Investigating the Relationship between Iranian EFL Learners' Learning Styles and their Willingness to Communicate

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Abstract

This study focused on Iranian EFL learners' learning styles and their willingness to communicate (WTC) in the classroom as two critical factors causing individual differences in language learners. A sample of 175 Iranian EFL learners studying at elementary, intermediate, and advanced levels at the University of Tehran Language Center participated in this study. The participants were asked to fill out two Likert-type questionnaires of the Willingness to Communicate and the Perceptual Learning Style Preference Questionnaire (PLSPQ). The findings of this study demonstrated that Iranian EFL learners prefer kinesthetic learning style above all others. Moreover, the findings indicated that there is a significant, albeit low, relationship between Iranian EFL learners' learning styles and their willingness to communicate in the classroom. Furthermore, it was revealed that while Iranian EFL learners' learning styles are not significantly different across different levels of language proficiency, there is a significant difference in their levels of willingness to communicate in the classroom.

Keywords: EFL learners, learning style preferences, willingness to communicate

Introduction

In the age of globalization and the expansion of multinational corporations, the importance of language acquisition has become increasingly apparent (Li & Chen, 2022). Proficiency in multiple languages enhances employment opportunities and fosters meaningful communication with individuals from diverse cultural backgrounds (Pourfannan et al., 2022). Consequently, language pedagogy has evolved significantly, with continuous reforms aimed at addressing the complex needs of modern learners (Nematipour, 2012).

Initially, the emphasis in language education was predominantly on teachers and their instructional methodologies, with minimal consideration given to other factors influencing language learning outcomes. For decades, researchers and practitioners regarded teachers as the primary determinant of student achievement, attributing the majority of responsibility for learning outcomes to their behaviors and instructional strategies (Jones, 2021). However, later studies revealed that "students' learning is influenced by a complex array of factors beyond just the behaviors of teachers" (Brown, 2001, p. 25). This paradigm shift redirected attention toward the multifaceted nature

of second language acquisition, encompassing individual learner differences and contextual influences.

Among the various factors influencing language learning, individual differences such as motivation, anxiety, learning strategies, personality, and learning styles have garnered significant attention (Sun & Nam, 2023). Learning styles, defined as the "cognitive, affective, and physiological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (Felder & Silverman, 1988, p. 674), play a crucial role in shaping learners' approaches to acquiring a second language. These styles represent consistent preferences in how individuals process and internalize new information, commonly categorized into visual, auditory, kinesthetic, tactile, and social modalities (Felder & Silverman, 1988).

Language learning, however, is rarely pursued as an end in itself. Learners often acquire a new language to achieve broader social, professional, or personal goals, such as enhancing career prospects, connecting with different cultures, or expressing their identities (Dörnyei & Ushioda, 2021). An essential aspect of this process is learners' willingness to communicate (WTC) in the target language. WTC is defined as "an individual's readiness to enter into discourse at a particular time and place with a specific person or persons, using an L2" (Peng & Woodrow, 2018, p. 29). According to MacIntyre et al. (2002), WTC reflects "individuals' propensity to initiate and maintain communication with others in a given context" (p. 542). Research suggests that students with higher levels of WTC are more likely to engage in meaningful interactions, thereby enhancing both language proficiency and motivation (MacIntyre & Wang, 2021; Mulyono & Saskia, 2020). Additionally, fostering WTC in language classrooms can reduce anxiety and build learners' confidence in their linguistic abilities (Zhou, 2023).

Despite shared access to the same learning environment, individual learners often display varying degrees of willingness to engage in communication. For instance, one student might actively participate in a conversation, while another may remain silent (MacIntyre, Dörnyei, Clément, & Noels, 1998). Several factors, including learning orientations (Zarrinabadi & Abdi, 2011), attitudes toward the target language (Yashima, Zenuk-Nishide, & Shimizu, 2004), and language anxiety (MacIntyre, 1994), have been shown to influence learners' WTC. However, the interplay between learners' preferred learning styles and their WTC remains underexplored, representing a critical gap in the existing literature.

This study aims to investigate the relationship between Iranian EFL learners' learning styles and their willingness to communicate in English as a foreign language classrooms. By addressing this gap, the research seeks to provide insights into how individual differences in learning preferences influence communication behaviors, contributing to more effective pedagogical strategies tailored to diverse learner needs. To meet this objective, the following research questions were proposed:

RQ: Is there a significant relationship between EFL learners' learning styles and their WTC?

Literature Review

Foreign and second language (FL/L2) teaching and learning have evolved significantly over time. Traditionally, the focus was primarily on mastering language structures, with little emphasis on communicative competence. Today, language pedagogy has shifted towards learner-centered approaches, emphasizing individual characteristics and their role in effective communication (Yashima et al., 2004). This transition highlights the importance of understanding the diverse factors influencing learners' willingness to communicate (WTC) and the role of learning styles in the language acquisition process.

