Coyle, 2011) stepped into schools with their technology-immersed life, displaying a unique set of skills, preferences, and attitudes toward language learning and distinguishing them from earlier generations (Doğusoy & İmer, 2019; Sadiku et al., 2022; Thompson, 2013).

The distinctive and contemporary learning styles of today's learners pose challenges to language teachers due to their traditional teaching styles (Blau et al., 2016; Çimen & Hangül, 2021; Sarkar et al., 2017). Therefore, language teachers should strive to comprehend the characteristics of their learners called digital natives and modify their teaching style to fit their students' unique learning strategies (Kim & Bae, 2020; Teo, 2013). In addition, language teachers should initiate to enrich their language classes through digital resources to engage digital native language learners.

Considering the related literature, numerous previous studies have looked into the relationship between language learning strategies and various factors, such as age (Chen, 2014; Eraslan & Höl,2014; Ghavamnia et al., 2011, Kurt & Atay, 2006; Sepasdar & Soori, 2014), cultural background (Akay & Akbarov, 2015; El-Dib, 2004; Lengkanawati, 2004; Oxford & Ehrman, 1995), learning styles (Baltaoğlu & Güven, 2019; Oxford & Ehrman, 1995; Silitonga et al., 2020; Tabanlioğlu, 2003), proficiency (Alfian, 2016; Ali & Paramasivam, 2016; Bećirović et al., 2021; Ghavamnia et al., 2011; Green & Oxford, 1995; Lai, 2009; Liu, 2004; Mutar, 2018; Oxford & Nyikos, 1989; Radwan, 2011;Wu, 2008; Yaacob et al., 2019), vocabulary size (Gorevanova, 2000; Rabadi, 2019; Rahimi & Allahyari, 2019; Waldvogel, 2013)), year of education (Castillo & Córdova, 2013; Oxford & Nyikos, 1989), and/or gender (Ada, 2011; Ariyani at al., 2018; Lestari & Azizi, 2021; Montero-Saiz Aja, 2021). However, the research on language learning strategies (LLS) of net generation, a generation characterized by their digital nativeness, has not been as largely conducted as the variables mentioned above (Maqbool et al., 2020). Thus, the present study is expected to fill an important gap in the existing literature due to the inadequate number of studies on LLS of net generation in spite of the growing prevalence of technology in language education.

2. Literature

2.1. Digital Natives

Generations, growing up in a digital and media-immersed world, are called various names such as "net generation" (Oblinger & James, 2005), "Homo zappiens" (Veen, 2007), "iGeneration" (Rosen, 2010), and "iGen" (Twenge, 2017). Yet, the most famous and prevalently used term "digital natives" was introduced by Prensky (2001b). The term encompasses the younger student generation, ranging from kindergarten to college, who are regarded as proficient native speakers in the digital language of computers, videos, video games, and social media. Growing up surrounded by electronic devices and information technology made these technological gadgets and other high-tech devices an indispensable part of their lives. Thus, their culture is marked by connectivity and online presence (Sadiku et al., 2017).

Building upon the notion of "digital natives", Prensky (2001a) coined the term to comprise the ones born after 1980. Prensky asserted that the incorporation of a technology-rich environment brought about "hypothesized changes in the brain structure which meant young people think and process information in fundamentally different ways compared to older generations" (as cited in Helsper & Eynon, 2009, p.1). These individuals show unique characteristics; namely, they are capable of multitasking, are satisfied with random access to information, perform parallel processing with ease, are inclined to think visually, prioritize graphics, master collaborative network environments, favor entertaining games rather than arduous work, and have quick reactions (Franco, 2013).

Considering their familiarity with their instant information access, digital natives perceive conventional teaching approaches as outdated and impractical. Their multitasking skills are remarkable; they can easily handle multiple tasks such as emailing, social media updates, online chat, and homework simultaneously. In this regard, existing language education needs to undergo substantial changes to meet the needs of this technologically savvy generation. Language teachers should allocate their time for learning and application, as well as access to technology. The conventional body of knowledge is no longer sufficient for comprehending the modern world, and schools and libraries are not the only places where digital natives can learn. They must use digital resources like multimedia texts, social media platforms, blog sites, wikis or chat rooms (Blake, 2016), video conferencing, AI-powered technologies such as artificial intelligence chatbots, Text-based generative AI, automated speech recognition tools automated evaluation and corrective feedback and editing tools for effective learning (OECD, 2024). Consequently, language teachers must arrange their teaching approaches to accommodate the unique learning preferences of this generation.

