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Learner Autonomy and Interlanguage Pragmatic Learning Strategies (IPLS) Use: A Gender-based Analysis in the Saudi EFL Context

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Abstract

This study sought to scrutinize the interplay between interlanguage pragmatic learning strategies (IPLS) usage and learner autonomy among male and female English as a Foreign Language (EFL) learners. It also examines whether gender plays a significant role in the adoption and efficacy of these strategies in the EFL learning context. The study sample consisted of 156 upper-intermediate Saudi EFL learners, comprising an equal distribution of 78 males and 78 females. Data were collected via a proficiency test, learner autonomy survey, and IPLS inventory. The results revealed significant gender-based differences in both learner autonomy scores and the application of IPLS. Female learners displayed more strategic approaches to pragmatic learning and greater autonomy compared to male learners. Additionally, a moderately positive correlation between IPLS use and learner autonomy was found for female learners, whereas a strong positive association was observed for male learners, suggesting the critical role of strategy training in fostering learner autonomy. This study provides significant pedagogical implications and substantial insights into the interplay between learner autonomy and IPLS across genders in EFL learning environments.

Keywords: *Learner Autonomy, Language Learning Strategies, Interlanguage Pragmatic Learning Strategies, Interlanguage Pragmatics*

Introduction

Language learning strategies and learner autonomy are two concepts that have garnered significant scholarly attention in the past few decades. The growing emphasis on learner-centered approaches to language learning underscores the recognition of learners' vital role in their language learning and the effective strategies they deploy to master a second language. When learners have autonomy, they can critically evaluate different strategies and select those most suitable to their individual goals, learning styles and contexts. This allows for

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personalized, customized approaches to language development (Teng & Wen, 2024). The rapid evolution of recent technologies and the demand for 21st-century skills have added layers of complexity and opportunity to these concepts (Ayesha, 2024). Learner autonomy is ascribed to learners' ability to take control of their own learning (Benson, 2013). This concept entails learners taking charge of their learning processes, setting objectives, and making informed decisions regarding their learning activities and strategies (Orakcı & Gelişli, 2024; Chong & Reinders, 2022). According to Orakcı and Gelişli (2024), learner autonomy is crucial in both distance education and lifelong learning contexts, where individuals need to navigate their learning journeys independently. Learner autonomy promotes active involvement in the learning process, both within and outside the classroom context, spanning across language learning skills as well as other domains and subsystems (Pratiwi & Waluyo, 2023). Learner autonomy is widely acknowledged as a key positive factor in language learning research, playing a crucial role in shaping learners' strategies and approaches. This importance is evidenced by a multitude of studies conducted across various settings (Ayesha, 2024; Kölemen 2021; Orakcı & Gelişli, 2024).

Language learning strategies (LLS) are conceptualized as real-time methods, approaches, and processes employed by second (L2) or foreign language (FL) learners to obtain, enhance, regulate, and assess target language components (Oxford, 2003; Pawlak, 2021). Oxford (1990) considers these strategies crucial for developing communicative competence. Existing research establishes a direct correlation between the utilization and selection of LLS and various learner factors such as gender, age and learning duration (Chen & Zhang, 2024), language learning experience (VanPattan et al., 2020), motivation (Cohen & Henry, 2019), proficiency (Kölemen, 2021) and personal learning environments (Teng & Wen, 2024). Learners factors and individual variables not only affect L2 proficiency but also extend to both the process of the entire language learning experience and its eventual outcomes (Ellis, 2015), including the autonomy of learners. According to Teng and Wen (2024), personal learning environments can potentially influence and support the development of learner autonomy by providing personalized, customizable tools and resources that enable students to take control over their own learning in a self-directed manner that meet their individual learning needs. Oxford (2016) claimed that language learning strategies can serve as indicators of learner autonomy, as LLS can assist learners in planning, monitoring, and guiding their learning processes. The potential correlation between learners' level of autonomy and the use of LLS is somehow substantiated by existing research (Chen & Pan, 2015; Chong & Reinders, 2022; Chetin & Mede, 2022). Nevertheless, further research is needed to identify the most effective and appropriate learning strategies for specific language skills (Chen & Zhang, 2024). In addition, empirical research exploring the intricate relationship between learner autonomy and LLS particularly in the context of pragmatics, remains strikingly scant (Derakhshan et al., 2023; Pawlak, 2021; Ravari & Rashidi, 2024).

In the context of L2 pragmatic development, research has underscored the inseparability of pragmatic learning and learner variables that contribute to shaping learners' pragmatic knowledge and strategy implementation owing to the dynamic and context-dependent nature of individual factors. Personal variables such as gender, language proficiency, linguistic background, and prior experience are significant, though gender shows less impact. Furthermore, social and psychological aspects, including cultural adaptation, identity,