Learning styles, as defined by Felder and Silverman (1988), are "cognitive, affective, and physiological traits that are relatively stable indicators of how learners perceive, interact with, and respond to the learning environment" (p. 674). These styles are integral to language learning as they shape the ways learners process and retain information. Common categories of learning styles include visual, auditory, kinesthetic, tactile, and social preferences (Reid, 1995). Cognitive theories suggest that learning styles influence how individuals acquire, interpret, and store knowledge. Keefe (1982) emphasized that learning styles are consistent patterns of interaction with the learning environment. Ehrman and Oxford (1990) proposed that while these styles are innate, they can adapt over time through exposure and conscious effort. Similarly, Sternberg (1994) argued that learning styles evolve based on environmental factors, reinforcing the dynamic nature of learning preferences.

Research has demonstrated that recognizing and accommodating diverse learning styles enhances educational outcomes. For instance, Gilakjani (2012) highlighted that aligning teaching strategies with students' preferred styles fosters greater engagement and retention. Furthermore, Vaseghi et al. (2012) underscored the importance of empowering learners to identify their own styles, which can boost self-confidence and risk-taking behaviors essential for language learning. The role of learning styles extends beyond merely influencing how students absorb information. They also affect the types of strategies learners choose to employ in their studies. For example, kinesthetic learners may prefer hands-on activities or simulations, while auditory learners benefit from verbal explanations and discussions (Dunn & Griggs, 1988). This variability underscores the necessity for teachers to employ a range of instructional methods to meet the diverse needs of their students. Furthermore, as learners become more aware of their preferred styles, they can adopt more effective strategies for studying and practicing language skills, ultimately enhancing their proficiency and autonomy (Reid, 1998). Yet, learning styles are not static, and their interaction with other individual characteristics—such as motivation, anxiety, and cultural background—adds further complexity. Oxford et al. (1992) proposed that learners' cognitive and affective traits interact dynamically with their environments, leading to continuous adjustments in how

they approach learning tasks. These interactions highlight the need for adaptive teaching methods that respond to the evolving needs of learners.

Moreover, the effectiveness of addressing diverse learning styles has been linked to technological integration in language instruction. For instance, computer-assisted language learning (CALL) tools cater to various learning preferences by offering auditory feedback, visual aids, and interactive kinesthetic tasks (Tai, 2013). Such tools not only enhance learner engagement but also create opportunities for individualized instruction, a critical component in addressing the unique needs of learners in heterogeneous classrooms. Additionally, cultural influences play a significant role in shaping learners' preferences and behaviors. Aliakbari and Soltani (2008) observed that Iranian learners tend to gravitate toward group and kinesthetic styles due to societal norms emphasizing collaboration and collective problem-solving. These preferences underscore the importance of culturally responsive teaching practices that accommodate and leverage these tendencies to optimize learning outcomes.

WTC, originally conceptualized in first-language (L1) communication, refers to "an individual's readiness to enter into discourse at a particular time with a specific person or persons" (MacIntyre et al., 2002, p. 547). The construct was later adapted to second-language (L2) contexts, emphasizing the unique challenges associated with L2 use, such as linguistic competence and cultural barriers (MacIntyre et al., 1998). MacIntyre (2007) explained that WTC is a voluntary act driven by learners' decision to engage or withdraw from communication opportunities. Factors influencing L2 WTC include motivation, anxiety, self-confidence, and attitudes toward the target language. For example, learners with high motivation and low anxiety are more likely to initiate interactions, which can enhance their linguistic competence (Dörnyei, 2005).

The relationship between WTC and communicative success has been extensively studied. Elahi et al. (2019) identified WTC as a key determinant of L2 proficiency, while Sutarsyah (2017) highlighted the negative impact of speaking anxiety on learners' willingness to communicate. Nkrumah (2021) found that fear of making mistakes and apprehension about peer judgment were significant barriers to WTC. In contrast, Liu (2017) demonstrated that speaking with familiar individuals reduced anxiety and increased WTC, underscoring the importance of supportive learning environments. It should be mentioned that WTC is not only influenced by internal factors but also shaped by external conditions such as classroom environment and teacher behavior. Teachers play a pivotal role in creating opportunities for communication and fostering a positive atmosphere that encourages participation (Gol et al., 2014). Khajavy et al. (2014) emphasized that teacher immediacy behaviors, including verbal and nonverbal cues, significantly influence learners' readiness to engage in communication. Similarly, supportive peer interactions can reduce anxiety and build confidence, further enhancing WTC (Yashima et al., 2004). The sociocultural context of language learning also plays a critical role in shaping WTC. For example, learners from collectivist cultures, such as Iran and Japan, may exhibit lower WTC due to societal norms prioritizing group harmony over

individual expression (Yashima et al., 2004). Understanding these cultural dimensions is essential for developing pedagogical strategies that accommodate diverse learner profiles.