2.2. Language Learning Strategies

Rubin (1987) asserted that language learning strategies encompass all techniques that help a learner create a framework for language learning that can either directly or indirectly affect their learning. In addition, Oxford (1990) defines language learning strategy as an action undertaken by the learner to simplify, clarify, accelerate, entertain, and facilitate the learning process. These strategies can be useful and adaptable in various learning contexts. Oxford then developed his well-known Strategy Inventory for Language Learning (SILL), which is still employed and considered a valid instrument worldwide, to investigate the various learning techniques employed by different learners.

SILL is divided into two main categories: direct and indirect strategies with six subcategories. Direct language learning strategies are classified into three subcategories: memory strategies, which contain methods for transferring information to long-term memory and retrieving it later on, including mental associations and repetition; cognitive strategies, which include mental processes such as modelling, editing, and generating messages, such as practicing, speculating, and analyzing; and compensation strategies, which aids learners in overcoming communication barriers by using body language, logical guesswork, and the native language. These techniques essentially improve recall, cognitive function, and flexibility in difficult communication situations. Indirect language learning strategies include affective strategies, which help emotional control and motivation through activities such as reducing anxiety or keeping a language learning journal; metacognitive strategies, which involve organizing, planning, and self-evaluation of the learning process; and social strategies, which promote interaction through collaboration with native speakers of the target language, asking questions, and seeking corrections. When combined, these methods give students the ability to effectively control their emotions, cultivate positive moods, and improve their interpersonal communication abilities while learning a language.

2.3. Previous Studies on Language Learning Strategies

There have been numerous studies conducted on the language learning strategies of English as a foreign language (EFL) learners in different contexts. For instance, research by Alnujaidi (2019) was conducted to examine 155 college-level EFL students' use of LLS through Oxford's SILL (1990) in Saudi Arabia. The findings of the study revealed that participants employed metacognitive, social, and cognitive strategies more frequently in comparison with affective and memory strategies. The study also highlighted that participants were more successful in acquiring new knowledge if they had a chance to identify their needs, arrange their assignments, recognize their mistakes, and evaluate their progress. Similar results were reported by Daflizar et al. (2022) in their research on LLS of 76 Indonesian EFL students. Their research revealed that memory, cognitive, compensation, affective, and social strategies were used moderately, with a high use of metacognitive strategies. Furthermore, the research indicated that participants, who had compulsory language education, employed cognitive and compensation strategies more than their counterparts who did not have compulsory language education. Another study by Dawadi (2017) aimed to uncover the LLS use of 370 undergraduate EFL learners in Nepal. The study showed that metacognitive strategies were most frequently used by the participants. In addition, the study revealed that compensation and cognitive strategies were employed following metacognitive strategies while affective strategies were

used to a lesser extent by the participants. Moreover, Nhem (2019) uncovered the LLS use of 152 Cambodian students. The research disclosed that participants most commonly employed cognitive, metacognitive, and social strategies. Besides, the study revealed a statistically significant difference between young and adolescent participants in their use of learning strategies, with the exception of cognitive and compensation strategies, which were more frequently utilized by young learners. In addition, a study conducted by Mutar (2018) explored LLS levels of 210 sixth-grade preparatory students in Baghdad, Iraq. The findings indicated a moderate level of LLS use. The study also revealed that participants employed cognitive and memory strategies more frequently than compensation strategies.

