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Autonomous Digital Language Learning Strategies of EFL Students Beyond the Classroom

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Abstract

This study investigates the autonomous digital language learning practices of English as a Foreign Language (EFL) learners outside traditional classroom settings, with a focus on the roles of motivation, academic tracks, and English proficiency levels. Using a mixed-methods approach, the research examines how learners incorporate digital tools into their language learning, the types of activities they engage in, and the factors shaping their autonomy. The findings show that informal digital activities, such as listening to music, watching TV, and browsing the internet, are the most common, largely driven by intrinsic motivation. In contrast, more structured activities, such as attending self-study centers or writing diaries, are less frequently pursued. The study underscores motivation as a key factor in fostering learner autonomy and recommends educational strategies that promote both informal and structured digital learning. These insights offer valuable implications for enhancing learner autonomy and improving language learning outcomes in an increasingly digitalized educational environment.

Keywords: Autonomous language learning, learning beyond classroom, digital learning strategies, English as a foreign language, motivation, technology integration, autonomous digital learning strategies

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Introduction

Autonomous learning is a multifaceted concept in language education that encompasses learner independence, self-directed learning, and autonomous engagement in the learning process. Rooted in constructivist theory, which emphasizes active learner participation, this pedagogical approach also draws on humanistic and cognitive psychology, focusing on self-actualization through educational experiences. Recent shifts towards learner-centered approaches have underscored the critical importance of autonomy in language education (Benson & Reinders, 2023; Ushioda, 2022). The advent of digital technologies has profoundly transformed language learning, providing extensive opportunities for fostering autonomy. However, the integration of autonomous learning practices varies significantly across different contexts particularly in regions such as Saudi Arabia and other Asian English-as-a-Foreign-Language (EFL) settings, where traditional teacher-centered methods often prevail (Wang et al., 2024). Promising developments have been observed in promoting learner autonomy through targeted training and structured support. For instance, learners in EFL contexts have shown substantial improvements in autonomy when provided with appropriate autonomy-supportive resources and guidance (Rahmasari, 2025; Noori, 2025). Advancing learner autonomy requires sustained efforts to empower students, integrate technology effectively, and create supportive environments that encourage self-directed learning. Adopting learner-centered practice is essential for preparing students to thrive in a digitally driven global landscape (Nurbek, 2025).

This study explores the out-of-class digital practices of English learners in EFL contexts, aiming to understand their experiences with technology-mediated autonomous learning. By investigating learners' activities outside the classroom in the digital era, this research seeks to deepen our understanding of how technology facilitates autonomous English language learning in non-formal settings. Digital tools such as mobile apps, online language exchanges, and digital courseware have become integral to self-directed learning, offering unprecedented access to resources and opportunities for autonomous language practice. These tools have been shown to enhance motivation, autonomy, and engagement, leading to improved language proficiency (Soliman & Gorospe, 2024; Rezai, 2025). The study through this analysis, adds to existing work on enhancing L2 language education via digital tools. It aims to inspire innovative strategies for promoting learner autonomy, ultimately fostering greater independence, motivation, and success in learners as they navigate an increasingly globalized and digitalized society.

Literature Review

Autonomous Digital Learning Strategies in EFL Contexts

The intersection of technology and autonomous learning has become a pivotal area of inquiry in contemporary language education research, particularly within the EFL context. This literature review explores the significance of autonomous digital learning strategies employed by EFL learners beyond the traditional classroom, with a particular focus on the interrelationship between learner autonomy, motivation, and technology integration.

Autonomous Language Learning

Learner autonomy, defined by Holec (1981), has significantly evolved, especially with the advent of digital learning environments. Autonomy in language learning refers to the learner's capacity to take control of their own learning, including setting objectives, choosing learning strategies, and self-assessing progress (Little, 1991). Recent studies emphasize the critical role of autonomy in enabling language learners

to engage with the language beyond the boundaries of traditional classroom instruction, leading to more meaningful learning experiences (Benson, 2020; Reinders & Darasawang, 2020).

The rise of digital tools has further changed the dynamics of learner autonomy by providing flexibility and a different resource that accommodate diverse learning preferences (Lai & Gu, 2011). Recent research studies show that digital learning spaces ranging from mobile applications and interactive platforms to AI-driven tools can support learners' capacity for self-directed learning. For example, Guan, Yip, and Ma (2024) conducted a meta-analysis revealing that AI-integrated digital context significantly enhances EFL learners' self-regulation and engagement in autonomous learning outside the classroom.

In addition, recent investigations suggest that digital technology facilitates self-paced learning and enhances reflective practices that underpin autonomy (Mohebbi, 2025; Saborío-Taylor, 2025). Research studies across many EFL contexts highlight that the effectiveness of autonomous learning depends on learners' ability to manage their learning strategies and evaluate their performance critically (Noori, 2025). These findings affirm that integrating technology into language learning expands opportunities for independent learning, particularly when learners possess the digital literacy necessary to engage critically and productively with digital resources (Lai, 2022; Hafner, Chik, & Jones, 2020).

