



Interplay of Spiritual Intelligence and Foreign Language Enjoyment in Willingness to Communicate: A Case of High School EFL Students

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ABSTRACT

Language learning is a multifaceted process influenced by a range of cognitive, emotional, and psychological factors. This study explores the relationships among spiritual intelligence (SI), foreign language enjoyment (FLE), and willingness to communicate (WTC) among Iranian high school learners of English as a Foreign Language (EFL). A quantitative approach was employed, utilizing structural equation modeling (SEM) to analyze data collected from 280 high school students in Kerman Province, Iran. The participants, selected through convenience sampling, included 78 males and 202 females, with ages ranging from 16 to 19 years. Data were gathered using three validated instruments, i.e., a WTC questionnaire, an SI scale, and an FLE scale. The findings reveal robust positive correlations among the three constructs, with both SI and FLE emerging as significant predictors of WTC. Additionally, a strong interdependence was observed between SI and FLE, highlighting their mutually reinforcing roles in shaping learners' communicative tendencies. These results underscore the importance of integrating psychological and emotional dimensions into language education, offering valuable insights for educators seeking to enhance learners' willingness to engage in communication.

KEYWORDS: Foreign language enjoyment; Iranian EFL learners; Spiritual intelligence; Structural equation modeling; Willingness to communicate

1. Introduction

The process of acquiring a new language is inherently complex, characterized by the intricate interplay of multifaceted elements that collectively shape learners' developmental trajectories throughout their language-learning journey (Benevene et al., 2020). This complexity underscores the necessity for a holistic understanding of the diverse components integral to language acquisition, which are deeply intertwined with the psychological and emotional dimensions of the learners themselves. Recent scholarly investigations have illuminated the pivotal role of these dimensions, particularly SI, FLE, and WTC, in determining the success of language acquisition (Derakhshan et al., 2022; Zhang et al., 2024; Zhao et al., 2024). Grounded in Gardner's (1983) theory of multiple

intelligences, which posits that learners possess a spectrum of intelligence, research has consistently examined the domains of cognitive and emotional intelligence and their respective impacts on various facets of foreign language acquisition, including learner autonomy, academic achievement, and motivation (MacIntyre et al., 2019).

Building on Gardner's (1983) theoretical foundation, Zohar and Marshall (2001) introduced the concept of SI, marking a significant advancement in the understanding of intelligence beyond traditional cognitive frameworks. SI represents an autonomous domain that necessitates a novel perspective on the relationship between one's inner self, spirituality, and the external world (Vaughan, 2002). It encompasses the capacity to address complex problems, particularly those involving existential questions about the significance and value of diverse lifestyles (Zohar & Marshall, 2004). Unlike conventional intelligence paradigms, SI transcends cognitive abilities and normative psychological growth, bridging the personal and transpersonal realms and fostering a connection between the self and the spiritual dimension (Estaji & Pourmostafa, 2020). Despite its conceptual richness, however, the integration of SI into language learning research remains underexplored.

While the social and interaction-oriented dimensions of foreign language learning have garnered substantial attention, the critical role of positive emotions in this context has been comparatively overlooked (Dornyei & Ryan, 2015). The burgeoning field of positive psychology has catalyzed a paradigmatic shift toward examining the impact of positive emotions on language acquisition, emphasizing their transformative potential in enhancing learning outcomes (Wang & Wang, 2025). Within this framework, enjoyment emerges as a salient construct that not only fosters engagement in communicative activities but also amplifies learners' WTC, thereby contributing to overall linguistic proficiency (Botes et al., 2022). FLE, defined as a positive emotional state that promotes language learning through playful and exploratory tasks, has been identified as a key determinant of productive skill development (Akkas et al., 2022; Wang et al., 2021). Learners who effectively regulate their emotions to enhance FLE demonstrate heightened motivation to participate in communicative practices during language classes (Zarrinabadi & Pawlak, 2021).