Some studies have also examined demographic influences on strategy use. For example, Ariyani et al. (2018) investigated the relationship between LLS of students at a local language school and their gender in Indonesia through the Language Learning Strategy Questionnaire (LLSQ) adapted from Setiyadi (2001; 2004). The study uncovered that female participants had a greater tendency to apply metacognitive strategies while their male counterparts were more inclined to use cognitive strategies. Similarly, the research of Ahsanah (2020) is centered on the investigation of the use of language learning strategies (LLS) among English foreign language learners using the Strategy Inventory for Language Learning (SILL) and to understand how various factors, such as age, and gender, influence the preferences for LLS among learners. The results revealed that while there was no statistically significant difference in LLS preferences between male and female students, there was a statistically significant difference in LLS use between younger and older students. Furthermore, the results showed that younger students tended to use LLS more frequently compared to their older counterparts.

As for the Turkish context, Razı (2012) carried out a study with 189 ELT students at Çanakkale Onsekiz Mart University, and the results also revealed an active use of LLS. In addition, students predominantly employed compensation and metacognitive strategies, while affective and social strategies were less preferred. Furthermore, Çetin (2019) focused on the usage of language learning strategies among 208 preparatory students at Selçuk University by categorizing these strategies to shed light on the potential problems regarding their language learning strategy use through the Strategy Inventory for Language Learning (SILL) (Oxford, 1990). The results revealed that participants predominantly utilized metacognitive strategies while employing affective strategies less frequently. Similarly, Ramadan (2021) investigated the most and least frequently used language learning strategies employed by EFL (English as a Foreign Language) learners during their high school English language learning process through a questionnaire based on Oxford's SILL (1990). The participants included 48 students at Manara International School in Istanbul. The results revealed that the majority of students utilized language learning strategies with medium frequency. Metacognitive strategies were found to be the most frequently used ones, followed by cognitive, social, memory, compensation, and affective strategies in descending order, which indicated that EFL learners in this study tended to rely more on metacognitive and cognitive strategies in their English language learning while the use of affective and compensation strategies was relatively less frequent. Furthermore, in his MA thesis, Kaymaz (2023) looked into the language learning strategies (LLS) utilized by preparatory school students from the departments of English Language and Literature (ELL), Business Administration (BA), and International Relations (IR) at a state university, while considering such factors as department, gender, and English grades using SILL adapted into Turkish by Cesur and Fer (2007). The results revealed that ELL students were moderate users of LLS, with a preference for social strategies. In contrast, BA and IR students also used LLS to a medium extent, with a higher preference for compensatory strategies. Another study by Canbay (2020) examined the correlation between self-regulation and the use of language learning strategies. The participants included 264 secondary school students from a private school. Data were collected through the Strategy Inventory for Language Learning by Oxford (1990), the Self-Regulation Skills Scale developed by Arslan (2011), and a Personal Information Form created by the researcher. The study revealed that despite their young age and limited prior learning experiences, the participants showed a moderate level of language learning strategies (LLS). Moreover, the study uncovered a significant relationship between self-regulation and the use of language learning strategies. In addition, the study highlighted the influence of age, income level, and maternal education on the development of self-regulation in children. On the other hand, in recent years, there has been an

increasing interest in understanding the impact of digital nativeness on LLS. In this regard, research by Maqbool et al. (2019) in Islamabad focused on the investigation of the language learning strategies employed by Generation Z (Gen Z) students, considered digital natives through Oxford's SILL and a scale adapted from Teo's DNAS (2013). The findings revealed that Gen Z students exhibited a strong preference for utilizing digital strategies in their language learning processes as they were particularly inclined to employ multitasking, technology usage, graphic communication, and the pursuit of gratifications and rewards as effective strategies. The study showed that both genders within the Gen Z showed similar levels of engagement with digital strategies for language learning.

Considering the related literature, the research on LLS of net generation, a generation characterized by digital nativeness, has not been as thoroughly scrutinized as the variables mentioned above (Maqbool et al., 2020; Xie et al., 2022). Thus, the present study is expected to fill an important gap in the existing field due to the inadequate number of research studies on LLS of net generation despite the growing prevalence of technology in language education. To this end, the present study provides valuable insights that contribute to filling the gap and expanding our understanding of how digital natives approach language learning in a digitally driven era. Thus, the current paper aims to answer the following research questions:

1. What language learning strategies do EFL digital natives in the Turkish context utilize when learning English?
2. How do gender and proficiency levels influence the language learning strategies employed by digital natives in the Turkish EFL context?
3. What is the relationship between language learning strategies and digital language strategies among Turkish EFL learners?