Numerous studies have explored the interplay between WTC and various learner characteristics, including learning styles. Maryam Gol et al. (2014) investigated the relationship between teacher immediacy behaviors and Iranian EFL learners' WTC, finding that both verbal and nonverbal teacher behaviors positively influenced learners' willingness to engage in communication. Similarly, Yousefi and Kasaian (2014) demonstrated a positive correlation between WTC and speaking accuracy and fluency, emphasizing the role of communicative competence in fostering learners' confidence. Khajavy et al. (2014) examined the impact of classroom environment on Iranian EFL students' WTC, identifying communication confidence and motivation as key mediators. Their findings suggest that supportive classroom dynamics enhance learners' readiness to interact. Additionally, Mesgarshahr (2014) highlighted the effectiveness of teaching communication strategies (CSs) in increasing learners' WTC, further emphasizing the role of instructional practices in shaping communicative behaviors.

Studies have also explored the relationship between learning styles and language achievement. Barzegar and Tajalli (2013) found that Iranian EFL learners' kinesthetic and group learning styles were positively correlated with classroom performance. Tai (2013) demonstrated that adult EFL learners' preferred perceptual styles, such as auditory and tactile preferences, significantly influenced motivation and success.

Further investigations into the cultural dimensions of learning styles and WTC have revealed interesting insights. For instance, Aliakbari and Soltani (2008) argued that cultural norms in Iranian society, which emphasize group harmony and collaboration, may explain learners' preference for kinesthetic and group learning styles. Similarly, Bui et al. (2022) found that Vietnamese learners' WTC was positively influenced by culturally responsive teaching strategies, highlighting the need for context-sensitive pedagogy. Moreover, technological interventions, such as the use of interactive platforms and virtual classrooms, have been found to bridge the gap between learning styles and WTC. Digital tools that cater to various preferences, such as providing audio-visual content for auditory and visual learners, can enhance both engagement and confidence in communication tasks (Tai, 2013).

While the existing body of research provides valuable insights into WTC and learning styles, several limitations warrant discussion. First, most studies adopt cross-sectional designs, which limit the ability to infer causal relationships. For example, the studies by Yousefi and Kasaian (2014) and Mesgarshahr (2014) focus on correlational data, leaving the directionality of the relationship between WTC and learner characteristics unclear. Future research could benefit from longitudinal approaches to capture changes over time. Second, cultural and contextual factors are often underexplored in the literature. As Khajavy et al. (2014) highlighted, classroom environments significantly influence WTC, yet the impact of broader sociocultural dynamics remains

insufficiently examined. This gap is particularly relevant in the context of Iranian EFL learners, where cultural norms and expectations may shape communication behaviors differently than in other settings. Third, while studies such as Vaseghi et al. (2012) and Barzegar and Tajalli (2013) emphasize the importance of learning styles, they often lack a nuanced discussion of how these styles interact with other variables, such as motivation and anxiety. A more integrated approach that considers the interplay between multiple factors could provide a deeper understanding of their combined effects on language learning. Additionally, the role of digital tools in bridging gaps between learning styles and WTC remains underexplored. For instance, online platforms that facilitate group discussions and provide tailored feedback could simultaneously address learners' preferred styles and enhance their communication confidence. Future studies could explore the efficacy of such interventions in diverse educational contexts.

In the Iranian EFL context, research has predominantly focused on the influence of learning styles on academic achievement. Nematipour (2012) examined the relationship between learning styles and learner autonomy, finding that learners who aligned their study strategies with their preferred styles exhibited higher levels of self-regulation and achievement. Similarly, Gilakjani (2012) explored the impact of mismatched teaching and learning styles, demonstrating that alignment between instructional methods and learner preferences significantly enhanced engagement and retention.

Studies have also highlighted the role of cultural factors in shaping learning style preferences. Aliakbari and Soltani (2008) found that Iranian learners' preferences for kinesthetic and group learning were influenced by cultural norms emphasizing collaboration and physical activity. These findings underscore the importance of context-sensitive pedagogical strategies in accommodating diverse learning needs.

The importance of individualizing instruction based on learning styles cannot be overstated. For instance, Tai (2013) found that adult learners' success in EFL classrooms was strongly linked to their preferred styles, which ranged from auditory to computer-assisted approaches. These findings suggest that leveraging technology to support diverse learning styles can further enhance engagement and motivation. Moreover, learners' awareness of their own learning preferences has been shown to foster greater autonomy and confidence. Vaseghi et al. (2012) argued that encouraging students to identify and embrace their learning styles can enhance their readiness to take risks and engage actively in communication tasks. This self-awareness can be particularly beneficial in environments where learners might otherwise feel constrained by traditional instructional methods.