The centrality of communication in second language acquisition (SLA) cannot be overstated, as underscored by recent studies highlighting its indispensable role in fostering genuine communicative competence (Cao, 2014). The advent of positive psychology in applied linguistics has further accentuated the affective turn, with emotions such as FLE playing a crucial role in shaping learners' WTC (Yu & Ma, 2024). Initially conceptualized as the readiness to initiate communication spontaneously in a second language at a specific moment with a particular interlocutor or group (MacIntyre et al., 1998), WTC has since emerged as a recurring theme in SLA research. Scholars have increasingly investigated the factors influencing WTC, emphasizing its importance as a predictor of successful language learning (Dewaele & Dewaele, 2018; Kruk, 2022; Nugroho, 2021; Yetkin & ÖZER, 2022). As MacIntyre and Vincze (2017) argue, the primary objective of foreign language education is to cultivate verbal self-expression, which serves as a catalyst for authentic communication and enhances language proficiency within educational settings.

Despite the growing body of interdisciplinary research on psychological factors in language learning, empirical investigations into the interplay between SI, FLE, and WTC among elementary and pre-intermediate Iranian EFL learners remain conspicuously sparse. To the best of the authors' knowledge, no prior study has simultaneously analyzed the roles of these constructs, underscoring the pressing need for further exploration of their combined influence. Addressing this lacuna, the present study seeks to contribute to the extant literature by employing a structural equation modeling (SEM) approach to examine the relationships between SI, FLE, and WTC among pre-intermediate Iranian EFL learners.

The significance of this study lies in its potential to transform the way educators and researchers approach the development of communicative competence in language learning. By empirically validating the interplay between SI, FLE, and WTC, the study provides a foundation for understanding how cognitive, emotional, and existential factors work together to shape learners' willingness to engage in communication. This holistic perspective is particularly vital in the Iranian EFL context, where traditional teaching methods have often overlooked the role of spiritual and emotional dimensions in fostering communicative behaviors. Furthermore, the findings are expected to offer actionable insights for educators, enabling them to design interventions that nurture learners' SI and enhance FLE.

2. Literature review

The review begins by tracing the theoretical underpinnings of SI, highlighting its multidimensional nature and its capacity to foster existential reflection and problem-solving. It then transitions to the role of FLE, a product of positive psychology, which underscores the importance of enjoyment and emotional engagement in language learning environments. Finally, the review examines WTC, a critical behavioral outcome influenced by both internal traits and external factors. By synthesizing prior studies on these constructs, this review sets the stage for understanding their interconnectedness and lays the groundwork for investigating their combined influence on communicative behaviors in second-language acquisition.

2.1. Spiritual intelligence (SI)

The role of individual differences in second-language acquisition has long been attributed to intelligence, a foundational concept in psychology that is universal among humans. Gardner (1983) defined intelligence as the capacity to solve problems within cultural contexts, expanding the traditional understanding of intelligence beyond intelligence quotient (IQ) and emotional quotient (EQ) through his theory of Multiple Intelligences. This theoretical framework laid the groundwork for the conceptualization of SI by Zohar in 1997, which sought to distinguish human cognition from other forms of life in the late 20th and early 21st centuries.

Despite its significance, SI remains challenging to define or operationalize within psychological research. Wigglesworth (2003) posited that spirituality represents an intrinsic human need that facilitates problem-solving and connects individuals to something transcendent beyond the physical realm. Emmons (2000) characterized SI as the ability to overcome challenges and achieve goals, emphasizing its internal connection to the mind, spirit, and external world. Zohar (2005) further elaborated on SI, describing it as the capacity to seek higher meanings, values, and core objectives while fostering imaginative lifestyles and exploring unconscious aspects of the self. Vaughan (2002) similarly linked SI to the ability to engage in deep existential reflection and navigate various levels of consciousness. King (2009) identified four key dimensions of SI: critical existential contemplation, the development of personal meaning, recognition of the transcendent, and the expansion of consciousness.

Advocates of SI, such as Hassan (2009) and Zohar (2012), argue that it fosters a learning environment conducive to maximizing learners' potential by focusing on significant life experiences, awareness, and analytical thinking. This necessitated the development of reliable tools to measure SI. For instance, Azadi et al. (2022) employed a sequential mixed-methods approach to construct and validate a questionnaire assessing SI among EFL learners. Their study surveyed 360 participants using a 27-item questionnaire developed through a literature review and interviews with 22 EFL learners. The findings demonstrated the efficacy of the new SI tool and revealed correlations between SI, gender, and educational level. Other studies have explored SI's relationship with language learning. Azizi and Zamaniyan (2013) found that high SI enables students to employ vocabulary learning strategies more effectively, enhancing their overall learning outcomes. Similarly, Aghaei et al. (2014) identified significant positive correlations between SI, language proficiency, and self-esteem among Iranian high school female students. Babazadeh et al. (2018) further examined the interplay between SI, multiple intelligences, and language learning strategies, revealing moderate positive relationships between these constructs.