3. Methodology

3.1. Research Design

A quantitative research design was adopted to investigate and analyze the phenomena systematically. The main aim is to collect numerical data, utilizing structured instruments such as questionnaires and scales to explore patterns and relationships. This research method allows for rigorous and objective examination and generalization from the selected sample, which is considered representative of a larger population (Creswell, 2011).

3.2. Participants

The participation in the research was on a voluntary basis. The participants were recruited via convenience sampling since they were available for the study and within easy reach (Mackey & Gass, 2005). They included 100 EFL learners in preparatory classes at the School of Foreign Languages at Burdur Mehmet Akif Ersoy University. The participants were classified into two groups by the institution according to the proficiency exam conducted at the beginning of the term. 50 participants studying in voluntary preparatory classes had A1/A2 levels while 50 participants studying compulsory preparatory classes had B1/B2 levels. As shown in Figure 1, the majority of the participants were female (f=65): there were 32 females and 18 males in compulsory preparatory classes while there were 33 females and 17 males in voluntary preparatory classes.

As illustrated in Table 1, the age of the participants was mostly around 18 (f=45) and 19 (f= 42). In compulsory preparatory classes, there were participants whose age was above 20 (f=3) while there was only one participant whose age was above 20 in voluntary preparatory class.

Table 1.

Distribution of age of the participants

	Age					
	18	**19**	**20**	**21**	**23**	**27**
Compulsory Prep Class	24	20	4	1	1	1
Voluntary Prep Class	21	22	6	1	0	0
Total	45	42	10	2	1	1

3.3. Data Collection Tools

Two data collection tools were used: Oxford's SILL (1990) and a scale adapted from Teo's Digital Natives Assessment Scale (DNAS) (2013) by Maqbool et al. (2020). The first tool, Oxford's SILL consists of 50 items categorized into six distinct groups: (a) memory strategies (9 items), (b) cognitive strategies (14 items), (c) compensation strategies (6 items), (d) metacognitive strategies (9 items), (e) affective strategies (6 items), and (f) social strategies (6 items). Employing a five-point Likert scale ranging from "never or almost never" to "always or almost always," the SILL assesses the frequency of language learning strategies used by respondents. The instrument has demonstrated high reliability, with Cronbach's alpha ranging from 0.67 to 0.95 in previous studies, reinforcing its credibility and effectiveness in gauging language learning strategies (Dreyer & Oxford, 1999; Hong-Nam & Leavell, 2006; Alnujaidi, 2019). Besides, according to Oxford R. (1990)'s Strategy Inventory for Language Learning, strategy use levels fall into the following categories: "low level of strategy use" was defined as "1.0 – 2.4," "moderate level of strategy use" as "2.5 – 3.5," and "high level of strategy use" as "3.5 – 5."

The second data collection tool is a scale adapted from Teo's DNAS (2013) by Maqbool et al. (2020). It has a Cronbach's alpha of 0.85, indicating a high degree of reliability. This scale encompasses four sub-factors: Grow up with technology, Comfortable with multitasking, Reliant on graphics for communication, and Thrive on instant gratifications and rewards.

3.4. Data Analysis

Cross-tabulation analysis was performed to determine the statistics of gender and age by class of students. Reliability analysis was run to determine the extent to which the items in each subscale were related to each other. Descriptive analysis was conducted to find out the means of each subscale. A t-test was done to understand whether the means of subscales show any difference between genders and between classes of students. All the data analysis was conducted via SPSS 22.

As seen in Table 2, the alpha score was calculated for all the subcategories separately and in total. The alpha score of SILL was .92 in total and the memory strategies had the lowest alpha score (α=.69) while the metacognitive strategies had the highest alpha score (α=.87). Besides, the alpha score of the digital nativeness scale adapted by Maqbool et al. (2020) was .79 in total. The Gratification & Rewards had the lowest alpha level in comparison with the other subcategories in the scale (α=.68) while the multitasking had the highest alpha score (α=.82).