Research on WTC in Iranian EFL classrooms has similarly highlighted the influence of contextual and individual factors. Khajavy et al. (2014) identified classroom environment as the most significant predictor of WTC, with communication confidence mediating the relationship between motivation and willingness to interact. Additionally, Shahisavandi (2023) demonstrated a significant positive correlation between WTC and creativity, indicating that

learners with higher levels of creativity are more inclined to engage in communicative activities. This finding suggests that fostering creative thinking in EFL classrooms may be a valuable strategy for increasing students' WTC. Furthermore, the role of peer interactions has been explored in various studies. Collaborative tasks, such as group discussions and peer assessments, have been shown to reduce anxiety and build confidence among learners. Liu and Feng (2023) highlighted that supportive peer dynamics can significantly influence learners' WTC by creating a sense of community and reducing the fear of judgment. These findings underscore the importance of designing classroom activities that encourage collaboration and mutual support. Despite the extensive research on WTC and learning styles as separate constructs, their intersection remains underexplored. Most studies tend to focus on either the impact of WTC on language learning outcomes or the influence of learning styles on academic performance. However, there is a lack of comprehensive studies that investigate how learning styles might shape learners' WTC, particularly in culturally diverse EFL contexts like Iran.

This study aims to address this gap by exploring the relationship between Iranian EFL learners' learning styles and their WTC. By integrating insights from the literature on both constructs, the research seeks to provide a deeper understanding of how individual differences influence communication behaviors. The findings are expected to inform pedagogical strategies that can better accommodate learners' preferences and enhance their communicative competence.

The present literature review highlights the critical roles of learning styles and WTC in shaping language learning experiences. While significant progress has been made in understanding these constructs individually, the lack of integrated research examining their relationship represents a key area for further exploration. By addressing this gap, the current study aims to contribute to the theoretical and practical understanding of effective language teaching practices, particularly in the context of Iranian EFL learners.

Method

Participants

This study initially recruited 175 male and female EFL learners (71 male, 104 female) enrolled in a language institute affiliated with the University of Tehran. The participants were classified into three proficiency levels—elementary, intermediate, and advanced—based on their results from the institute's placement tests and prior term achievement exams. These classifications ensured that learners across a broad range of English proficiencies were included. The participants were all studying the *Top Notch* series, a widely recognized curriculum designed to build communicative competence in English learners.

The participants' ages ranged from 20 to 45, representing a diverse group of university students majoring in various disciplines, including engineering, social sciences, and the humanities. This diversity added depth to the study by encompassing a broad spectrum of educational and experiential backgrounds. While the majority of participants were university students, some were

professionals seeking to improve their English for career advancement or personal development.

During the data collection process, 25 participants were excluded because they did not fully complete both questionnaires. These incomplete responses could compromise the reliability and validity of the analysis. As a result, 150 participants completed both questionnaires in full and were included in the final analysis. This final sample size ensured adequate representation of the three proficiency levels, allowing for robust statistical analyses and generalizable findings within the Iranian EFL context.

Instruments

Two well-established questionnaires were used to gather data: the Willingness to Communicate Questionnaire (MacIntyre et al., 2001) and the Perceptual Learning Style Preference Questionnaire (Reid, 1987). These instruments were selected due to their proven validity and reliability in prior research, as well as their alignment with the study's objectives. Both questionnaires were translated into Persian to ensure accessibility for participants at the elementary proficiency level.

The WTC questionnaire, developed by MacIntyre et al. (2001), was adapted to assess participants' willingness to communicate within the classroom setting. It consists of 27 items rated on a 5-point Likert scale (1 = almost never willing, 5 = almost always willing). These items are categorized into four subdomains: as the first subdomain, speaking consists of 8 items focusing on learners' readiness to engage in spoken communication. Meanwhile, reading has 6 items measuring willingness to participate in reading activities. Then, comes writing with 8 items evaluating readiness to complete written tasks. Last but not the least, listening comprehension bears 5 items assessing the willingness to actively listen and comprehend spoken English.

The original questionnaire demonstrated high reliability with alpha coefficients reported by MacIntyre et al. (2001) as follows: speaking (α = .81), comprehension (α = .83), reading (α = .83), and writing (α = .88). In this study, the reliability coefficients were recalculated to confirm consistency within the sample, yielding similar values: speaking (α = .84), comprehension (α = .84), reading (α = .80), and writing (α = .83). These results indicate high internal consistency, validating the instrument's use in this context.