2.2. Foreign language enjoyment

The introduction of positive psychology into language learning research by Mercer and MacIntyre (2014) marked a paradigm shift toward examining the role of positive emotions, particularly FLE, in language acquisition. Positive emotions are believed to enhance language learning by increasing awareness, improving classroom focus, fostering resilience, and strengthening personal resources (Fredrickson, 2003, 2006; MacIntyre & Gregersen, 2012). Language educators recognize the importance of cultivating motivation, determination, and resilience alongside positive emotions to sustain the language learning process (Mercer & MacIntyre, 2014). Fredrickson's (2001) broaden-and-build theory suggests that pleasure and playfulness in language learning promote social connections and cognitive growth.

Dewaele and MacIntyre (2014) conducted pioneering research on the relationship between FLE and foreign language classroom anxiety (FLCA), surveying 1,746 multilingual participants globally. Their findings revealed significantly higher levels of FLE compared to FLCA, indicating that the absence of enjoyment does not necessarily correlate with heightened anxiety. However, a strong inverse relationship was observed between FLE and FLCA, though statistical evidence did not support their distinctiveness. Dewaele et al. (2018) extended this line of inquiry by examining learner-internal and teacher/classroom-specific factors influencing FLE and FLCA among 189 British high school students. The results showed a small but significant negative correlation between FLE and FLCA, with learner-related factors (e.g., age, gender, language proficiency, attitudes) exerting a stronger influence than teacher-related variables.

Recent studies have further explored the implications of FLE in diverse educational contexts. Ma et al. (2024) investigated how enjoyment and burnout mediate the relationship between teacher-student interactions and foreign language achievement among 4,900 Chinese learners. Their findings highlighted gender differences in mediation effects, with boys exhibiting more pronounced mediation than girls. Pan and Zhang (2023) examined the development of FLE and FLA over 14 weeks among 55 college students, revealing that extraversion significantly influenced both constructs. Alrabai (2024) utilized PP to explore the interplay between emotions and motivation among 328 Saudi learners, identifying enjoyment as a mediator between motivation and L2 WTC (L2WTC). Wang and Wang (2025) analyzed the emotional experiences of 27 dual-language students, uncovering three primary attitudes: balanced enjoyment, activity-induced boredom, and low emotion regulation.

2.3. Willingness to communicate

The challenge of motivating learners to engage in communication is a persistent concern in language classrooms worldwide. The concept of WTC emerged as a personality trait linked to self-examination and self-esteem (Burgoon, 1976). McCroskey (1992) defined WTC as the likelihood of initiating communication when given the freedom to do so. While some researchers view WTC as a stable characteristic (McCroskey & Richmond, 1990), others argue that it is influenced by individual traits such as self-confidence, motivation, introversion/extroversion, perceived communication ability, communication apprehension, and self-esteem (Fallah, 2014; MacIntyre, 1994; Peng, 2007; Yu et al., 2011).

Tavakoli and Davoudi (2017) developed and validated a survey to assess oral WTC among 117 Iranian EFL students, identifying three dimensions: WTC with instructors, peers, and unfamiliar individuals. Their findings indicated that interlocutor type significantly influenced WTC, with students preferring communication with instructors or in front of the class rather than with peers in pairs or small groups. Sato and Dussuel Lam (2021) explored the impact of metacognitive instruction (MI) on WTC, revealing that MI enhanced target language use and equitable speaking turn distribution, though it did not significantly affect WTC itself.

Yashima et al. (2018) examined the interaction between learner characteristics and contextual factors in shaping state WTC among 21 Japanese EFL university students. Their findings underscored the influence of personality, skill level, peer responses, and

group communication patterns on WTC. Recent studies have also highlighted the role of emotions in WTC. Yu and Ma (2024) demonstrated that FLE, directly and indirectly, influences L2 WTC through mediators like Growth Language Mindset (GLM) and grit. Yang and Lin (2024) assessed the impact of FLE and classroom environment on WTC among Chinese EFL learners, revealing significant increases in WTC over a semester.