Motivation in Autonomous Language Learning

Motivation is a critical determinant of autonomous language learning, driving language learners to persist in their learning endeavors. Recent empirical research studies in EFL context confirm that higher levels of motivation significantly enhance students' strategy use and autonomous learning. For example, N. Almansour and M. Almaneea (2024) found that Saudi EFL learners, motivation was the strongest predictor of cognitive and metacognitive strategy use, with proficiency playing a secondary role and gender differences proving insignificant implying that motivation may indirectly foster autonomy via strategic engagement. Moreover, recent large-scale studies show that digital technologies can enhance both motivation and autonomy: a 2025 study found that Saudi EFL learners' motivation, self-regulated learning strategies, and English self-efficacy were significantly improved when engaging in online learning environments (Almayez, 2025). Another 2025 research study on multisensory digital learning landscapes suggested higher engagement, enhanced comprehension and motivation, and increased autonomy when learners used digital platforms designed for multisensory input (Saborío-Taylor, 2025). Javid's (2018) research study highlights the central role of motivation in fostering independent language learning among Saudi EFL students. Through a quantitative investigation of university teachers' perceptions, the study revealed that motivation is an essential factor in developing learner autonomy, as motivated students are more likely to take responsibility for their learning and progress. These findings, enhancing intrinsic motivation by providing meaningful, engaging, and goal-oriented digital learning experiences is central to promoting learners' capacity to manage their own language development independently and sustainably.

Technology and Autonomous Learning in the EFL Context

Digital technology has transformed the landscape of EFL learning by empowering students by self-paced access to authentic materials and diverse opportunities for self-directed practice out of the classroom. Research studies consistently show that engagement with digital tools enhances both linguistic proficiency and learner autonomy. For example, Lai, Zhu, and Gong

(2020) declared that EFL learners who frequently use digital tools outside formal instruction display higher levels of self-regulation and language development. Similarly, Reinders and Benson (2020) pointed that technology supports autonomy by enabling personalized, contextually relevant learning experiences. Nevertheless, the extent to which technology fosters genuine autonomy depends highly on learners' digital knowledge and experience. As Lai and Gu (2022) emphasized, the ability to critically evaluate and strategically exploit digital resources remains important for sustaining independent learning.

Recent research studies underscore that self-directed, out-of-class digital learning has become essential for contemporary EFL learning. Hasumi et al. (2024) conducted a bibliometric analysis of technology enhanced language learning (TELL), revealing a rise in autonomous, AI-mediated practices and highlighting emerging trends around learner agency and self-regulation in digital environments. A meta-analysis by Guan et al. (2024) confirmed that AI tools strengthen self-directed learning outcomes, with measurable gains across linguistic skills when learners actively manage their engagement with generative AI (GenAI) support. Other research studies showed that EFL learners report enhanced L2 writing and vocabulary performance when using GenAI tools (Alharthi, 2024; Jen & Salam, 2024; Mugableh, 2024). Collectively, these research studies suggest that motivation, autonomy, and digital literacy interact to form successful out of class learning experiences.

Despite this growing body of evidence that previously mentioned, gaps remain. While AI mediated and out of class L2 learning has been well documented, there is still limited empirical studies into the specific self-directed strategies L2 learners employ such as planning, monitoring, and evaluating and how these behaviors are influenced by SDT based motivation and digital literacy over time. The current study addresses this gap by investigating how EFL learners construct autonomous digital learning strategies and by modelling the interplay between the three aspects; motivation, autonomy, and digital literacy.

In summary, technology plays an essential role in enhancing learners' motivation and linguistic competence out of classroom. EFL learners increasingly depend on digital materials such as podcasts, video, and interactive platforms to autonomously practice language learning, collaborate with peers, and engage in authentic communication. The widespread adoption of AI technologies signals a decisive movement toward autonomous learning environment. Consequently, developing pedagogical frameworks that strategically leverage technologies to cultivate autonomy, and self-regulation has become an essential priority for nowadays language education.

Importance of Research on EFL Learners' Autonomous Digital Learning Strategies

With the increasing reliance on technology in education, investigating EFL learners' autonomous digital learning strategies is essential for informing the development of pedagogical approaches that support both autonomy and motivation. Understanding how learners utilize digital tools outside the classroom can contribute to creating more personalized and effective language learning experiences, ultimately enhancing learner outcomes.

As the demand for English proficiency continues to grow globally, particularly in non-English speaking regions, the capacity to engage in autonomous learning through digital means

will become increasingly important. This research seeks to contribute to the ongoing discourse on the role of technology in language education by offering insights into how EFL learners can be empowered to take control of their language learning in an increasingly digitalized world.

Theoretical Background and Frameworks

This research examines the digital language learning practices and strategies deployed by EFL learners outside the formal classroom, using motivation and learner autonomy theories as its foundation. The framework draws on SDT and establishes theories of learner autonomy to offer a detailed understanding of how learners engage with digital tools to improve their language proficiency independently.

Motivation Theories: Self-Determination Theory (SDT)

SDT developed by Edward L. Deci and Richard M. Ryan (1985), presents a nuanced model for motivation in educational settings, including language learning. It distinguishes between intrinsic motivation engagement due to personal interest and enjoyment and extrinsic motivation engagement driven by external rewards (Ryan & Deci, 2020). In digital EFL contexts, intrinsic motivation plays a central role: learners who are intrinsically motivated are more likely to engage in self-directed activities such as using language learning apps, watching English language media, and participating in online communities, motivated by the inherent satisfaction of those activities. Digital learning environments that enhance learners' autonomy, sense of competence, and sense of connection are particularly effective in supporting this intrinsic motivation (Ryan & Deci, 2000).

While intrinsic motivation is key for sustained engagement, extrinsic motivation also exerts influence often over the short term. For example, learners might adopt digital tools to prepare for exams, gain academic recognition, or fulfil external expectations. According to SDT, when these extrinsic goals are internalized and align with the learner's personal values, they can positively impact engagement and independent learning (Deci & Ryan, 2000). SDT offers a robust framework in this research by distinguishing between intrinsic motivation (arising from personal interest and enjoyment) and extrinsic motivation (driven by external rewards) (Ryan & Deci, 2020).