The PLSPQ which was developed by Reid (1987), identifies participants' learning style preferences across six domains with different preferences as follows: In the visual domain, the preference was for learning through visual aids such as charts and diagrams. In the auditory domain, the preference was for verbal instruction and discussions. The kinesthetic domain laid the preference on hands-on, experiential learning; however, the tactile domain put the preference on using physical objects and materials in learning. In the meantime, the individual domain's preference was for independent study. As the last domain, the group domain laid the preference on collaborative learning in groups.

The questionnaire comprises 30 items, with five items per learning style category, rated on a 5-point Likert scale (1 = strongly disagree, 5 = strongly

agree). It has been widely used in non-native English-speaking contexts and has undergone validation by linguistic and educational experts (DeCapua & Wintergerst, 2004). The reliability coefficient of the PLSPQ in this study was calculated as .89, further confirming its consistency and suitability for the research objectives.

To ensure accessibility for elementary learners, the researcher translated both questionnaires into Persian. A back-translation process was conducted by two TEFL PhD candidates, who independently translated the Persian versions back into English. The back-translated versions were compared to the original questionnaires, revealing near-identical content, which confirmed the accuracy of the Persian translations. This rigorous translation process ensured that participants across all proficiency levels could understand and respond accurately to the questionnaire items.

Procedure

The data collection procedure was carefully designed to ensure clarity, voluntary participation by all participants, and compliance with ethical standards. The researcher first obtained permission from the institute's supervisors and teachers to conduct the study and received proper authorization to distribute the questionnaires. This process secured the cooperation and support of the institute. The participants were informed that their participation was voluntary, their responses would be kept confidential, and the data would be used solely for research purposes. These steps helped establish clear communication, build trust, and encourage honest participation. Altogether, the researcher distributed 175 sets of questionnaires. These were distributed across elementary, intermediate, and advanced classes, utilizing classroom teachers to hand out the questionnaires during regular class periods to maximize participation and convenience. Each questionnaire set included detailed written instructions on the first page, so the participants did not require an oral explanation. However, the participants were advised to consult their teacher should they need any clarification before completing the questionnaires.

The participants completed the questionnaires in their classrooms under the supervision of a teacher, which helped reduce distractions and ensured timely completion. After the students finished, the questionnaires were immediately collected to minimize the risk of lost or damaged. Of the 175 questionnaires distributed, 25 were excluded due to incomplete responses, resulting in a final sample of 150 valid questionnaires.

Data analysis

The data that were gathered and then analyzed using the SPSS (version 16) for its credibility and substantial ability to analyze quantitative datasets, particularly descriptive and inferential statistics. The analysis began with reliability analysis, where Cronbach's alpha coefficients for both questionnaires were calculated to assess internal consistency. The WTC questionnaire and the PLSPQ demonstrated substantial reliability with coefficient values of .91 and .89, respectively - both well above the standard benchmark of .70 - asserting that the instruments were consistent and worthy of study. Next, they performed correlation analysis using the Pearson Correlation Coefficient to study the

relationship between participants' learning style preferences and their willingness to communicate (WTC). This method of analysis was meaningful as it allowed them to determine the strength and direction of linear relationships between continuous variables, and how specific types of learning styles may have influenced learners' willingness to participate in communicative activities in the classroom. The results of this study hold significant value for both the research objectives and the broader literature, offering practical implications for language teaching practices in EFL contexts.

Results

Reliability of the Items in the Questionnaires

In the current study, two questionnaires were employed to gather data. A modified version of the MacIntyre et al. (2001) Likert-type questionnaire was utilized to gauge the participants' WTC levels within the classroom. There are 27 Likert-scale items in this quiz, with scores ranging from 1 to 5. The Perceptual Learning Style Preference Questionnaire (PLSPQ), another questionnaire created by Reid (1987), was utilized to ascertain the individuals' preferred learning styles. Five sets of statements on each learning style—visual, kinesthetic, auditory, tactile, individual learning, and group learning—are ordered at random in this questionnaire. Likert scales with points ranging from 1 to 5 are used to rate the assertions.

To ensure the internal consistency of the responses in both questionnaires, a reliability analysis (Table 1 & 2) was conducted. The Perceptual Learning Style Preference Questionnaire (PLSPQ) by Reid (1987) and the Willingness to Communicate (WTC) questionnaire by MacIntyre et al. (2001) were evaluated using Cronbach's alpha coefficients.

Table 1
The Reliability Coefficient of Perceptual Learning Style Preference Questionnaire

Cronbach's Alpha	N of Items
.898	30

Table 2
The Reliability Coefficient of Willingness to Communicate Questionnaire

Cronbach's Alpha	N of Items
.910	27

As shown in Tables 1 and 2, the reliability coefficients were found to be .89 and .91 for PLSPQ and WTC Questionnaires respectively. In general, values above .70 are considered acceptable for reliability, indicating that the items in both questionnaires consistently measure their respective constructs. This analysis confirms that the instruments are reliable for use in this study.