Despite the wealth of research on individual factors influencing language learning, a significant gap remains in the simultaneous examination of SI, FLE, and WTC within a unified framework. Existing studies have predominantly explored these constructs in isolation or limited combinations, failing to capture their dynamic interplay. For instance, while Babazadeh et al. (2018) examined the relationship between SI and language learning strategies, they overlooked its direct impact on communicative behaviors like WTC. Similarly, Dewaele and MacIntyre's (2014) pioneering work on FLE primarily focused on its inverse relationship with anxiety, neglecting its potential synergy with other cognitive and existential factors. Furthermore, Tavakoli and Davoudi's (2017) exploration of WTC dimensions did not account for the influence of deeper constructs such as SI or the mediating role of positive emotions like FLE. This fragmented approach has left unanswered questions about how these constructs collectively shape communicative readiness. Addressing this gap, the present study investigates the interplay between SI, FLE, and WTC among Iranian EFL learners, employing SEM to elucidate their complex relationships and contribute to a more holistic understanding of language learning outcomes.

Therefore, the present study seeks to answer the following research questions:

RQ1. Is there any significant relationship between spiritual intelligence, foreign language enjoyment, and willingness to communicate among Iranian high school EFL learners?

RQ2. Do spiritual intelligence and foreign language enjoyment significantly predict willingness to communicate among Iranian high school EFL learners?

3. Methodology

3.1. Research design

This study adopted a quantitative approach with a correlational design, leveraging numerical data and statistical analyses to address the research questions. The primary objective was to explore the relationships and predictive capacities of SI and FLE on WTC among Iranian high school EFL learners. By employing advanced statistical techniques, including Pearson correlation analysis and SEM, this study aimed to provide robust insights into the interplay between these constructs. The correlational design allows for the examination of relationships between variables without manipulating them, ensuring an ethical and practical approach to understanding their dynamic interactions in the context of language learning.

3.2. Participants

The sample comprised 280 high school students (females: $n = 202$, 72%; males: $n = 78$, 28%; Mean age = 16.88, SD = 0.79) enrolled in state schools across Kerman Province, Iran. Convenience sampling was utilized to recruit participants, ensuring accessibility and feasibility within the educational context. All participants were native Persian speakers, ensuring linguistic homogeneity across the sample. Representing diverse socioeconomic backgrounds, the students were drawn from both urban and rural areas within Kerman Province, providing a broad and representative perspective of the population under study. Based on teacher reports, the students' English proficiency levels varied between elementary and pre-intermediate. This diverse demographic composition enhances the generalizability of the findings to similar educational contexts.

3.3. Instruments

3.3.1. Willingness to communicate questionnaire

WTC was assessed using WTC questionnaire, developed by Lee and Hsieh (2019), which is comprised of three sub-sections namely, WTC inside the class, WTC outside the class, and WTC in digital contexts. Each subsection has 4 items scored on a Likert scale ranging from 1 (definitely not willing) to 5 (definitely willing). The questionnaire provides a comprehensive measure of learners' communicative tendencies across different settings, capturing both face-to-face and digital interactions. To ensure the reliability of the instrument, Cronbach's alpha was calculated, yielding a coefficient of 0.86, which falls within the acceptable range for internal consistency. This suggests that the scale is both reliable and suitable for assessing WTC among the participants in this study.

3.3.2. Spiritual intelligence questionnaire

To determine spiritual intelligence among participants, spiritual intelligence scale developed and validated by Azadi et al. (2022) was used. This well-structured instrument comprises four sub-scales: (1) learning English for personal, social, and educational benefits, (2) learning English for personal, social, and academic achievement, (3) learning English to promote religious values, and (4) learning English for intercultural communication. The scale consists of 27 items, each measured on a five-point Likert

scale ranging from strongly agree to strongly disagree, allowing for nuanced responses that capture participants' perspectives on the role of English learning in relation to spiritual intelligence. A sample item from this scale is "I respect all people with different languages and beliefs". The reliability of the scale was assessed using Cronbach's alpha, which yielded a value of 0.95, indicating excellent internal consistency and demonstrating the instrument's robustness for measuring spiritual intelligence in diverse contexts. The high reliability, coupled with the scale's comprehensive sub-scales, ensures that it effectively captures the multifaceted nature of spiritual intelligence, particularly in the context of language learning and intercultural communication.