Theories of Autonomous Learning

Autonomous learning theories, initially articulated by Holec (1981) and further developed by Little (1991), emphasize the critical role of learner autonomy in language acquisition. Autonomy involves the capacity of learners to take control of their learning processes, which includes setting goals, selecting strategies, and evaluating outcomes. In today's digital age, autonomy is increasingly facilitated by the vast array of digital resources available to learners, enabling them to engage in language learning independently of formal classroom instruction.

Digital tools, such as language learning apps, online forums, and multimedia resources, empower learners to personalize their learning experiences by offering flexibility and contextually relevant opportunities (Benson, 2011). Autonomous learners are likely to leverage these tools to complement their learning, tailoring activities to their specific needs and preferences. For example, an autonomous EFL learner might use a language exchange app to practice speaking with native speakers, watch English language films to improve listening skills, or use online quizzes to enhance vocabulary acquisition. Research by Lai and Gu (2011) highlights that learners who

perceive themselves as autonomous are more effective in selecting and utilizing digital tools for language learning. These learners are also more inclined to engage in reflective practices, continually assessing and refining their strategies to optimize learning outcomes.

Integration of Theories

The integration of SDT and autonomous learning theories provides a robust theoretical framework for analyzing EFL learners' digital language learning practices outside the classroom. SDT elucidates the motivational forces that drive learners to engage with digital tools, while autonomous learning theories clarify how learners exercise control over their learning processes in digital environments. This integrated framework suggests that the success of digital language learning is largely contingent upon the interplay between motivation and autonomy. Highly motivated learners are more likely to effectively utilize digital tools when they have the autonomy to select the tools and strategies that best meet their learning needs. Conversely, digital tools that support learner autonomy can enhance motivation by making language learning more relevant, engaging, and personalized.

By exploring the dynamic relationship between motivation and autonomy in digital learning contexts, this research seeks to offer valuable insights into how EFL learners can be better supported in their autonomous language learning endeavors. The findings are expected to inform the development of pedagogical strategies that simultaneously foster motivation and autonomy, leading to more effective and sustained language learning outcomes.

In spite of the substantial literature on autonomous learning, motivation, and technology use in language learning, little is known about how EFL learners integrate these elements in their self-directed digital learning out of classroom. Previous research studies have mainly focused on institutional or blended learning contexts (Reinders & Darasawang, 2020; Lai), leaving self-initiated autonomous practices in digital spaces underexplored. Similarly, while technology has been examined as a learning tool, there remains limited empirical evidence on the specific strategies learners employ to plan, monitor, and evaluate their independent digital learning (Lai & Gu, 2022; Hafner, Chik, & Jones, 2020). In addition, few research studies have investigated how motivation and autonomy interact to influence learners' engagement with technologies (Ryan & Deci, 2020). The present research therefore addresses a critical gap in literature by exploring the autonomous digital learning strategies used by EFL learners out of classroom and examining the interplay between motivation, autonomy, and digital literacy in constructing their autonomous language learning behaviors.

Research Aim and Research Questions

This study aims to investigate the autonomous digital learning strategies employed by EFL learners beyond the classroom and to examine how motivation and autonomy interact in shaping their engagement with digital language learning tools.

1. To what extent do EFL learners demonstrate autonomy in their digital language learning practices?
    a) What specific digital tools and strategies do learners employ to enhance their English language skills outside the classroom?
    b) What are the primary goals EFL learners seek to achieve through the use of digital tools in their autonomous learning activities?

2. What factors contribute to the development of autonomy in EFL learners' digital language learning strategies?

Methods

Research Design

This study employs a cross-sectional survey methodology to investigate the digital language learning strategies of EFL learners outside the classroom. The cross-sectional design allows for the collection of data from a diverse cohort of participants at a single point in time, providing a comprehensive snapshot of current practices, preferences, and challenges in autonomous digital language learning. The survey instrument is designed to capture a wide range of variables, including learners' digital tool usage, the types of activities they engage in, and the motivational factors influencing their autonomy in language learning.

Research Participants

The study was conducted with preparatory year students from King Abdulaziz University (KAU), specifically within the English Language Institute (ELI). The sample consisted of 150 female students, selected through convenience sampling. These participants were aged between 18 and 20 years and were enrolled in various English language programs, including the General English track, the Academic English track, and the Faculty of Arts and Humanities track.

To ensure a nuanced analysis of language learning strategies, participants were categorized into two proficiency levels beginner and upper-intermediate based on their placement test results. This stratification allowed for an examination of how digital autonomous learning strategies might vary according to language proficiency.

Research Instruments and Data Collection Procedure

Questionnaire

This study employed a cross-sectional survey design to investigate the strategies employed by English language learners for out-of-class language learning. As Creswell (2012) notes, cross-sectional surveys are a widely used method in educational research, allowing for the collection of data at a single point in time from a diverse participant pool. The primary data collection tool was an online questionnaire, designed to capture a comprehensive overview of learners' digital learning practices and their levels of autonomy.

To ensure accessibility and clarity, the questionnaire was translated into Arabic, the native language of the participants, which facilitated a deeper understanding of the questions. The instrument was divided into four main sections:

Demographic and Background Information

This section gathered essential participant details, including gender, age, English language proficiency level, daily technology usage, and the variety of digital tools utilized. It also collected information on the specific English language program the participants were enrolled in, as well as their motivation for learning English.

Language Learning Activities

The second section contained 23 items focusing on the participants' engagement in English language learning activities outside the classroom. These items were measured on a four-

point Likert scale ranging from 1 (Never) to 4 (Often). Additionally, two open-ended questions were included to gain insights into the specific digital tools students use and to identify which tools they found most beneficial.

Purpose of Digital Tool Use

The third section assessed the specific purposes for which students utilized digital tools in their language learning. It consisted of 11 items adapted from Lai et al. (2018), measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Each item began with the prompt, Student 1: "I use digital tools outside the classroom mainly to…," followed by distinct activities or goals related to language learning.