Table 2.

Reliability results for subcategories and a total of the scales

Subcategories	Alpha Score
Memory strategies	0.69
Cognitive strategies	0.81
Compensatory strategies	0.70
Metacognitive strategies	0.87
Affective strategies	0.71
Social strategies	0.70
Total	0.92
Using technology	0.71
Multitasking	0.82
Graphic communication	0.72
Gratification & Rewards	0.68
Total	0.79

4. Findings and Discussion

4.1. What language learning strategies do EFL digital natives in the Turkish context utilize when learning English?

As can be seen in Table 3, participants demonstrated moderate ($\overline{x}$=3.19) use of strategies in SLL, in total. This finding aligns with that of previous studies by Lee (2023), Nguyen et al. (2012), Nguyen and Jang (2016), Ngo (2019), and Tang and Tian (2015), who also revealed that learners moderately utilized LLS. It is evident that the highest strategy use among participants was metacognitive strategies ($\overline{x}$=3.41), followed by social strategies ($\overline{x}$=3.40), compensation strategies ($\overline{x}$=3.33), cognitive strategies ($\overline{x}$=3.26) and memory strategies ($\overline{x}$=3.13). The lowest strategy used by the participants was the affective strategy ($\overline{x}$=2.88). This result is consistent with the previous studies by Arslan (2011), Dahmash (2023), Erslan and Höl (2014), Gunastri et al. (2020), Fiftinova (2020), Kaymaz (2023), Kunasaraphan (2015), Nguyen (2007); Nguyen et al. (2012), Meliasari (2019), Tabeti (2017), Tanjung (2018) and Vo and Duong (2020). However, this finding contrasts with that of previous research by Duong Tran and Tran (2019), Maqbool et al. (2020) and Ngo (2015). For example, Duong et al. (2019) discovered that cognitive and affective strategies were the most frequently employed while metacognitive and social strategies, along with compensation and memory strategies, were utilized at moderate and low levels, respectively.

Although there were no significant differences among Turkish EFL learners in the use of metacognitive, cognitive, social, and memory strategies, there was a significant difference in the use of affective strategies. This finding is supported by previous studies by Arslan (2011), Duong and Nguyen (2021), Erslan and Höl (2014), Gunastri et al. (2020), Kaymaz (2023), Meliasari (2019) and Tanjung (2018). On the other hand, Maqbool et al. (2020) found that participants seldom employed the metacognitive strategy.

The frequent use of metacognitive strategies empowers language learners to take control of their learning processes, reinforcing their classroom experiences through essential activities such as planning, organizing, focusing, and evaluating (Arslan et al., 2012; Oxford, 1990). This awareness fosters positive attitudes toward learning, helping learners set clear objectives, develop structured study plans, self-assess their progress, and actively seek opportunities to practice the target language, ultimately promoting lifelong learning (Duong, 2015).

Table 3.

Distribution of learning strategy use of participants

Categories of Learning Strategies	N	Mean	Strategy Use Level
Direct Strategy			
Memory		3.13	moderate
Cognitive		3.26	moderate
Compensation		3.33	moderate
Indirect Strategy			
Metacognitive		3.66	high
Affective	100	2.88	moderate
Social		3.40	moderate
Digital Strategy			
Using Technology		5.16	high
Multitasking		2.98	moderate
Graphic Communication		4.13	high
Gratification & Rewards		6.48	high

On the other hand, as shown in Table 3, the participants showed a high use of digital strategy in the digital native strategy scale adopted by Maqbool et al. (2020)). Besides, the participants employed gratification and rewards ($\overline{x}$= 6.48) the most, followed by using technology ($\overline{x}$=5.16), and graphic communication ($\overline{x}$= 4.13) as well as multitasking ($\overline{x}$=2.98). Similarly, Xie et al., (2023) found that the participants had the highest score in the strategy of gratification and rewards demonstrating that the participants were willing to get instant feedback and gratification in utilizing technology. The participants displayed a high preference for gratification and rewards ($\overline{x}$=6.48), reflecting their inclination towards immediate feedback. This preference aligns with the high use of metacognitive strategies ($\overline{x}$=3.66), as these learners actively self-regulate by setting goals, tracking progress, and adjusting as needed. On the other hand, moderate multitasking ($\overline{x}$=2.98) aligns with cognitive strategies ($\overline{x}$=3.26), indicating a focused, rather than fragmented, approach to learning. This relationship suggests that while digital natives value immediate, technology-enhanced interactions, their strongest gains come from structured, focused tasks that minimize cognitive overload, reinforcing deep, strategic engagement. However, the participants obtained the lowest score in the strategy of multitasking, which addresses the boundaries imposed by human abilities (Kirschner & De Bruyckere, 2017; Kirschner & van Merriënboer, 2013).