3.3.3. *Foreign language enjoyment scale*

The FLE scale, adopted from Dewaele and Macintyre's (2014) study, was employed to measure participants' levels of enjoyment in learning a foreign language. This well-established scale consists of 21 items, each rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree), allowing for a detailed assessment of various dimensions of foreign language enjoyment. The instrument has two main sub-scales including private and social. Items 1-13 measure FLE private and items 14-21 measure FLE social aspects. The scale captures a wide range of emotional and experiential aspects related to language learning, such as positive classroom experiences, personal satisfaction, and interactions with peers and teachers. A sample item from this questionnaire is "I've learnt interesting things". In the present study, the reliability of the FLE scale was evaluated using Cronbach's alpha, which yielded a value of 0.91, indicating excellent internal consistency and demonstrating the instrument's robustness for measuring foreign language enjoyment.

3.4. Data collection procedures

In the initial phase, the English questionnaires were translated into Persian to eliminate potential linguistic barriers and ensure clarity for participants. The translations were meticulously reviewed and double-checked by the researchers to ensure accuracy and cultural appropriateness. No significant issues were identified during this process. Subsequently, the questionnaires were digitized and uploaded to Google Forms to facilitate easy distribution and accessibility. A unique link to access the forms was generated and shared with participants via WhatsApp groups. To expand the reach and diversity of the participant pool, the researchers collaborated with colleagues in various cities, who distributed the link to their respective students. At the beginning of the online questionnaire, an informed consent section was included to emphasize that participation was entirely voluntary. Participants were required to acknowledge and agree to this section before proceeding. To ensure transparency and trust, teachers verbally assured students that the collected data would be used solely for research purposes and would remain strictly confidential. Ethical approval for the study was granted by the Ethics Committee of the Department of Education in Kerman Province, ensuring compliance with ethical standards throughout the research process. These procedures ensured both the integrity of the research process and the ethical treatment of participants.

3.5. Data analysis

The collected data were systematically coded and entered into SPSS software, version 27, for analysis. Following data entry, the dataset was carefully inspected for missing values and potential outliers to ensure data integrity and accuracy. The Kolmogorov-Smirnov test was conducted to assess the normality of the data, confirming that the data were normally distributed and thus suitable for parametric statistical tests. To address the first research question, Pearson correlation analysis was performed to examine the relationships between the study variables. Subsequently, SEM was conducted using AMOS 24 software to determine the impact of learners' SI and FLE on their WTC. SEM allowed for the simultaneous examination of direct and indirect effects, providing a nuanced understanding of the complex relationships among the constructs. This rigorous methodological framework ensures the reliability and validity of the findings, contributing to a deeper understanding of the interplay between SI, FLE, and WTC in the Iranian EFL context.

4. Results

4.1. Results of Kolmogorov-Smirnov test, descriptive statistics and correlations among variables

The present study sought to explore the intricate relationships between SI, FLE, and WTC among Iranian high school EFL learners. Specifically, the investigation aimed to address two pivotal inquiries: first, whether there exists a significant relationship between learners' SI, their experience of FLE, and their WTC; and second, whether SI and FLE serve as significant predictors of WTC. The findings presented in this section shed light on these questions, offering empirical insights into how these constructs interrelate and collectively influence communicative tendencies within the context of English language learning.

Before delving into the first research question, it is imperative to establish the normality of the data, a foundational prerequisite for robust statistical analysis. To this end, the Kolmogorov-Smirnov (K-S) test was rigorously employed to scrutinize whether the data distribution exhibited significant deviations from a normal distribution. As Field (2024) contends, a non-significant p-value—exceeding the conventional threshold of 0.05—is indicative of data that adheres to the assumptions of normality. The findings of the K-S test, as delineated in Table 1, serve as a critical juncture in validating the integrity of the subsequent analyses. Any deviation from normality would have undermined the reliability of the inferential statistics; thus, the confirmation of normality not only fortifies the methodological rigor of this study but also ensures the validity of the ensuing

interpretations.