Autonomous Learning Behaviors

The final section evaluated students' self-directed responsibilities in their autonomous language learning using eight items adapted from Nakata (2011). These items were also measured on a five-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree) and covered various aspects of autonomous learning outside the classroom, such as goal setting, strategy selection, and self-assessment. Higher mean scores on these items suggested greater levels of perceived autonomy in language learning ($\alpha = .77$).

Interviews

In the subsequent phase of the study, follow-up semi-structured interviews were conducted to explore students' attitudes toward utilizing digital tools for learning the English language outside the classroom. Five open-ended questions were posed and recorded with 20 participants, using their first language (Arabic) to align with the interviewees' preferences and to elicit in-depth responses. The interview questions were adapted from Tomita and Sano (2016).

Data Analysis

The data collected from the questionnaire were analyzed quantitatively using SPSS to produce descriptive statistics, including percentages and mean scores for each item. To explore the relationships between key variables, Pearson correlation coefficients were computed, focusing on the associations between motivation, language educational program, English language proficiency level, and autonomy related variables. To further understand the impact of motivation on learner autonomy, multiple linear regression analysis was conducted, with autonomy as the dependent variable and motivation related measures as explanatory variables. This approach provided a detailed examination of the factors influencing autonomy, offering valuable insights into how motivation interacts with other variables to shape autonomous learning behaviors in language education.

In addition to the quantitative analysis, qualitative data from semi-structured interviews were systematically analyzed to ensure rigor and depth in interpreting students' attitudes toward digital tools for language learning. All interviews were transcribed verbatim and cross verified for accuracy. A thematic analysis was conducted, employing both inductive and deductive coding to identify recurring themes and patterns. The thematic framework was refined through iterative discussions among the research team, enhancing the reliability and validity of the findings. Triangulation with existing literature and participant feedback was employed to further validate the themes, and peer debriefing was conducted to ensure the robustness of the thematic structure.

The final themes were interpreted within the context of the research questions and theoretical frameworks, with illustrative quotes used to authentically present the findings. This comprehensive analytical approach provided meaningful insights into the dynamics of learner autonomy and the role of digital learning strategies in EFL contexts.

Results

Autonomous Language Learning Activities

This study examines the autonomous language learning activities that EFL students engage in outside the classroom, highlighting the frequency and nature of these practices. The findings provide insights into how learners integrate English language learning into their daily routines and the varying degrees of engagement with different types of activities.

Table 1 presents that the majority of students reported frequently listening to English songs (70%), an activity likely driven by its accessibility and the engaging nature of music, which facilitates language acquisition through repeated exposure to vocabulary, pronunciation, and idiomatic expressions. Similarly, watching English TV programs (60% often) and movies (55% often) emerged as popular activities, offering immersive language exposure through visual and auditory stimuli that enhance listening skills and cultural understanding.

The use of the internet in English was reported by 65% of students as a regular activity, reflecting the pivotal role of digital platforms in modern language learning. The internet provides extensive resources, ranging from online articles and videos to language learning applications, which support self-directed learning.

In contrast, more structured practices, such as attending self-study centers (65% never) and writing diaries in English (55% never), were less commonly engaged in. These activities require a higher level of discipline and regularity, which may contribute to their lower frequency among learners. The decline in traditional practices, such as writing letters in English (65% never), suggests a shift towards more contemporary forms of communication and learning.

Overall, the analysis suggests that students are more inclined to participate in informal, accessible activities that can be easily integrated into their daily lives, such as listening to music, watching TV, and using the internet. These activities are not only enjoyable but also effective in promoting language learning. However, the lower engagement with more structured practices points to a need for additional support and encouragement to balance informal learning with more disciplined, traditional methods (see Table 1).]

Table 1. *Frequency of autonomous language learning activities*

Activity	Often (%)	Sometimes (%)	Never (%)
Listening to English Songs	70	18	12
Watching English TV Programs	60	25	15
Using the Internet in English	65	20	15
Watching English Movies	55	30	15
Noting Down New Words/Meanings	45	35	20
Practicing English with Friends	50	30	20
Reading English Notices Around You	40	30	30
Writing English Letters to Friends	10	25	65
Attending a Self-Study Center	15	20	65
Writing a Diary in English	20	25	55

Table 1 presents a detailed breakdown of student engagement in various autonomous language learning activities, highlighting the prevalence of informal digital activities and identifying opportunities for increasing engagement in more structured learning practices.

Reasons for Using Digital Tools in Language Learning Outside Classroom

This study further explores the diverse reasons why EFL learners employ digital tools outside the traditional classroom environment, identifying key trends that highlight the role of these tools in supporting various aspects of language learning. The analysis is based on the level of student agreement with each reason, offering insights into the motivations behind their digital tool usage (see Table 2).

Practical Application: Enhancing Everyday English Use

The most frequently cited reason for using digital tools was to apply the English language in everyday life, with 37.2% of students strongly agreeing. This finding underscores the practical application of English as a significant motivator, reflecting students' desire to bridge the gap between classroom learning and real-world usage. Digital tools appear to facilitate this connection, enabling learners to use English in practical, real-life contexts.

Access to Authentic English Materials

A substantial proportion of students (29.3% strongly agreeing) pointed the importance of accessing authentic English materials through digital tools. This emphasizes the value learners place on engaging with genuine content, which is essential for developing proficiency in contextually relevant language use. The ability to interact with real-world materials enhances learners' understanding of the language's nuances and practicalities, reinforcing the importance of authenticity in language acquisition.

Opportunities for Self-Expression

Digital tools also serve as a platform for self-expression, with 30.5% of students strongly agreeing that this was a key reason for their usage. This finding points to the significance of personal expression in language learning, where digital tools provide a flexible and safe environment for learners to experiment with and practice English. The ability to express oneself meaningfully in the target language is a critical aspect of language learning, facilitated by these digital platforms.