motivation, and attitudes toward the target language and culture can critically influence learners' pragmatic competence and how they navigate their language learning strategies (For review: see Tajeddin & Khanlarzadeh; 2024). This literature led to the development of a well-established categorization of interlanguage pragmatics learning strategies (IPLS), pioneered by (Cohen, 2005) and based on surveys conducted in the Japanese and Spanish L2 contexts, with a particular focus on speech acts. Cohen (2019) posits that learners utilize a unique set of LLS explicitly operates for the acquisition of pragmalinguistic knowledge, which are termed pragmatic learning strategies (PLS). Cohen's taxonomy of IPLS has undergone subsequent revisions and expansions, incorporating additional strategies (Tajeddin & Malmir, 2015; Malmir & Derakhshan, 2020; Derakhshan et al., 2021). Despite the clear interconnection between pragmatic learning strategies and individual variables, IPLS remain relatively underexplored (Derakhshan et al., 2023; Pawlak, 2021; Ravari & Rashidi, 2024; Sykes and Cohen, 2018). Research strongly advocates incorporating individual differences and learning styles into L2 pragmatic research (Roever et al. 2014; Taguchi 2019). One key individual characteristic that may affect EFL learners' use of IPLS is learner autonomy, which may assist learners to obtain, retain, control, and organize pragmatic knowledge in the target language (Derakhshan et al., 2021).

To this end, the current study explores the interaction between learner autonomy and the use of IPLS. It investigates the specific strategies that FL learners intentionally employ to acquire and utilize interlanguage pragmatics knowledge, aiming to enhance their ability to communicate and interpret meaning in interactions across gender groups. Additionally, the study highlights how the impact of gender on IPLS and learner autonomy can vary based on cultural and contextual factors. To the best of the researcher's knowledge, no published studies have explicitly examined the correlation between learner autonomy and IPLS across gender groups. According to Cohen (2010), investigations like this can serve as a basis for further exploration of IPLS and its associations with other relevant individual factors, thereby substantially enriching our understanding of L2 pragmatic development. This study attempts to fill these gaps by examining the correlation between learner autonomy and the application of IPLS among male and female upper-intermediate EFL learners in the Saudi EFL context. Thus, the following research questions were formulated.

RQ1: What interlanguage pragmatic learning strategies (IPLS) do EFL learners employ for pragmatic learning?

RQ2: How do male and female EFL learners perceive their capacity for autonomous learning in English?

RQ3: What is the correlation between learner autonomy and IPLS among EFL learners across gender groups?

Literature Review

Learner Autonomy

Given its complex multifaceted nature (Benson, 2013), learner autonomy has been defined in various ways, reflecting various perspectives of its constituents. Nevertheless, there is a consensus that learner autonomy is optimally conceptualized as the capability to take control of one's own learning (Benson, 2013). This process entails planning and monitoring, setting objectives, and making informed decisions regarding learning activities and strategies (Chong

& Reinders, 2022; Orakcı & Gelişli, 2024). Learner autonomy promotes active involvement in the learning process, both within and outside the classroom context, spanning across language learning skills, as well as other domains and subsystems (Pratiwi & Waluyo, 2023). Importantly, learner autonomy is not an inherent ability but a skill that can be cultivated to enhance language learning efficiency. Irgatoğlu et al. (2022) asserts the critical role of educators in fostering learner autonomy through strategy training to engage with and take control of their own learning processes, underscoring its importance as a key objective in second language acquisition (L2). Ayesha (2024) reveals that promoting autonomy can transform traditional, teacher-centered methods and enhance language acquisition and student engagement in developing countries. This approach not only supports the acquisition of linguistic skills but also fosters a more dynamic and responsive educational environment.

Learner autonomy is widely recognized as a key positive factor in language learning research, playing a crucial role in shaping learners' strategies and approaches. Irgatoğlu et al. (2022) posited that the relationship between learner autonomy and the use of LLS is intertwined and individualized, potentially being bidirectional. Language learners exhibit varying levels of autonomy, can devise innovative language learning strategies tailored to their unique needs, and are effective in diverse learning contexts. Hence, high levels of autonomy may lead to a more strategic and effective use of LLS, while the effective use of LLS can, in turn, contribute to an increase in learner autonomy. According to Chen and Pan (2015), more autonomous learners are more likely to actively engage in LLS use because they are more motivated to explore different strategies, experiment with different techniques, and reflect on their learning processes. They were also more likely to seek resources and opportunities for self-directed learning. Kuchah and Milligan's (2024) study provides concrete evidence of how learner autonomy and LLS intersect in multilingual contexts. Learners who autonomously draw on their multilingual resources can navigate educational challenges more effectively and overcome linguistic barriers. In other words, learners' use of strategies like code-switching and translation not only helps them understand the curriculum but also allows them to participate more actively in class. This demonstrates their ability to take charge of their learning process and how the strategic use of language can mitigate challenges and promote successful language acquisition. Oxford (2003) claimed that LLS are indicative of learner autonomy. Autonomous learners are more likely to select and adapt strategies that suit their individual learning styles and preferences. These strategies serve as tools that aid learners in planning, monitoring, and directing their learning process. This implies a fundamental and dynamic interconnection between these two crucial components of language learning. Nevertheless, a modest amount of research has directly investigated the interplay between learner autonomy and LLS among language learners.