Table 1. Tests of normality for different variables

	Kolmogorov-Smirnov		
	Statistics	df	Sig.
WTC	.041	280	.200
SI	.038	280	.200
FLE	.054	280	.045

Table 1 unveils a compelling distinction in the distribution patterns of the study variables. Both WTC and SI demonstrate adherence to a normal distribution, as evidenced by their non-significant p-values, thereby satisfying the statistical assumptions required for robust analysis. Conversely, the variable FLE presents a more contentious scenario, with a p-value of 0.045 that narrowly breaches the conventional threshold of 0.05. This marginal deviation from normality, while statistically detectable, remains sufficiently close to the cutoff to warrant cautious acceptance within the context of preliminary analysis. Such a finding underscores the importance of exercising analytical prudence; however, given the proximity of the p-value to the threshold, this slight deviation is unlikely to exert a substantial impact on the overall integrity of the results. Thus, the data collectively provide a defensible basis for proceeding with subsequent analyses, albeit with an acknowledgment of this nuanced limitation.

Table 2 presents a comprehensive overview of the descriptive statistics, offering critical insights into the dataset. The table includes the number of participants, means, and standard deviations for each variable under investigation, providing a clear snapshot of the central tendencies and variability within the data. Additionally, the correlations among the variables are delineated, enabling an initial assessment of the relationships between SI, FLE, and WTC. These statistical measures serve as foundational elements for understanding the patterns and interconnections that underpin the research questions, thereby setting the stage for more nuanced inferential analyses.

Table 2. Descriptive statistics and correlations for the variables

Variable	N	M	SD	Min	Max	1	2	3
1.WTC	280	39.91	9.96	15	60	-	.690**	.649**
2.SI	280	97.63	21.06	29	135		-	.797**
3.FLE	280	79.52	13.39	39	105			-

* $p < .05$. ** $p < .01$

The data in Table 2 reveal compelling insights into the central tendencies of the variables under investigation. Notably, the mean score for WTC among EFL learners stands at 39.91, while SI and FLE exhibit mean scores of 97.63 and 79.52, respectively. These figures underscore the relative strengths of these constructs within the sample, suggesting that learners' experiences of SI and FLE are pronounced and potentially influential in shaping their communicative behaviors. However, such descriptive statistics alone cannot substantiate the hypothesized relationships between these variables; they merely set the stage for a more rigorous interrogation through inferential analysis.

In reply to the first research question, interrogating the existence of significant relationships between SI, FLE, and WTC, a Pearson correlation analysis was conducted. The findings, as outlined in Table 2, present an irrefutable case for the interconnectedness of these constructs. A robust positive correlation emerged between WTC and SI ($r = .69$, $p < .01$), affirming the pivotal role of SI in fostering communicative readiness. Similarly, a significant positive relationship was identified between WTC and FLE ($r = .64$, $p < .01$), underscoring the critical influence of positive emotional experiences in language learning contexts. Furthermore, the analysis revealed a strikingly strong correlation between SI and FLE ($r = .79$, $p < .01$), suggesting that these constructs are not only individually significant but also mutually reinforcing. These results collectively dismantle any skepticism regarding the interdependence of these variables and highlight their collective importance in shaping learners' communicative tendencies.

4.2. Results of structural equation modeling

To address the second research question—whether SI and FLE significantly predict WTC—an SEM approach was employed. This methodological choice was driven by the need to rigorously test the predictive validity of the proposed model. To evaluate the model's compatibility with the data, multiple fit indices were scrutinized against established thresholds. The χ^2/df ratio, a fundamental measure of model fit, was required to fall below 3, while indices such as the Goodness-of-Fit Index (GFI), Comparative Fit Index (CFI), Normed Fit Index (NFI), and Tucker-Lewis Index (TLI) were expected to exceed .90. Additionally, the Root Mean Square Error of Approximation (RMSEA) was constrained to values less than .08 (Collier, 2020). The results of these goodness-of-fit indices, detailed in Table 3, provide a decisive affirmation of the model's adequacy. Any deviation from these stringent criteria would have undermined the study's claims; however, the robust alignment of the data with the proposed model reinforces the argument that SI and FLE are indeed significant predictors of WTC. This empirical validation not only

strengthens the theoretical foundation of the study but also challenges prior assumptions that overlooked the predictive power of these constructs in language learning contexts.