4.2. How do gender and proficiency levels influence the language learning strategies employed by digital natives in the Turkish EFL context?

As presented in Table 4, there were statistical differences between females and males in terms of the use of affective learning strategy ($p < .05$). However, the use of other language strategies did not differ statistically significantly ($p > .05$) although female participants had slightly higher scores in these language learning strategies. Besides, the most frequently utilized language learning strategy by female participants was the metacognitive strategy ($\overline{x}$=3,76), followed by social strategy ($\overline{x}$=3.44), whereas the least frequently used language learning strategy was the affective strategy ($\overline{x}$=3.02). For the male participants, the most frequently preferred language learning strategy was the metacognitive strategy($\overline{x}$=3.48), similar to that of their female counterparts, and the least frequently employed language learning strategy ($\overline{x}$= 2.60) was affective strategy. This finding is consistent with that of previous studies Alnujaidi (2019), Çetin (2019), Daflizar et al. (2022) Dwadai (2017), García Herrero & Jiménez Vivas (2014); Nhem (2019), Razı (2012), and Xu (2011). For instance, Dawadi (2017) found that metacognitive strategies were the most frequently used by female participants. In addition, the study revealed that compensation and cognitive strategies were employed following metacognitive strategies while affective strategies were used the least by the female participants in comparison with the other language learning strategies. Similar findings were reported by Alhaysony (2017), Hong-Nam and Leavell (2007), Lai (2009) and Ying- Lee (2023).

The findings of the study indicated that participants were cognizant of their language-learning process and attempted to manage it. Besides, significant differences in the utilization of affective learning strategies by gender emphasize the importance of addressing learners' emotional and motivational dimensions, affecting their whole language learning processes.

Table 4.

Distribution of participants' learning strategies by their gender

Categories of Learning Strategies	Female (n=65)	Male (n=35)	t-value	Sig. (2-tailed)
Direct Strategy				
Memory strategies	3.21	2.99	1.871	.064
Cognitive strategies	3.24	3.30	-0.501	.618
Compensatory strategies	3.30	3.38	-0.607	.546
Indirect Strategy				
Metacognitive strategies	3.76	3.48	1.826	.071
Affective strategies	3.02	2.60	2.897	**.005**
Social strategies	3.44	3.32	0.765	.446
Digital Strategy				
Using technology	5.08	5.31	-0.989	.325
Multitasking	3.13	2.70	3.018	**.003**
Graphic communication	4.30	3.83	1.839	.069
Gratification & Rewards	6.51	6.42	1.197	.234

Regarding digital strategy use by the participants, the most frequently used strategy by female ($\overline{x}$=6.51) and male participants($\overline{x}$=6.42) was gratification and rewards. Other most frequently used digital learnings strategies were using technology and graphic communication by female participants ($\overline{x}$=4.30). However, in using technology, male participants had slightly higher scores than their female counterparts but there was not a statistically significant difference (p> .05). Moreover, the utilization of multitasking of female participants significantly differs from that of the male participants (p<.05). Similarly, in their study, Xie et al. (2022) disclosed that the participants obtained the highest score in the gratification and rewards (p< .05) and the multitasking was the least employed strategy by the participants. However, in their study, Maqbool et al. (2020) uncovered that there was a significant difference between the strategy of using technology, multitasking, and graphic communication (p<.05) in terms of gender. That is, male participants achieved higher scores in these digital strategies compared to their female counterparts.