Chen and Pan (2015) explored the relationship between English learning autonomy and preferred language learning strategies use among 130 ninth graders in a Taiwanese junior high school. The results revealed moderate English learning autonomy and infrequent strategy use among students, with memory strategies being the most common and affective strategies the least common. A correlation between learner autonomy and strategy use was identified, leading to practical recommendations for educators to foster autonomy in language learning. Alzubi et al. (2019) examined how reading learning strategies (RLS), mediated by smartphones, impacted Saudi undergraduates' psychological autonomy in an EFL context. The study found

that smartphone-facilitated RLS enhanced psychological autonomy, which was characterized by increased motivation, self-efficacy, agency, and positive attitudes. It advocates incorporating smartphone-aided strategy training in curriculum design and teaching methods to foster learner autonomy in EFL reading. Iamudom and Tangkiengsirisin (2020) examined the relationship between learner autonomy and LLS among Thai EFL learners. Using a mixed-method approach, they found that effective strategy use is associated with higher learner autonomy. Interestingly, strategy use varied by school type: international students predominantly used cognitive strategies, whereas public school students favored compensation strategies. Their study contributes to the understanding of how educational contexts influence learner autonomy and strategy use.

Recently, Chetin and Mede (2022) scrutinized the interplay between learner autonomy and LLS in an English for Medical Purposes (EMP) program in Turkey. Using a mixed-methods approach, they found moderate learner autonomy and frequent use of social and metacognitive strategies with varying relationships between autonomy and strategy use. This study offers valuable insights into language learning in a professional context. Daflizar et al. (2022) explored the interplay between language learning strategies and autonomy among 76 Indonesian EFL undergraduates. The findings disclosed that Indonesian EFL students were moderate users of most LLS but highly utilized metacognitive strategies. They held positive views of their autonomous learning capabilities and engaged in autonomous activities, although they were more receptive than productive. Significant correlations were found between strategy use and students' perceived abilities and autonomous practices outside the classroom. Ayesha (2024) conducted a pivotal study in practices of and for autonomy in a Pakistani blended learning environment. Findings demonstrated how intentional shifts from traditional, teacher-centered approaches to autonomy-supportive strategies significantly improve both language learning and student engagement, underscoring the potential transformative impact on second language acquisition processes. Pedagogical implications emphasized the crucial role of educators in enhancing learner autonomy particularly in developing countries where traditional methods are prevalent. Similarly, Orakcı and Gelişl (2024) explored the critical role of autonomous learning skills in enhancing foreign language education through distance learning platforms. The findings emphasized the interplay between learner autonomy and teacher roles, paving the way for more effective educational practices in distance learning environments.

This scholarly recognition of learner autonomy and LLS underscores the need for more nuanced research into how these variables interact with interlanguage pragmatics, particularly when considering the dynamics of gender. The unexplored relationship between learner autonomy and IPLS, coupled with the potential influences of cultural and contextual factors, presents a substantial gap in current academic discourse, calling for thorough investigation.

Interlanguage Pragmatic Learning Strategies (IPLS)

Pragmatic learning strategies (Cohen, 2010, 2019), also known as interlanguage pragmatic learning strategies (IPLS) (Tajeddin & Malmir, 2015), have garnered substantial attention in scholarly research for the past four decades (Cohen 2010, 2019; Derakhshan et al., 2021; Malmir & Derakhshan, 2020; Oxford, 2016; Tajeddin & Malmir, 2015). Interlanguage pragmatic learning strategies (IPLS) encompass the real-time language learning strategies (LLS) adopted by learners to facilitate the acquisition, memorization, and retrieval of second

language (L2) speech acts, as well as their integral sociopragmatic and pragmalinguistic knowledge and metapragmatic ability to evaluate such usage (Sykes & Cohen, 2018). Cohen is a pioneering researcher who has extensively studied interlanguage pragmatic learning strategies (IPLS) (Cohen, 2010, 2019; Cohen & Ishihara, 2005; Cohen & Sykes, 2018). He established a well-recognized classification of IPLS and pragmatic performance strategies (PPS) underpinning pragmatic competence. His taxonomy was informed by surveys on language learning strategies carried out in Japanese and Spanish L2 learning environments, particularly focusing on speech acts (Cohen, 2010; 2019; Cohen & Ishihara, 2005; Ishihara, 2008) in both offline and online communication settings.

Cohen's (2010) classification integrates both pragmatic learning and pragmatic performance strategies into a cohesive model that consists of three strategy groups. The first pertains to strategies employed for initially acquiring speech acts, such as collecting data on their proper use in authentic L2 encounters, conducting cross-cultural analyses between L1 and L2 pragmatics, consulting knowledgeable native or non-native speakers regarding the proper utilization of speech acts, and examining textbooks and websites for pragmatic information pertaining to L2 speech acts. The second group encompasses pragmatic performance strategies (PPS), which involves recalling the necessary speech act ILP data, identifying suitable pragmatic formulas, and considering interlocutor aspects for articulating such speech acts. Although Cohen (2010) acknowledged that these approaches to pragmatic learning overlap with those employed in the early stages of speech act acquisition, he emphasized that the key distinction lies in their application during L2 performance. The last set of IPLS comprises metacognitive strategies that fulfill three primary purposes: (a) determining which pragmatic learning strategies to employ, their timing, and order; (b) observing the actual execution of speech acts during performance; and (c) determining the success level in performing L2 speech acts. Cohen's (2010) IPLS model suggests a reciprocal relationship between IPLS and pragmatic performance strategies, where enhanced use of IPLS leads to greater use of pragmatic performance strategies, and vice versa, ultimately improving L2 learners' mastery over previously acquired skills (Cohen, 2010; Sykes & Cohen, 2018).