The Construct Validity of the Questionnaires

Construct Validity of the PLSPQ

The construct validity of the PLSPQ was examined using principal component factor analysis with varimax rotation. The analysis initially identified eight factors, explaining 69.34% of the cumulative variance. However, the results did not present a clear pattern at the item level. To refine

the analysis, the total scores of the six learning style categories were used. A six-factor solution was applied, resulting in distinct factors representing each learning style category, as summarized in Table 3. This solution explained 74.12% of the cumulative variance, supporting the construct validity of the PLSPQ.

Table 3

Rotated Component Matrix of Learning Style

	Component					
	1	2	3	4	5	6
Tactile	.886					.318
Group		.923				
Individual			.934			
Visual				.909		
Auditory					.864	
Kinesthetic	.434					.812

Construct Validity of the WTC Questionnaire

Similarly, the construct validity of the WTC questionnaire was assessed using principal component analysis with varimax rotation. The initial analysis identified six factors, explaining 65.32% of the cumulative variance. However, a clear construct pattern was not evident at the item level. Consequently, the total scores for the four WTC components (speaking, reading, writing, and comprehension) were analyzed. A four-factor solution was performed, revealing distinct factors for each WTC component, as shown in Table 4. This model explained 59.26% of the cumulative variance, validating the construct integrity of the WTC questionnaire.

Table 4

Rotated Component Matrix of WTC

	Component			
	1	2	3	4
Comprehension	.969			
Reading		.933		
Speaking			.927	
Writing	.326	.301		.847

Accordingly, the reliability and validity analyses of both questionnaires indicated that the data is suitable enough for further statistical analyses.

Correlation Analysis: WTC and Learning Styles

To investigate the relationship between Iranian EFL learners' learning styles and their WTC in the classroom, a Pearson Correlation Coefficient analysis was conducted. The results are summarized in Table 5 and provide insights into the direction and strength of these relationships.

The analysis showed general outcomes involving a positive correlation between all six learning styles, visual, auditory, tactile, kinesthetic, individual, and group and the four elements of willingness to communication (WTC): speaking, reading, writing, and comprehending. The strength of the correlations was low overall, with most correlations below 0.40. This suggested a weak

relationship between the variables and the WTC. In terms of our understanding of effect size and statistical significance, correlations below 0.30 reflect a small effect size, whereas correlations between 0.30 and 0.50 show moderate relationships. For example, auditory learners showed a moderate correlation with comprehension (r = .39), which shows that these learners have a clearly identified preference for activities that involved listening comprehension. The analysis indicated that these relationships were statistically significant (p < 0.05), thus there was a meaningful association between the variables and the likelihood of these results occurring by chance was low, allowing for comprehension of what the learner was doing.

Table 5
The Relationship between Learners Learning Styles and their Willingness to Communicate in English

		Visual	Tactile	Auditory	group	kinesthetic	Individual
Speaking	R	.301	.252	.263	.125	.249	.219
	Sig	.000	.002	.001	.129	.002	.007
	N	150	150	150	150	150	150
Reading	R	.366	.294	.290	.104	.228	.240
	Sig	.000	.000	.000	.207	.005	.003
	N	150	150	150	150	150	150
Writing	R	.371	.285	.359	.232	.329	.208
	Sig	.000	.000	.000	.004	.000	.011
	N	150	150	150	150	150	150
Comprehe	R	.280	.290	.395	.204	.393	.329
	Sig	.001	.000	.000	.012	.000	.000
	N	150	150	150	150	150	150

The results in Table 5 reveals that writing activities had the highest relationship with willingness to communicate (WTC) for visual learners (r = .37), followed by reading (r = .36), then speaking (r = .30), and lastly comprehension (r = .28). The results indicate for visual learners, that they had the most motivation and engaged with the writing activities because they relied on visual aids, visuals, and graphics outlines/processes. Auditory learners had the strongest relationship with comprehension (r =.39), they showed a most clearly preferred item of the WTC variables with listening (r =.39), followed by writing (r =.35), reading (r =.29), and then speaking (r =.26), therefore confirming none of the individuals had difficulties processing the tasks involving both visual and auditory. Tactile learners listed reading and comprehension as equal (r = .29), followed by writing (r = 28), and then speaking (r = .25), thus confirming practical/hands-on tasks were rated as significant for tactile learning learners. Kinesthetic learners showed their most preferred activities with comprehension tasks (r =.39), followed by writing (r =.32), speaking (r =.24), and reading (r =.22) thus confirming they were mostly engaged with activities that incorporated movement and an experience. Individual learners reported equal, most preferred correlations with comprehension (r =.32), reading (r =.24), then speaking (r =.21), and then writing (r =.20), therefore, confirming self-paced/independent tasks were most preferred if the structure allowed for an individual learner to explore and

analyze the activities at their own rate. Finally, group learners reported the most preferred relationship or correlation with writing (r = .23) than comprehension (r =.20), determining they preferred collaborative type of activities that included discussion/collaboration solving their problems together.