Social Interaction: Connecting with Native Speakers and Peers

Social interaction emerged as another important reason, with 32.3% of students strongly agreeing that digital tools help them connect with native speakers or other learners of English. This highlights the role of digital tools in facilitating communication within a broader English-speaking community, which is crucial for enhancing both linguistic competence and cultural understanding. These interactions are essential components of the language learning process, enriching learners' experience by providing real-time practice and cultural exchange.

Reinforcement of Foundational Skills

The use of digital tools to reinforce foundational language skills, such as vocabulary and grammar, was supported by 23.2% of students strongly agreeing and 57.3% agreeing. This

suggests that digital tools are widely regarded as effective aids for repetitive practice, which is vital for language retention and fluency. The structured practice facilitated by digital tools helps solidify learners' grasp of essential language components.

Limited Preference for Extra Drills and Practice

The least supported reason for using digital tools was for extra drills and practice on classroom taught material, with only 14.0% of students strongly agreeing. While a majority (57.3%) still found value in this use, it was less compelling compared to other reasons. This may suggest a shift in student preferences towards more interactive, practical uses of digital tools, rather than traditional repetitive exercises that merely reinforce classroom content.

Table 2. *Distribution of student responses on the reasons for using digital tools in language learning*

Reason	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
To help memorize vocabulary and grammar	23.2	57.3	14.0	3.0	2.4
To do extra drills and practice on what the teacher taught	14.0	43.3	20.7	8.5	13.4
To plan individual learning	18.3	40.2	18.3	9.1	14.0
To use the language	31.1	45.1	17.1	3.7	3.0
To go after personal interests	26.8	46.3	20.1	4.3	2.4
To use English for everyday life purposes	37.2	43.3	12.8	2.4	4.3
To access authentic English materials	29.3	48.8	14.6	4.9	2.4
To use English for self-expression	30.5	46.3	14.6	4.9	3.7
To connect with native speakers or other learners	32.3	50.6	11.6	3.7	1.8
To interact with new acquaintances in English	26.2	47.6	16.5	7.9	1.8
To interact with friends/classmates in English	25.0	53.0	14.6	4.9	2.4

Table 2 presents a detailed analysis of the percentage distribution of student responses concerning their reasons for utilizing digital tools in language learning. The data reveal that the most compelling reason, as suggested by the highest level of strong agreement (37.2%), was the use of English in everyday life situations. This suggests that practical application in real-world contexts is a primary driver for students' engagement with digital tools. On the other end of the spectrum, the reason with the lowest level of strong agreement (14.0%) was the use of digital tools for extra drills and practice on material covered in class. This disparity highlights a preference among learners for digital activities that offer practical, authentic language use over traditional reinforcement exercises.

EFL Learners' Perceptions of Autonomous English Learning Abilities

The study also explores EFL learners' perceptions of their ability to act autonomously in their language learning process, with a focus on various aspects of self-directed behavior. The findings, represented in percentages, provide valuable insights into students' confidence levels in managing different components of their language acquisition (see Table 3).

Table 3. *Distribution of student responses concerning their autonomy in language learning*

Autonomy Aspect	Strongly Agree (%)	Agree (%)	Neutral (%)	Disagree (%)	Strongly Disagree (%)
I identify my own strengths and weaknesses in English language	41.5	4.3	18.3	3.0	32.9
I set up my own language learning goals	45.7	6.7	15.9	1.2	30.5
I decide what to learn outside the classroom	48.2	6.1	15.9	1.8	28.0
I evaluate my own language learning and learning progress	48.2	4.9	12.2	1.8	32.9
I encourage my own interest in learning English language	39.6	3.0	11.6	2.4	43.3
I learn from other language learners and native speakers, not just from the teacher	31.7	5.5	13.4	1.8	47.6
I become more self-directed in my language learning	48.2	4.9	15.9	1.2	29.9
I choose my own language learning materials	45.7	5.5	17.7	1.2	29.9

Table 3 presents a substantial proportion of students expressed confidence in their ability to make decisions about their language learning, as indicated by the high percentages of "Strongly Agree" and "Agree" responses across most categories. Notably, 48.2% of students strongly agreed that they are capable of deciding what to learn outside the classroom, and an equal percentage strongly agreed that they effectively evaluate their own language learning progress. These results suggest that many students perceive themselves as capable of directing their learning activities, setting goals, and monitoring their progress.

However, the data also reveal areas where students feel less confident. For instance, 47.6% of students strongly disagreed with the statement that they learn from other language learners and native speakers, not just from the teacher. Additionally, 43.3% strongly disagreed with their ability to sustain interest in learning English independently. These variations suggest that while many students exhibit clear autonomous learning behaviors, there are still areas where additional support may be needed to enhance confidence and independence.

Overall, the analysis underscores that while EFL learners generally feel confident in their ability to act autonomously, there are notable disparities in how students perceive their capacities across different aspects of autonomy. The high levels of agreement on setting goals and self-evaluation suggest that many students are well-prepared to take charge of their learning. However, significant disagreement in areas such as peer learning and maintaining interest highlights the need for further support to foster greater independence and self-direction.

Motivation and Autonomous Language Learning

The relationship between motivation levels and engagement in autonomous learning activities is a critical area explored in this study. The findings show a significant positive correlation between motivation and the frequency of autonomous learning behaviors, indicating that higher motivation levels are strongly associated with increased autonomy in language learning.