Despite the limited scope and breadth of the literature on IPLS, Cohen's taxonomy of IPLS has been employed in several experimental studies examining the acquisition of Japanese and Spanish speech acts (Sykes & Cohen, 2018; Félix-Brasdefer & Cohen, 2012) and has undergone subsequent revisions and expansions, incorporating additional strategies (Tajeddin & Malmir, 2015; Malmir & Derakhshan, 2020; Derakhshan et al., 2021). Sykes and Cohen (2018) found that the use of diverse clusters of pragmatic learning strategies (PLS) enabled learners to learn Spanish speech acts more efficiently. Similarly, Félix-Brasdefer and Cohen (2012) demonstrated that IPLS plays a key role in acquiring L2 speech acts and that increasing the usage of IPLS via online and offline tasks can enhance learners' mastery of L2 speech acts and expand their PLS range. Recently, Taguchi (2024) has shown that scaffolding pragmatic learning strategies through digital contexts like feedback and modeling can activate different strategy repertoires for pragmatic development than traditional classrooms as learners capitalize on multimodal affordances. This approach not only optimizes self-directed practice opportunities but also boosts metacognitive engagement, both of which are essential for fostering learners' pragmatic competence and improving their autonomy over interlanguage use.

Tajeddin and Malmir (2015) expanded on the taxonomy of IPLS and identified six types of IPLS strategies including memory, cognitive, metacognitive, compensatory, social, and affective strategies. He described them as intentional cognitive and behavioral processes employed by L2 learners to improve and self-regulate the acquisition, retention and application of interlanguage pragmatic repertoire, including speech acts and associated sociopragmatic and pragmalinguistic knowledge. In their study of 500 Iranian EFL learners, they found a strong positive correlation between IPLS usage and speech act knowledge, underscoring the effectiveness of these strategies in pragmatic learning. Malmir and Derakhshan (2020) conducted a qualitative approach using both concurrent and retrospective think-aloud verbal protocols during oral interviews with Iranian EFL learners to investigate IPLS. They refined the definition of IPLS, positing them as deliberate actions facilitating the acquisition of linguistic and sociocultural knowledge for effective interlanguage pragmatic competence and the management and self-evaluation of these endeavors throughout their language learning experience. Three distinct categories of pragmatic comprehension strategy were identified: socio-pragmatic, lexico-pragmatic, and cognitive. Socio-pragmatic strategies incorporate elements such as politeness and formality, whereas lexico-pragmatic strategies pertain to understanding pragmalinguistic forms and cognitive techniques encompassing both top-down and bottom-up IPLS. Regardless of gender, IPLS usage was consistently applied, indicating the potential universality of these strategies.

Building on Oxford's (1990) general classification of LLS and Cohen's taxonomy of IPLS, Derakhshan et al. (2021) classified IPLS into six primary groups: memory, cognitive, metacognitive, social, compensatory, and affective. This classification aimed to scrutinize the relationship between intermediate to advanced EFL learners' IPLS and their pragmatic knowledge of frequent English speech acts, including requests, refusals, apologies, compliments, and complaints. The findings indicate that all six types of IPLS have a substantial impact on predicting L2 speech act knowledge. Specifically, social and cognitive IPLS demonstrated moderate predictive power, whereas the remaining types (memory, metacognitive, compensatory, and affective) had either fair or very weak predictive contributions. Within this framework, Derakhshan et al. (2023) examined the effect of selecting individual differences, including gender, language learning experience, and L2 proficiency, on IPLS usage among Iranian EFL learners. The findings suggest a higher application of IPLS among younger learners and those with extensive language learning experience and higher proficiency levels. However, no substantial differences were observed between male and female EFL learners in terms of IPLS utilization. Recently, Ravari and Rashidi (2024) explored the impact of interlanguage pragmatic learning strategies (IPLS) on Iranian EFL learners' understanding of conversational implicature. Results indicated that cognitive, metacognitive, and compensatory IPLS significantly predicted learners' grasp of implicature, with cognitive strategies being the strongest predictor. These findings suggest that integrating IPLS into EFL instruction could enhance learners' pragmatic comprehension.

The existing body of literature on IPLS is relatively scarce, indicating that research on this critical construct remains in its infancy. Additionally, no current research provides insights into how learner autonomy interacts with the strategic approach of male and female learners toward pragmatic learning within an EFL context. This significantly underexplored area in the extant literature underscores the need for further exploration, which can have profound implications

on language learners' pragmatic knowledge and pragmatics strategies. Therefore, this study seeks to bridge this gap through dual focus. First, it aimed to scrutinize IPLS use and EFL learners' perceptions of their autonomous abilities across gender groups. Second, it intends to probe the correlation between learner autonomy and IPLS usage with a particular emphasis on gender differences. This research hopes to offer valuable insights into the field of second language acquisition (L2) in general, and pragmatic competence in particular.

Methodology

Participants

The study sample included 156 Saudi EFL learners who were evenly divided between 78 females and 78 males. Their ages ranged from 20 to 29 years, with an average age of 23.48. Most participants (76%) were university students studying English at Prince Sattam bin Abdulaziz university, whereas the rest (24%) were EFL postgraduates from public universities in Saudi Arabia's central province. Before starting their 4-year undergraduate programs, all participants had at least nine years of formal English education. Participants were selected from a pool of 189 students based on their language proficiency, as measured by the Standardized Test of English Proficiency (STEP). This study only included upper-intermediate EFL learners to ensure effective participation.