Discussion

The analysis showed general outcomes involving a positive correlation between all six learning styles, visual, auditory, tactile, kinesthetic, individual, and group and the four elements of willingness to communication (WTC): speaking, reading, writing, and comprehending. The strength of the correlations was low overall, with most correlations below 0.40. This suggested a weak relationship between the variables and the WTC. In terms of our understanding of effect size and statistical significance, correlations below 0.30 reflect a small effect size, whereas correlations between 0.30 and 0.50 show moderate relationships. For example, auditory learners showed a moderate correlation with comprehension (r = .39), which shows that these learners have a clearly identified preference for activities that involved listening comprehension. The analysis indicated that these relationships were statistically significant (p < 0.05), thus there was a meaningful association between the variables and the likelihood of these results occurring by chance was low, allowing for comprehension of what the learner was doing.

As mentioned above, the results showed a positive but relatively weak association between learners' learning styles and aspects of willingness to communicate (WTC). This indicates that while learning styles do play a part in communication actions, the other variables could be more influential. Nonetheless, knowing a learner's preferences can help inform and improve instructional practice for educators. For example, visual learners benefit most from writing tasks that use diagrams and visual structures. Auditory learners, meanwhile, are most engaged when allowed to communicate verbally and do listening exercises. Tactile/kinesthetic learners perform the best from hands-on tasks and activities that have some level of bodily involvement and interaction. Individual learners benefit from being able to do self-directed learning that allows for exploration. Group learners are mostly engaged when doing collaborative activities that have team dynamics and shared goals. This data provides a clearer idea of the relationship between learning styles and WTC. It is valuable information for language educators to consider when working to make classroom practice relevant to their teaching and accommodating students' needs for learning and communication. The broader implications for this data will be discussed in the next section, particularly regarding improvements to language instructors' instructional practice to better meet the needs of the diverse learners they teach.

The findings of this study both align with and diverge from prior research on learning styles and WTC. For instance, the observed preference for kinesthetic learning among Iranian EFL learners is consistent with the results of Barzegar and Tajalli (2013), who found kinesthetic and group styles dominant in Iranian contexts, likely influenced by cultural factors (Aliakbari & Soltani, 2008). Moreover, the moderate correlation between auditory learning

style and comprehension in the current study supports Tai's (2013) findings that auditory and tactile styles are linked with increased motivation and success. However, unlike studies such as Gilakjani (2012), which emphasized stronger effects when teaching is aligned with learning styles, the present study found only low to moderate correlations between learning styles and WTC. This suggests that while learning style preference plays a role in learners' communicative behavior, it may not be as strong a predictor of WTC as previously assumed. Additionally, unlike Liu (2017) and Khajavy et al. (2014), who stressed the overriding influence of classroom environment and communicative confidence on WTC, the current findings suggest that internal preferences like learning styles—though statistically significant—account for a limited portion of communicative engagement. This nuanced understanding calls for an integrative approach where individual preferences are acknowledged but not overemphasized at the cost of broader contextual variables.

The findings of this study highlight the relationship between Iranian EFL learners' learning styles and their willingness to communicate (WTC) in English classes, providing insights into individual differences and their implications for language teaching. The results revealed low but positive correlations between learning styles and WTC components, suggesting that while learning preferences influence communication behaviors, other factors such as motivation, anxiety, and classroom dynamics may play more dominant roles (MacIntyre et al., 1998; Gol et al., 2014). For instance, auditory learners demonstrated a moderate correlation with comprehension tasks ($r = .39$), reflecting their preference for listening-based activities, while visual learners showed a strong inclination for writing tasks ($r = .37$), likely due to their reliance on visual aids and structured frameworks. Kinesthetic and tactile learners exhibited preferences for comprehension and writing tasks, aligning with their need for hands-on, experiential learning (Reid, 1987). Furthermore, group learners displayed higher WTC for collaborative activities such as writing and comprehension ($r = .23$ and $r = .20$, respectively), while individual learners preferred independent tasks like comprehension and reading ($r = .32$ and $r = .24$, respectively). These variations emphasize the importance of accommodating diverse learning preferences through targeted teaching strategies, as engaging learners in activities that resonate with their styles can enhance their communicative engagement (Gilakjani, 2012; Reid, 1998). However, the low overall correlation coefficients, all below 0.40, indicate that while learning styles provide a foundational understanding of WTC, other influential factors, such as language proficiency, cultural norms, and classroom environment, must also be considered (Khajavy et al., 2014). The results underscore the necessity of adopting diverse instructional methods, including visual aids, auditory exercises, and tactile tasks, to create inclusive classrooms that support learners of all styles (Tai, 2013). Additionally, the findings suggest practical strategies to address specific WTC gaps, such as fostering low-anxiety environments for auditory and individual learners and incorporating