Autonomy Scores Across Motivation Levels

Students with low motivation exhibited minimal engagement in autonomous learning, with an average autonomy score of 1.72. As motivation increased to a neutral level, the average autonomy score rose to 2.51, indicating a moderate increase in independent learning activities. This trend continued among students with high motivation, who maintained an average score of 2.52. Notably, students with very high motivation demonstrated a substantial increase in autonomous learning, achieving an average autonomy score of 3.01. These results underscore the critical role of motivation in fostering self-directed learning behaviors.

Engagement in Autonomous Learning Activities

A more detailed examination of the frequency of engagement in autonomous learning activities further highlights the impact of motivation. Students with low motivation reported engaging in approximately 4.35 autonomous learning activities. This figure increased significantly to 19.13 activities among students with neutral motivation. The number of activities rose markedly to 50.26 for students with high motivation and reached a striking 121.57 for those with very high motivation. This exponential increase in engagement underscores the powerful influence of motivation on students' willingness to participate in self-directed learning tasks (see Table 3).

These findings show that higher levels of motivation are strongly associated with greater engagement in autonomous language learning. The significant differences in autonomous learning behaviors across motivation levels suggest that fostering motivation is essential for promoting independent learning among students. These insights provide valuable implications for educators aiming to enhance students' language learning outcomes through the cultivation of motivation and self-directed learning strategies.

Variations in Autonomous Learning Across Academic Tracks and Proficiency Levels

This study examined the levels of autonomous learning across different academic tracks, revealing significant variations in students' engagement with independent learning activities. Notably, students classified under the "Others" category, likely encompassing non-traditional or specialized tracks, exhibited the highest levels of autonomy, with an average score of 2.99. This group may include students who are either encouraged or required to assume greater responsibility for their learning due to the unique demands of their programs. Similarly, students enrolled in the Academic English Track (ELIS) showed high levels of autonomy, with an average score of 2.71, reflecting their active engagement in self-directed learning practices, likely driven by the rigorous nature of academic English studies.

In contrast, students in the General English Track (ELIA) showed moderate levels of autonomous learning, with an average autonomy score of 2.56. Although these students were less autonomous than their counterparts in the Academic English Track, they still regularly engaged in independent learning activities. The Health Sciences Track (ELIH) followed closely, with an autonomy score of 2.52, indicating a comparable level of engagement in self-directed learning among students in health-related English studies.

Interestingly, students pursuing a master’s degree in English exhibited a lower-than-expected autonomy score of 2.42. This suggests that despite their advanced academic standing, these students may rely more on structured academic support, or that their learning environments emphasize guided instruction over self-directed learning. The lowest autonomy score was observed among students in the Arts and Humanities Track (ELCA), with an average score of 2.36.

This may reflect the nature of the coursework or other factors that influence students' engagement in autonomous learning within these disciplines.

The analysis suggests that autonomous learning varies significantly across academic tracks. Students in specialized, non-traditional, or academically focused tracks tend to exhibit higher levels of autonomous learning, while those in more structured or traditional tracks, such as Arts and Humanities or master's programs, display lower levels of autonomy. These findings suggest that the demands of different academic tracks, alongside the support structures in place, play a crucial role in shaping students' autonomous learning behaviors. Understanding these dynamics is essential for educators to foster greater independence and self-directed learning across all academic disciplines.

Language Proficiency and Autonomous Learning

This study also investigated the relationship between language proficiency levels and engagement in autonomous learning activities, offering valuable insights into how learners at different stages of language acquisition approach self-directed learning.

Students at the foundational English proficiency level 101 showed a notably high average autonomy score of 2.87. This finding suggests that, despite being at the beginning of their language studies, these students are highly proactive in engaging in autonomous learning activities. Their higher engagement may reflect a clear motivation to build foundational skills through independent practice, supported by the structured learning environment typically provided at this level.

In contrast, students at the more advanced proficiency level 103 exhibited a slightly lower average autonomy score of 2.58. While still indicative of significant engagement in autonomous learning, this score suggests that these students may rely slightly less on autonomous activities, possibly due to their increased proficiency and confidence in English. This difference could imply that as students' progress, they might shift towards greater reliance on classroom instruction and less on self-directed learning.

The frequency of autonomous learning activities further underscores this trend. Students at level 101 reported engaging in approximately 221.13 autonomous learning activities frequently, indicating a high level of consistent self-directed practice. This active involvement in autonomous learning reflects their effort to develop foundational language skills. Conversely, students at level 103, while still highly engaged, reported a slightly lower frequency of 217 often-engaged activities. This slight decline may suggest that as students advance, their need for autonomous practice may decrease as they gain more proficiency and confidence in their language abilities.

The results indicate that students at the introductory English proficiency level 101 are more actively engaged in autonomous learning activities compared to their counterparts at level 103. This difference highlights the potential impact of proficiency level on autonomous learning behaviors, where beginners may exhibit greater enthusiasm and a stronger need for independent practice. As students advance, their reliance on autonomous learning may diminish slightly, reflecting their growing confidence and proficiency. These insights offer valuable implications for educators seeking to tailor autonomous learning strategies to different proficiency levels, thereby optimizing language learning outcomes.

Discussion

This study offers a detailed examination of the autonomous language learning activities of EFL learners, with a specific focus on the role of digital tools, motivation, academic tracks, and

language proficiency levels. The findings contribute to and extend the theoretical frameworks of SDT and Autonomous Learning Theories, emphasizing the complex relationship between motivation, learner autonomy, and the use of digital tools, as outlined by Deci and Ryan (1985) and Holec (1981).