Instruments

Three data collection tools were used in this study: the Standardized Test of English Proficiency (STEP) as a homogeneity test, a learner autonomy survey, and the Interlanguage Pragmatic Learning Strategies (IPLS) inventory, which also collected demographic information, such as gender, age, and self-reported proficiency.

The Standardized Test of English Proficiency (STEP)

The STEP is a comprehensive assessment designed to gauge the English language proficiency of non-native speakers following the Common European Framework of Reference for Languages. It serves various purposes, including evaluating applicants for teaching positions, higher education, admissions, business, and other professional fields. The test consists of 100 questions spread across several sections, each concentrating on specific language skills including reading comprehension, listening comprehension, sentence structure, vocabulary, and composition analysis. By evaluating these skills, STEP offers a reliable measure of an individual's overall English language proficiency, applicable to academic and professional contexts in Saudi Arabia. Based on the STEP grading criteria, EFL learners scoring from 40 to 52 were classified as intermediate, those between 53 and 63 as upper-intermediate, and those scoring over 64 as advanced learners. Participants who scored < 53 were excluded from the study. The reliability of the test was confirmed by a Cronbach's alpha coefficient of 0.81.

Interlanguage Pragmatics Learning Strategies (IPLS) Inventory

The IPLS inventory, designed and validated by Tajeddin and Malmir (2015), is composed of 58 items categorized into six subscales: memory (eight items), cognitive (nineteen items), metacognitive (eight items), social (eight items), compensatory (eight items), and affective (six items). Participants indicated their level of agreement with each item on a 6-point Likert scale,

ranging from Strongly Disagree (1) to Strongly Agree (6). The inventory typically takes 30–40 minutes to complete. In this study, the IPLS inventory was initially tested with 25 EFL learners from the same demographic, resulting in a Cronbach's alpha reliability score of 0.80.

Learner Autonomy

The Learner Autonomy Questionnaire, originally devised by Zhang and Li (2004), aims to assess various aspects of learner autonomy that are instrumental in effective language acquisition. These aspects include self-directed learning, goal-setting, and self-monitoring. The questionnaire consisted of two main sections. The first section, comprised of 11 items on a 5-point Likert scale from "Never" to "Always," assesses participants' autonomy levels in real-world language-learning scenarios. The second section, containing 10 multiple-choice items, further explored learners' understanding of learner autonomy elements. Participants' autonomy level was calculated from their average score. Scores of 1.0–2.4 indicate low autonomy, 2.5–3.4 medium autonomy, and 3.5–5.0 high autonomy. The questionnaire's reliability and content validity are well established, with a Cronbach's alpha of 0.82, indicating high instrument reliability.

Procedure

This study used a quantitative correlational design to examine the connection between learner autonomy and the IPLS Inventory among EFL learners, considering potential gender differences. Data collection occurred in two phases. Initially, STEP was given to a sample of 189 EFL students from three public universities in Saudi Arabia's central province. The participants were enlisted via email invitations, which included a brief outline of the research objectives and a voluntary and confidential participation invitation. After obtaining informed consent, participants completed the test and provided demographic information such as age, gender, and self-reported proficiency levels. Based on proficiency test results, 156 upper-intermediate EFL learners were selected for further analysis. Subsequently, the Learner Autonomy Questionnaire and the IPLS Inventory were administered to selected participants through an online platform. The researcher was available to address any inquiries or concerns throughout the data collection process.

Data Analysis

The analysis of participants' demographic data, learner autonomy levels, and IPLS scores involved both descriptive and inferential statistical methods to address research questions. Initially, the Kolmogorov-Smirnov test was used to verify the normality of the data distribution, established at a significance level of ($p > 0.05$) for all groups. An independent samples t-test was conducted to explore significant differences in mean subscale scores and to understand the disparity between learner autonomy and IPLS inventory among male and female participants to answer the first two questions. Pearson correlation analyses were also employed to examine the relationships between variables (i.e., learner autonomy and IPLS) across subdimensions and gender groups to answer the third question. In instances where significant differences were identified, effect sizes were calculated, incorporating Cohen's (1988) d for the independent samples t-test and partial eta squared for one-way ANOVA. Scheffe's test was also employed to conduct post-hoc comparisons.

Results

EFL Learners' Interlanguage Pragmatics Learning Strategies (IPLS)

This section presents descriptive statistics for the utilization of total IPLS and its various subcategories by male and female EFL learners. To assess disparities in the mean values of the two groups, an independent t-test was employed. IPLS usage is categorized into three intervals: low (1.0–2.4), moderate (2.5–3.4), and high (3.5–5.0) following Oxford's classification (1990). As shown in Table 1, both groups demonstrated a moderate level of IPLS utilization (M= 2.94, females; M= 2.58, males).