collaborative projects for group learners (Nkrumah, 2021; Liu, 2017). Despite its contributions, the study's cross-sectional design limits its ability to establish causality, and its focus on Iranian learners may affect the generalizability of the findings. Future research should consider longitudinal designs and explore additional factors, such as personality traits and teaching methods, to provide a more comprehensive understanding of the interplay between learning styles and WTC (MacIntyre et al., 2001; Dörnyei, 2005). By bridging these findings to existing literature, the study affirms the practical relevance of integrating learning styles into teaching practices while acknowledging that fostering WTC requires a holistic approach. This aligns with the broader pedagogical objective of enhancing learners' communicative competence and highlights the critical role of context-sensitive and adaptive teaching methods in achieving this goal (Reid, 1987; Gol et al., 2014).

Conclusion

This study contributes to the growing body of research on individual differences in language learning by exploring the relationship between Iranian EFL learners' learning style preferences and their willingness to communicate (WTC) in the classroom. Individual differences, such as age, gender, personality, and learning strategies, have long been recognized as crucial factors influencing language learning outcomes (Brown, 2007; Nosratinia, 2011). Among these, learning styles and WTC are particularly significant because they directly affect how learners engage with communicative tasks and opportunities in the classroom (MacIntyre et al., 1998; Reid, 1987). WTC, initially conceptualized in L1 contexts, has been adapted to L2 learning as a psychological readiness to use the target language when the opportunity arises (MacIntyre, 2007). Despite the importance of these constructs, the relationship between learning styles and WTC has received limited attention in the literature, which this study aimed to address.

The findings reveal a low but positive correlation between learning styles and WTC, suggesting that while learning preferences influence communication behaviors, they are not the sole determinants. Learners with distinct learning styles demonstrated varying levels of WTC across the four skills of speaking, reading, writing, and comprehension. Visual learners showed the highest WTC for writing tasks, likely due to their reliance on structured and visually guided activities, whereas comprehension tasks were the least preferred. Auditory learners favored comprehension and writing activities, reflecting their affinity for listening-based and verbal tasks. Tactile and kinesthetic learners displayed a preference for comprehension activities, underscoring their need for hands-on and experiential learning. Group learners exhibited higher WTC for collaborative tasks such as comprehension and writing, while individual learners preferred independent comprehension drills over speaking or writing activities. These variations emphasize the need for educators to adopt flexible and adaptive teaching methods that align with the diverse learning preferences of their students.

From an educational perspective, these findings underscore the importance of tailoring classroom activities to enhance learners' WTC. For

instance, incorporating visual aids and structured frameworks can engage visual learners, while auditory learners benefit from group discussions and listening exercises. Kinesthetic and tactile learners may thrive in interactive tasks such as role-playing and simulations, and group learners are best supported through collaborative projects. These strategies can foster a more inclusive learning environment and encourage active participation, which is crucial for developing communicative competence in EFL contexts. However, the low effect sizes observed in this study indicate that learning styles are just one of many factors influencing WTC. Other variables, such as motivation, language anxiety, and cultural norms, also play critical roles and should be addressed alongside learning preferences.

The study has broader implications for curriculum design and teacher training. Educators should be equipped to recognize and respond to the learning style diversity within their classrooms. Moreover, curriculum designers should integrate varied instructional materials and activities to accommodate different preferences. For example, technology-based tools such as multimedia platforms can provide auditory and visual learners with tailored resources, while kinesthetic learners may benefit from gamified learning environments.

While the study provides valuable insights, it is not without limitations. The cross-sectional design restricts the ability to draw causal inferences, and the focus on Iranian EFL learners limits the generalizability of the findings to other cultural contexts. Future research should adopt longitudinal designs to examine how learning styles and WTC evolve over time and explore the impact of contextual factors, such as classroom dynamics and cultural attitudes toward communication. Additionally, investigating the interplay between learning styles and other variables, such as personality traits, motivation, and teacher immediacy behaviors, could provide a more comprehensive understanding of WTC in language learning.

In conclusion, this study highlights the nuanced relationship between learning styles and WTC, emphasizing the need for personalized and context-sensitive approaches to language teaching. By addressing individual differences and fostering an inclusive and supportive environment, educators can better equip learners to overcome communication barriers and achieve their language learning goals. These findings reaffirm the critical role of adaptive teaching practices in enhancing learner engagement and communicative competence, laying the groundwork for future research to further explore the complexities of individual differences in language education.

Declaration of interest: None

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