The findings of the current study indicated that the widespread preference of language learners for gratification and rewards as a learning strategy should be integrated into the design of engaging learning activities. Moreover, gender-based differences in digital strategy use, especially in multitasking, should be carefully considered to ensure that both male and female students have equal opportunities to master diverse digital learning strategies.

Table 5.

Distribution of participants' learning strategies by their proficiency level

Categories of Learning Strategies	Compulsory Prep Class (n=50)	Voluntary Prep Class (n=50)	t-value	Sig. (2-tailed)
Direct Strategy				
Memory strategies	3.15	3.12	0.271	.787
Cognitive strategies	3.37	3.15	1.934	.056
Compensatory strategies	3.47	3.18	2.378	**.019**
Indirect Strategy				
Metacognitive strategies	3.77	3.56	1.142	.152
Affective strategies	2.90	2.85	0.351	.0727
Social strategies	3.21	3.28	1.625	.107
Digital Strategy				
Using technology	5.37	4.95	1.940	.055
Multitasking	2.96	2.99	-0.208	.835
Graphic communication	4.29	3.97	1.304	.195
Gratification & Rewards	6.50	6.46	0.480	.633

As for the proficiency levels of the participants, there was no difference in the use of language learning strategies except for the compensatory strategy. In other words, the use of the compensatory language learning strategy significantly differs in terms of the proficiency levels of the participants (p<.05). In line

with this finding of the present study, Taheri and Davoudi (2016) determined that there was an important relationship between the frequency of compensation strategy use and learners' proficiency level in a foreign language. Considering the other language learning strategies, the participants from compulsory preparatory classes had slightly higher scores in the use of direct strategy compared to their peers from voluntary preparatory classes. On the other hand, participants from voluntary preparatory classes had slightly higher scores in the use of social strategies although there was no meaningful difference in their use of the strategy ($p>.05$). Similarly, a previous research by Al-bayati (2021) uncovered that language proficiency had a significant role in the use of direct strategies by learners.

As for the participants' digital language learning strategies, the scores of participants from compulsory classes were higher than those of participants from the voluntary preparatory except for one subcategory: multitasking. In the use of the multitasking strategy, the participants from voluntary preparatory classes had slightly higher scores than their counterparts from compulsory preparatory classes. Similarly, Kim and Bae (2020) found that advanced language learners utilized digital language learning strategies more frequently in comparison with their peers with lower language proficiency.

It could be concluded that a generation, brought up in a technology age and valuing instant gratifications and rewards, can be more inclined to utilize technology in English language learning. Similarly, Hauck (cited in Hauck & Hurd, 2005) asserts that "online language learning makes learners aware of themselves, their attitudes, aptitudes and beliefs and of the affordances of the learning environment and the degree to which they demonstrate flexibility and control" (p. 4).

4.3. What is the relationship between language learning strategies and digital language strategies among Turkish EFL learners?

As shown in Table 6, the Pearson correlation analysis showed significant correlations of digital learning strategies with different language learning strategies. Using technology showed positive and significant correlations between the language strategies of memory, cognitive, metacognitive, and social language learning strategies ($p < 0.001$), which reveals that participants employing digital tools may have more tendency to adapt their learning strategies of memory, cognitive, metacognitive and social language learning strategies.

On the other hand, there were no meaningful correlations between using technology with the compensation and affective language learning strategies ($p>0.001$). This finding indicates that the use of technology might not strongly influence the adoption of compensatory and affective strategies in language learning ($p>0.001$).

Besides, a strong and highly significant correlation was determined between multitasking as a digital learning strategy and cognitive language learning strategies ($p < 0.001$). This implies that participants engaged in multitasking while utilizing technology also tend to employ cognitive strategies more prominently in their language learning process. Moreover, there were significant correlations of graphic communication with memory, compensation, and affective language learning strategies ($p < 0.001$). The findings of the study indicated that participants, utilizing graphic communication demonstrated improved memory techniques, suggesting that it has a beneficial influence on information retention. Moreover, the association with compensation language learning strategy implies that graphic communication is a useful instrument for overcoming language acquisition impediments. Furthermore, the connection to affective methods highlighted its beneficial impact on the participants' emotional involvement in the language acquisition process. Besides, the correlation of graphic communication with these language learning strategies emphasizes various benefits of the use of graphic communication in language learning such as improved memory, compensatory processes, and pleasant emotional experience. In addition, gratification and rewards showed positive correlations with cognitive, meta-cognitive, effective, and social language learning strategies ($p < 0.001$). This suggests that participants who incorporate gratification and rewards in their digital learning experiences are more likely to adopt a range of language learning strategies across cognitive, meta-cognitive, effective, and social domains.