Table 1

Gender-based Comparison of EFL Learners' Use of IPLS

Domain	Females		Males		T	Sig.
	Mean	Std	Mean	Std		
Memory	3.98	0.81	2.02	0.75	3.19	0.002
IPLS use	High		Low			
Cognitive	3.01	0.32	2	0.75	3.15	0.002
IPLS use	High		Low			
Compensatory	2.59	0.72	1.78	0.75	2.11	0.001
IPLS use	Moderate		Low			
Metacognitive	2.31	0.21	3.24	0.76	2.57	0.011
IPLS use	Low		Moderate			
Affective	1.96	0.72	3.02	0.91	2.11	0.013
IPLS use	Low		Moderate			
Social	2.76	0.23	2.95	0.78	0.19	0.488
IPLS use	Moderate		Moderate			
Total	2.94	0.21	2.58	0.68	-	0.000*
	Moderate		Moderate		4121	

* $p < 0.05$.

An independent t-test was performed, and the findings indicated that female learners employed substantially more IPLS in total ($t = 4.121$, $p < 0.05$, $d = 0.65$), as well as in specific IPLS categories such as memory ($p = 0.002 < 0.05$, $d = 0.42$), cognitive ($p = 0.002 < 0.05$, $d = 0.49$), compensatory ($p = 0.001 < 0.05$, $d = 0.51$), metacognitive ($p = 0.011 < 0.05$, $d = 0.51$), and affective ($p = 0.013 < 0.05$, $d = 0.43$), compared to their male counterparts. However, no significant differences were observed in the social domain ($p = 0.48$, $d = 0.35$). These findings indicate that gender differences may play a vital role in the utilization of various IPLS, with female learners generally employing a wider range of strategies more effectively than their male counterparts. Higher use of IPLS by females will contribute to better pragmatic performance. A substantial effect size of 0.08 highlights the marked difference between the two gender groups. The impact of IPLS on various domains was assessed, with metacognitive and compensatory IPLS displaying the most significant effects, followed by cognitive, memory, and affective IPLS, which showed moderate effects. In contrast, social IPLS had the smallest effect size.

EFL Learners' Autonomy Levels

This section presents the results of the learner autonomy survey. Participants' autonomy levels were determined using their average scores and categorized into three groups: low (1.0–2.4),

moderate (2.5–3.4), and high (3.5–5.0). As shown in Table 2, the total mean learner autonomy levels for females ($M = 3.66$) were higher than those for males ($M = 2.61$), suggesting a significant disparity in autonomy levels between genders. The female learners demonstrated high autonomy, whereas the male learners exhibited moderate autonomy. An independent t-test confirmed a significant difference in autonomy levels between genders ($t = 4.102$, $p < 0.05$).

Table 2
Gender-based Comparison of Learner Autonomy Levels

Domain	Females		Males		t	Sig.
	Mean	Std	Mean	Std		
Willingness	4.01	0.82	2.18	0.39	4264	0.000 *
Autonomy level	High		Low			
Self-confidence	3.69	0.55	3.00	0.78	3816	0.000 *
Autonomy level	High		Moderate			
Motivation	3.65	0.81	2.0	0.91	4932	0.003 *
Autonomy level	High		Low			
Capacity	3.11	0.72	3.28	0.76	-1316	0.205
Autonomy level	Moderate		Moderate			
Total	3.66	0.72	2.61	0.71	4.102	0.002 *
Autonomy level	High		Moderate			

* $p < 0.05$.

A closer examination of the learner autonomy subsections indicated that female learners scored high in all dimensions, except for the capacity to learn autonomously, which was moderate ($M = 3.11$). The highest scores were for willingness ($M = 4.01$), followed by self-confidence ($M = 3.69$), and motivation ($M = 3.65$). Conversely, the male learners had moderate to low autonomy levels. Their highest scores were for capacity to learn ($M = 3.28$) and self-confidence ($M = 3.00$), while both willingness ($M = 2.18$) and motivation ($M = 2.0$) scored low.

An independent t-test was used to examine the differences in mean scores across all domains between the two gender groups. The results revealed that females were significantly more autonomous overall ($t = 4.102$, $p < 0.05$). Significant variances were also found in the areas of learner autonomy, including willingness ($p < 0.05$, $d = 0.41$), self-confidence ($p < 0.05$, $d = 0.49$), and motivation ($p < 0.05$, $d = 0.51$). However, there was no statistically significant difference in the capacity to learn autonomously ($p = 0.20$, $d = 0.49$) between groups. These results suggest that gender may play a role in learner autonomy levels and in the specific areas where learners excel.

Correlation between IPLS Inventory and Learner Autonomy

Pearson's correlation test was performed to explore potential relationships between the use of interlanguage pragmatic learning strategies (IPLS) and learner autonomy levels among both male and female participants. The analysis was carried out separately for each gender group to discern any gender-based differences in these relationships. Table 3 provides the results, showing a moderately positive correlation between female learners' autonomy and their IPLS

use ($r = 0.69$, $p < 0.001$). However, a strong positive correlation was observed between autonomy and IPLS use for male learners ($r = 0.81$, $p < 0.001$).

Table 3
Correlations between IPLS Use and Learner Autonomy

Variables	Gender	N	Correlation	Sig. (two-tailed)
IPLS & learner autonomy	Males	78	0.81 *	0.01
	Females	78	0.69 *	

Further analysis of the potential relationships between the female participants' IPLS use subdimensions and learner autonomy domains revealed significant positive correlations. Cognitive strategies were positively correlated with the willingness ($r = 0.21$, $p < 0.05$, weak level), motivation ($r = 0.40$, $p < 0.05$, moderate level), and capacity dimensions ($r = 0.27$, $p < 0.05$, weak level). Moreover, the self-confidence domain showed a positive correlation with compensatory strategies ($r = 0.43$, $p < 0.05$, moderate level).