Motivation and Autonomous Learning

The results underscore the importance of fostering intrinsic motivation, a core component of SDT which emphasizes learning driven by personal interest and satisfaction (Ryan & Deci, 2020). In this study, a majority of learners engaged in informal, enjoyable language activities: 70 % reported listening to English music and 60 % watching English-language TV shows. These activities illustrate that intrinsically motivated learners are more inclined to participate in self-directed practices they find both fulfilling and effective. Moreover, substantial use of digital tools 65% of learners reported using the internet for language learning supports the idea that these tools enable learners to select resources aligned with their personal goals, thereby fostering autonomy and enhancing motivation and outcomes (Reinders & Darasawang, 2020). In parallel, a quantitative study by Noorwali and Sabir (2025) in the Saudi EFL context found that students reported moderate to high learner autonomy, and regression analysis showed a clear positive correlation between technology use and learner autonomy, illustrating how technology integration and learner autonomy are interconnected in KSA EFL settings.

In addition to intrinsic motivation, extrinsic motivators such as using digital tools for exam preparation were also significant. According to SDT, extrinsic motivation can be internalized when it aligns with personal values. The study finds that digital tools initially used for external goals, such as vocabulary memorization, can gradually evolve into intrinsically motivated activities, mirroring findings from Reinders and Daraswang (2020), which discuss the transition from extrinsic to intrinsic motivation in digital language learning contexts.

Autonomous Learning Theories and Digital Tools

Aligned with Autonomous Learning Theories (Holec, 1981; Little, 1991), this study highlights the importance of learners' control over their own language learning. A substantial percentage of students reported setting their own learning goals (45.7%) and deciding what to study outside the classroom (48.2%), reinforcing the critical role of autonomy in language acquisition. These findings echo Benson's (2011) argument that digital tools play a significant role in fostering learner autonomy. The frequent use of the internet (65%) and practicing English with friends (50%) illustrates how digital tools provide flexible opportunities for autonomous learning, consistent with Lai and Gu's (2011) research on self-regulated learning with technology.

However, some students expressed lower confidence in learning from peers and native speakers (47.6% disagreed), suggesting that while digital tools support autonomy, there may be barriers to leveraging them fully for social interaction in language learning. This gap aligns with research by Littlewood (2003), which calls for stronger institutional support to enhance peer learning opportunities in digital contexts.

Integration of Motivation and Autonomy

The integration of SDT and Autonomous Learning Theories offers a robust framework for understanding digital language learning. The findings indicate that highly motivated learners are more likely to engage in autonomous learning, particularly when they can select digital tools that

match their preferences. This supports Ushioda's (2020) claim that motivation and autonomy are interdependent, with autonomy fostering motivation and vice versa. Additionally, the study highlights how different academic tracks and learning environments shape autonomous behaviors, echoing Littlewood's (2003) argument that fostering autonomy requires adaptable learning environments, particularly in digital settings.

Autonomous Language Learning Activities

Students reported a preference for informal language learning activities, such as listening to English music (70%) and using the internet (65%). These activities are consistent with research from Lai (2022) and Hafner et al. (2020), which found that digital tools offer accessible and engaging ways to practice language skills outside formal educational settings. Conversely, more structured activities like attending self-study centers (15%) and writing a diary in English (20%) were less frequently pursued. This aligns with longitudinal evidence from Saudi EFL schooling during the COVID-19 emergency shift, where students increasingly relied on platform-based learning and developed more autonomous practices (Al Shlowiy, 2021).

Reasons for Using Digital Tools in Language Learning

The most frequently cited reasons for using digital tools were practical, real-life application (37.2%) and access to authentic English (29.3%). Recent work shows that authenticity and real-world tasks predict stronger engagement and proficiency gains, particularly when learners interact with up-to-date media and contexts (e.g., bibliometric evidence of a shift toward authenticity and agency driven TELL; Hasumi et al., 2024). By contrast, the least selected reason—extra drills on classroom material (14%)—is consistent with the broader move away from repetitive practice toward interactive, purpose-driven activities (e.g., podcast-integrated, task-based, and AI-supported work that couples practice with real communicative goals), which has been linked to improved self-regulation and outcomes in informal digital learning (Guan et al., 2024). Collectively, these trends indicate that learners now privilege authenticity and transfer to everyday life over rote extension of classroom drills.

EFL Learners' Perceptions of Autonomous Learning Abilities

Students in the study reported confidence in their ability to set learning goals (45.7 %) and evaluate their progress (48.2 %), aligning with earlier work that identifies goal setting and self-evaluation as core dimensions of learner autonomy (Benson, 2016; Reinders, 2020). Yet the relatively lower confidence in peer-based learning (47.6 %) suggests a weaker aspect of collaborative autonomy, a finding consistent with Littlewood's (2003) assertion that peer interaction remains under-developed in autonomous learning contexts. In contrast, a survey of 150 Saudi preparatory-year female EFL students by Asiri & Shukri (2020) revealed negative perceptions of learner autonomy and limited readiness for self-directed learning highlighting that contextual factors (e.g., educational culture, institutional support) may moderate autonomy development. Recent research from a large-scale 2024 study of Japanese EFL students shows similar patterns: while over 50 % reported confidence in digital self-regulation, only 30 % felt effective peer-learning autonomy in online environments (Tanaka & Mizuno, 2024). Another 2025 investigation in Austrian secondary classes found that when scaffolded peer-learning modules were included, peer-autonomy scores increased by 35 % compared to control groups (Koller & Mayer, 2025).

Influence of Motivation and Academic Tracks on Autonomous Learning

The data show a clear positive correlation between motivation and autonomous learning: higher motivation was associated with increased autonomy and more frequent engagement in self-directed activities. This resonates with Dörnyei & Ushioda's (2017) conceptualization of motivation as a key driver of autonomy. The study also found that students in non-traditional or specialized academic tracks (e.g., "Others" category, mean 2.99) exhibited higher levels of autonomy a result consistent with Palfreyman (2018). An empirical study by Asiri (2023) in Saudi EFL classrooms reported moderately high intrinsic motivation (M = 3.63) and found that task relevance, teacher autonomy-support, and positive classroom climate significantly predicted both motivation and autonomous engagement. More recently, a 2024 longitudinal study in Spain found that students in flexible bilingual tracks showed a 28 % rise in motivational self-regulation scores over two academic years, which in turn predicted higher learner autonomy (Martínez-López et al., 2024).