Table 3. Goodness-of-fit indices

	χ^2/df	GFI	CFI	NFI	TLI	RMSEA
Acceptable fit	<3	>.90	>.90	>.90	>.90	<.08
Model	1.45	.97	.99	.97	.99	.04

As demonstrated in Table 3, the goodness-of-fit indices for the proposed model consistently meet or exceed the established thresholds, affirming its robust alignment with the empirical data. The χ^2/df ratio, which is a critical indicator of model fit, remains below the stringent threshold of 3, while other indices such as the GFI, CFI, NFI, and TLI all surpass the recommended value of .90 (Kline, 2023; Tseng & Schmitt, 2008; Rappaport et al., 2020). Furthermore, the RMSEA falls well below the acceptable limit of .08. These findings collectively substantiate the validity of the hypothesized model, leaving little room for contention regarding its adequacy. Consequently, it is not merely suggestive but rather conclusively evident that the proposed model is empirically supported and theoretically sound, offering a reliable framework for understanding the interplay between the constructs under investigation.

Figure 1 presents the structural model, which visually encapsulates the intricate interrelationships among EFL learners’ SI, FLE, and WTC. This diagrammatic representation serves as a compelling testament to the hypothesized pathways, delineating not only the directionality of these relationships but also their statistical significance. By mapping these connections, the model elucidates how SI and FLE converge to predict WTC, thereby reinforcing the theoretical underpinnings of the study. Far from being a mere illustrative tool, Figure 1 stands as a pivotal analytical artifact, offering both clarity and empirical grounding to the complex dynamics explored in this research.