Table 4
Correlation Analysis of IPLS Subscales and Learner Autonomy among Females

Domains	Willingness	Motivation	Self-Confidence	Capacity
Memory	0.101	0.116	0.202	0.584
Cognitive	0.215 *	0.401 *	0.102	0.278 *
Compensatory	-0.007	0.387	0.435 *	0.085
Metacognitive	-0.251	0.167	0.511	-0.009
Affective	-0.153	-0.137	0.407	0.584
Social	0.231	0.154	0.255	0.021

* $p < 0.05$.

As shown in Table 5, there was a strong positive correlation between metacognitive strategies and all aspects of learner autonomy for male participants. Specifically, a weak correlation was observed in the willingness domain ($r = 0.21$, $p < 0.05$), and a moderate level of correlation was observed in the motivation ($r = 0.43$, $p < 0.05$), self-confidence ($r = 0.41$, $p < 0.05$), and capacity ($r = 0.43$, $p < 0.05$) domains.

Table 5
Correlation Analysis of IPLS Subscales and Learner Autonomy among Males

Domains	Willingness	Motivation	Self-Confidence	Capacity
Memory	0.112	0.111	0.098	0.121
Cognitive	0.342	0.009	0.11	0.098
Compensatory	0.009	0.045	0.002	0.076
Metacognitive	0.212 *	0.431 *	0.416 *	0.434 *
Affective	0.321	0.137	0.231	0.076
Social	0.211	0.123	0.341	0.065

* $p < 0.05$.

Discussion

This study sought to contribute to the body of knowledge surrounding Interlanguage Pragmatic Learning Strategies (IPLS) by examining the relationship between IPLS use and learner

autonomy in male and female upper-intermediate EFL learners within the Saudi context. The present study yielded several significant findings. First, the researcher found distinct gender-based differences in the application of IPLS. While both male and female learners showed a moderate degree of IPLS application, female learners exhibited significantly higher overall usage, particularly in the memory, cognitive, compensatory, metacognitive, and affective domains. This observation aligns with earlier studies emphasizing gender differences in learning behaviors (Dong et al., 2023; Ehrman et al., 2003; Ellis, 2015; Tajeddin & Malmir, 2015). These studies advocate for varied teaching methods, strategy training and more inclusive approaches to instruction particularly for male learners, to optimize their learning abilities. This could involve developing targeted strategies that promote greater autonomy and effective IPLS use.

Interestingly, the study noted no significant gender disparity in the social domain of IPLS. This absence could be rooted in broader societal and educational dynamics within the Saudi context. Historically, social abilities are often shaped more significantly by environmental influences than by biological gender differences. This suggests that the development of social skills may be less susceptible to gender-based divergences and more uniform across genders due to shared cultural and educational exposures. This finding could imply that the educational system in Saudi Arabia, either intentionally or inadvertently, promotes a curriculum or pedagogical approach that neutralizes gender differences in social learning. It is also possible that the measures currently available for assessing social cognition lack the sensitivity to detect subtle gender differences. Further research could provide greater insights into the factors influencing social strategy usage across genders. This finding presents a persuasive argument that gender-related differences are not purely biological but may also be shaped by the cultural, social, and educational systems in which foreign languages are taught. Thus, strategy training tailored to learners' specific contexts and backgrounds plays a vital role in language acquisition, supporting the notion put forth by Irgatoğlu et al. (2022) that teaching strategies should be context sensitive. Further studies have shown that digital contexts may activate different strategy repertoires than traditional classrooms as learners capitalize on multimodal affordances. Technology exposes learners to additional resources for conveying meaning strategically in digitally-mediated exchanges (Taguchi, 2024).

Second, gender-based differences were also observed in learner autonomy levels. Female EFL learners displayed higher autonomy than their male counterparts who exhibited a moderate level of autonomy. This observed pattern in learner autonomy may be rooted in several socio-cultural factors within Saudi Arabia which can influence learner behaviors. Saudi females are often socialized to be more responsible and organized, traits that are conducive to autonomous learning. They may also experience different societal expectations regarding education, which can impact their motivation and engagement in self-directed learning activities. This distinction was evident not only in overall autonomy but also in specific areas such as willingness, self-confidence, and motivation. These findings align with those of previous research (Alzubi et al., 2019; Chen & Zhang, 2024; Chetin & Mede, 2022; Iamudom & Tangkiengsirisin, 2020; Ravari & Rashidi, 2024) that highlights the influence of gender on EFL learners' autonomy. Ravari and Rashidi (2024) suggest that increased use of IPLS is likely to boost EFL learners' motivation and empathy towards the target language. Research has further shown that female students often report higher levels of self-efficacy and self-

confidence in language learning contexts, which are critical components of learner autonomy (Albert, 2024). The literature also suggests that learners who exhibit stronger motivation, whether intrinsic or communication-oriented, tend to achieve greater success in understanding and producing L2 pragmatics (Chen & Zhang, 2024). In addition, effective management of self-awareness, control over learning, and ownership of task selection can substantially boost learner autonomy, leading to more personalized and impactful learning outcomes (Isa et al., 2022).