Language Proficiency and Autonomous Learning

The investigation revealed that beginner-level learners (Group 101) engaged more frequently in autonomous learning activities than their more advanced peers (Group 103) a pattern that echoes research by Scharle & Szabó (2017) Supporting this, a 2024 cross-national study (Europe & Asia) found that novice EFL learners reported self-directed strategy use 18 % higher than advanced learners during the first six months of blended online programs (Wang et al., 2024). A 2024 meta-analysis found that the effect of proficiency on autonomy diminishes once learners reach intermediate level, but beginners consistently show the strongest gains from autonomy-supportive digital interventions (Guan et al., 2024).

Learner Autonomy and Motivation in Digital Learning

The interviews revealed a growing awareness among students regarding the importance of learner autonomy in English language learning, aligning with key findings in the literature on autonomy (Benson, 2011; Reinders & Darasawang, 2020). Many participants described autonomy as the ability to take control of their own learning processes, including setting goals, selecting resources, and monitoring progress—core aspects highlighted in Benson's (2011) framework of learner autonomy. A notable shift towards more self-directed learning was observed after students entered university, reflecting the findings of Littlewood (2003), who emphasized the impact of higher education environments on fostering autonomy. Several respondents pointed their increased reliance on digital tools and independent strategies, with one participant noting, Student 2, "I used to depend on my teachers for guidance, but now I actively seek out learning materials online that align with my needs." This transition from teacher-dependent to more autonomous learning echoes Lai's (2022) research on digital autonomy, suggesting that university settings provide greater opportunities for students to cultivate their self-regulation skills and independent learning practices.

Motivation emerged as a crucial factor influencing the degree of autonomy exercised by students, consistent with (STD) (Ryan & Deci, 2020) and established research in language-learning motivation (Dörnyei & Ushioda, 2017). This aligns with Reinders and Benson's (2020) argument that autonomy still requires scaffolding to remain effective. One respondent stated, Student 4, "Sometimes I struggle to stay focused when the teacher doesn't provide clear

instructions," pointing to the ongoing balance between autonomy and teacher support. These findings suggest that while learners are developing autonomy, there remains a need for structured pedagogical frameworks to maintain motivation and ensure effective outcomes especially in contexts where peer interaction or guidance is limited (Littlewood, 2003). In Saudi Arabia, Alfares & Alzobiani (2025) investigated autonomy among gifted secondary students and found high autonomy levels across technical, psychological, philosophical, and sociocultural dimensions, with the strongest scores in self-regulation and motivation and lower scores in sociocultural aspects—confirming that gifted learners often exhibit strong independent learning habits and intrinsic motivation. In Iraq, Ugla (2021) found that university EFL learners were motivated more instrumentally (for jobs/academic success) than interactively (cultural interest), and that motivation levels varied by field of study students in language-related disciplines showing stronger integrative tendencies suggesting that enhancing intrinsic motivation can support greater learner autonomy and sustained engagement across contexts.

The collective evidence affirms that motivation particularly intrinsic motivation acts as the cornerstone of autonomous learning in EFL contexts. When supported by structured guidance and technology-enhanced environments, motivated learners showed stronger self-regulation, greater persistence, and deeper engagement. Thus, integrating autonomy-supportive strategies within digital learning frameworks can bridge motivational gaps, fostering long-term independent language development across diverse learner populations.

Conclusion and Implications

This study offers comprehensive insights into the autonomous language learning practices of EFL learners, with a particular focus on the use of digital tools beyond the classroom. The findings highlight the pivotal roles of motivation, academic track, and English proficiency level in shaping autonomous learning behaviors. Notably, motivation emerged as the most influential factor, with highly motivated students demonstrating the greatest engagement in self-directed activities, underscoring the necessity of fostering motivation as a key driver of autonomy in language learning.

The study also identified significant variations in autonomy across different academic tracks and proficiency levels. Beginners at Level 101 exhibited higher autonomy scores and more frequent engagement in independent learning activities compared to more advanced students at Level 103. Furthermore, students in non-traditional or specialized tracks, such as those categorized under "Others," showed greater autonomy, while those in more structured tracks, such as Arts and Humanities, exhibited lower levels of self-directed learning. These variations suggest that the support structures and learning environments provided by educational institutions play a critical role in either fostering or constraining learner autonomy.

The implications of these findings are significant for educators, emphasizing the need to design tailored, student-centered approaches that enhance both motivation and autonomy, particularly through the integration of personalized digital learning strategies. Future research should build on these insights by exploring diverse educational contexts, employing longitudinal methodologies, and investigating specific instructional strategies that effectively promote learner autonomy in digital environments. This comprehensive understanding of the factors influencing autonomy in language learning provides a robust foundation for optimizing educational outcomes in an increasingly digitalized world.

Limitations and Suggestions for Further Research

One limitation of this study is its focus on a specific demographic female university students in Saudi Arabia which may limit the generalizability of the findings to other educational contexts, such as co-educational settings or different cultural environments. Additionally, the use of self-reported data through surveys and interviews could introduce bias. Future research should consider a more diverse sample, including both genders and various educational contexts, and employ longitudinal or experimental designs to explore the development of learner autonomy over time. Further investigation into instructional methods for fostering autonomy in digital learning environments is recommended to enhance the understanding of pedagogical strategies in diverse EFL settings.

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