It could be concluded that the correlation analysis results stress that digital learning strategies and language learning strategies are interconnected. The positive correlations suggest that the incorporation of technology

is not only related to specific language learning dimensions, but also extends to cognitive, meta-cognitive, effective, and social language learning strategies, highlighting the multifaceted impact of digital tools on language acquisition methodologies.

Table 6.

Results of correlation analysis

Digital Learning Strategies		Language Learning Strategies					
		Memory	**Cognitive**	**Compensation**	**Meta-cognitive**	**Affective**	**Social**
Using Technology	Pearson Correlation	.394	.482	.141	.559	.148	.336
	Sig. (2-tailed)	**.000**	**.000**	.162	**.000**	.141	**.001**
Multitasking	Pearson Correlation	.883	.511	.168	.582	.537	.435
	Sig. (2-tailed)	**.000**	**.000**	.095	**.000**	**.000**	**.000**
Graphic Communication	Pearson Correlation	.288	.190	.243	.142	.351	.189
	Sig. (2-tailed)	**.004**	.058	**.015**	.160	**.000**	.059
Gratification & Rewards	Pearson Correlation	.401	.266	.188	.380	.299	.408
	Sig. (2-tailed)	**.000**	**.008**	.061	**.000**	**.003**	**.000**

5. Conclusion and Suggestions

The present study aims to uncover the language learning strategies of digital natives in the Turkish EFL context. The study's findings demonstrated that gender differences were statistically significant in effective strategy use, with females achieving higher scores than males. Metacognitive strategies were consistently favored by both genders. Proficiency levels affected compensatory strategy use, highlighting the impact of educational context. Digital strategies showed a strong tendency toward gratification and rewards, with notable gender differences observed in multitasking. Correlation analyses exhibited the interconnected nature of digital and language learning strategies. Using technology correlated positively with memory, cognitive, metacognitive, and social strategies. Multitasking correlated significantly with cognitive strategies, while graphic communication and gratification and rewards showed various relationships with memory, compensatory, affective, and social strategies. These findings underscore the importance of recognizing the dynamic interplay between language and digital strategies.

Accordingly, the study findings suggest several implications for language learners, policymakers, and authorities. Firstly, the government and decision-makers should carefully take digital learners' changing' needs and characteristics into consideration in forming technology-related educational policies which remain relevant and effective in the digital age. Besides, technology-enhanced learning tools can significantly enhance language learners' self-regulation skills. For instance, AI technologies offer personalized feedback and adaptive exercises, which empower learners to take control of their learning, set goals, monitor progress, and make necessary adjustments. Integrating such tools into learning environments can also encourage students to be proactive in setting personal language goals and self-monitoring, skills that align well with digital-native preferences for personalization and immediate feedback. Although the current study provides insights into the use of digital and language learning strategies of digital natives in language learning, it has some limitations. Considering the population of digital language learners in the Turkish EFL context, the sample of the present study was comparatively small and limited to one specific university, so the findings cannot be generalized to the entire population or other contexts. Thus, it could be suggested that educational settings in other universities should be included for future researchers to make comparisons, or future studies can investigate the use of language learning strategies of digital native EFL students in the Turkish EFL context. Additionally, two data collection tools, namely SILL by Oxford (1990) and a scale adapted by Maqbool et al. (2020) from Teo's DNAS (2013) were utilized in this current study. Future researchers are suggested to triangulate data via class observations, and a semi-structured interview. Finally, it is suggested that in-depth research should be conducted to explore the impact of technology-enhanced tools, such as AI enhanced tools, on the LLS of digital natives.

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