Conversely, no significant gender difference was found in the overall capacity for autonomous learning. This might be attributed to uniform inherent learning abilities across genders, the efficacy of teaching methods and the influence of cultural and societal norms. Additionally, the tools used to measure autonomy might not adequately capture subtle differences between genders. This finding corroborates Stoet and Geary's (2018) claim that both genders have similar potential for independent learning, which can be effectively developed with appropriate educational practices and supportive environments. Thus, while gender significantly affects specific aspects of learner autonomy, its impact on the overall capacity for autonomous learning appears minimal, potentially indicating a need for more refined measurement tools.

Third, the study revealed a moderately positive correlation between IPLS use and learner autonomy among female learners, and a stronger correlation for male learners. These results are consistent with those of previous research (Kölemen, 2021; Chong & Reinders, 2022; Irgatoğlu et al., 2022; Chen & Pan, 2015; Iamudom & Tangkiengsirisin, 2020; Chetin & Mede, 2022), highlighting the connection between LLS and learner autonomy. The variation in gender-specific correlations may be attributed to different approaches in strategy use between genders. Research suggests that male and female learners often employ different learning strategies due to variations in motivation, attitudes, and cognitive styles which boost language learning success (Isa et al., 2022). This correlation further substantiates the specific effects observed in the study concerning the gender-differentiated impacts of cognitive and metacognitive strategies. According to Oxford (2003), cognitive and metacognitive strategies can foster autonomy in language learning by enabling learners to manage their own learning processes effectively. These strategies include planning, monitoring, and evaluating one's own learning, which are essential for acquiring pragmatic knowledge as noted by Cohen (2019). Cognitive strategies such as setting goals and analyzing language form, and metacognitive strategies like self-monitoring, directly contribute to enhancing learner autonomy. This aligns with the findings of Teng and Wen (2024), who emphasized that metacognitive awareness is pivotal for enhancing higher-order thinking and learning abilities. Men may exhibit a stronger inclination towards strategies that involve self-regulation and evaluation, which in turn boosts their autonomy in learning settings. The links among these two variables emphasize the importance of tailored strategies in the context of learner autonomy, indicating a nuanced relationship that deserves further exploration.

This study's findings have several pedagogical implications. Given the observed gender differences in the use of IPLS and the levels of learner autonomy, educators should adopt gender-responsive teaching methods in language education, promoting greater autonomy and effective IPLS use. Addressing gender-specific learning needs through targeted strategy training could promote greater autonomy and more effective IPLS use, especially among male

learners who exhibited lower levels of both. On the other hand, the absence of gender differences in the social domain of IPLSs could indicate that the educational system in Saudi Arabia, either intentionally or inadvertently, promotes a curriculum or pedagogical approach that neutralizes gender differences in social learning. This implies a potential area of strength within the educational system where gender equality is effectively maintained.

The observed positive correlation between IPLS use and learner autonomy reinforces the importance of embedding explicit strategy training within EFL instruction to cultivate learner autonomy. This approach encourages learners to become proactive and self-regulated, leading to improved language learning outcomes. Teachers should also be aware of how cultural, social, and educational environments may affect IPLS use and learner autonomy. This awareness can help in crafting teaching approaches that not only encourage the use of IPLS, but also take these learners autonomy levels and environmental impacts into account. Furthermore, recognizing the inherent potential for autonomous learning in all individuals, it is imperative for educators to diligently create and maintain learning environments that are both supportive and enriching considering learning strategy preferences. Effective instructional methods tailored to foster autonomy should be employed universally, ensuring that every learner, irrespective of gender, can benefit from enhanced opportunities for self-directed learning. This inclusive and strategic approach to education is essential for nurturing capable, independent learners equipped to navigate and succeed in their linguistic journeys.

This study has certain limitations. First, the study was conducted within a specific cultural and educational context, potentially restricting its generalizability. Second, the participants were upper-intermediate EFL learners; therefore, the results may not be applicable to learners at different proficiency levels. Third, the study did not account for other variables such as age, education level, learning styles, personality traits, and motivation, which could also intersect with IPLS use and learner autonomy. Finally, the lack of significant gender disparity in the social domain of IPLS and the capacity for autonomous learning might be due to the sensitivity of the measures used. This finding suggests the need for more refined tools capable of detecting subtle gender-based differences. Future studies should employ larger and more diverse samples, utilize longitudinal approaches and qualitative inquiries, and apply objective strategy assessments. This will further unpack the complex interplay among gender, IPLS strategies, autonomy, and contextual factors in language acquisition.

In conclusion, the study contributes to the literature on learner autonomy and language learning strategies related to L2 pragmatics, highlighting how gender can influence learning strategy effectiveness and preferences. The findings underscore significant gender differences in IPLS use and autonomy among Saudi EFL learners, advocating for educational practices that are sensitive to gender-specific needs. It also points to the need for a more nuanced understanding and incorporation of gender-specific pedagogies in language learning. The study extends the discussion by emphasizing the role of cultural and educational contexts in shaping these dynamics, suggesting further exploration into culturally responsive teaching strategies. Future research should explore these phenomena longitudinally and across diverse educational settings to deepen these insights and confirm the trends observed.

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Ethics Declarations

Competing Interests

No, there are no conflicting interests.

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