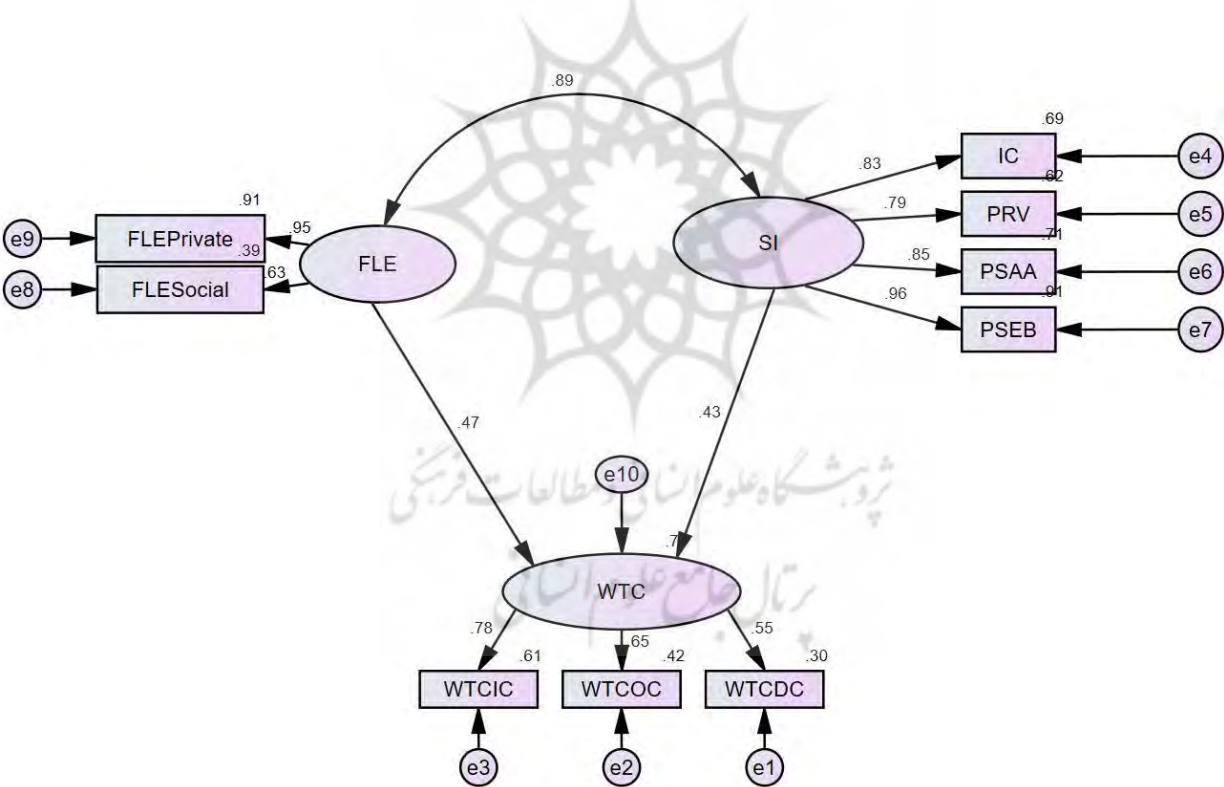


Figure 1. Interrelationships among SI, FLE, and WTC in EFL learners

The examination of standardized estimates was undertaken to rigorously interrogate the causal relationships between the independent variables—SI and FLE—and the dependent variable, WTC. As depicted in Figure 1, the findings present a compelling case for the predictive power of both SI ($\beta = .43$, $p < .05$) and FLE ($\beta = .47$, $p < .05$) on learners’ WTC. These significant beta coefficients not only affirm the direct influence of these constructs but also highlight their substantial explanatory capacity within the model. Furthermore, the analysis unveils a strikingly robust positive correlation between FLE and SI ($\beta = .89$, $p < .05$), underscoring the deeply intertwined nature of these variables. This interdependence challenges any reductionist interpretation of their roles and emphasizes the necessity of considering their combined impact on communicative readiness. Collectively, these results refute skepticism regarding the causal dynamics at play, reinforcing the argument that SI and FLE are indispensable predictors in shaping learners’ willingness to engage in communication.

5. Discussion

The robust positive correlation identified between SI and WTC ($r = .69, p < .01$) represents a decisive departure from prior studies that have either trivialized or misunderstood the behavioral impact of SI. For instance, Babazadeh et al. (2018) reported only moderate relationships between SI and language learning strategies, confining their analysis to cognitive processes such as vocabulary acquisition and strategy use. While their work was foundational, it failed to explore SI's direct influence on tangible behavioral outcomes like WTC. In stark contrast, the beta coefficient of .43 for SI's predictive power on WTC in this study establishes SI as a critical catalyst for communicative readiness—a finding that fundamentally challenges Zohar's (2005) narrow conceptualization of SI as a mechanism for existential reflection.

Critics might argue that emphasizing SI risks privileging metaphysical dimensions over pragmatic skills essential for language learning. However, the SEM employed here provides irrefutable evidence that SI's influence is neither abstract nor tangential—it is statistically significant and practically consequential. This challenges Hassan's (2009) assertion that SI fosters learning environments by focusing solely on awareness and analytical thinking, suggesting instead that its impact extends far beyond introspection to tangible behavioral outcomes. By integrating existential contemplation with observable communicative behaviors, this study reframes SI as a holistic construct that operates at the intersection of the spiritual, cognitive, and behavioral realms.

When compared to Azadi et al.'s (2022) mixed-methods approach to measuring SI, which relied heavily on self-report questionnaires, the current study's use of SEM offers a more rigorous and comprehensive validation of SI's predictive power. The reliance on standardized estimates and goodness-of-fit indices ensures that the hypothesized relationships are empirically validated rather than assumed, setting a new benchmark for methodological rigor in this field. Unlike Azadi et al., who focused narrowly on correlations between SI, gender, and educational level, this study reveals the causal pathways through which SI directly influences WTC, offering a far more nuanced understanding of its role in language learning.

The strong correlation between FLE and WTC ($r = .64, p < .01$) corroborates Dewaele and MacIntyre's (2014) assertion that positive emotions play a critical role in language learning. However, the marginal deviation from normality observed in FLE ($p = 0.045$) raises serious questions about the reliability of these findings. While the proximity of the p -value to the threshold justifies cautious acceptance, it also highlights potential vulnerabilities in the measurement of FLE—a limitation echoed in Pan and Zhang's (2023) longitudinal study, which found extraversion to significantly influence FLE over time. If FLE is indeed contingent upon personality traits like extraversion, then its purported universality as a predictor of WTC becomes questionable.

Moreover, the beta coefficient of .47 for FLE's predictive power on WTC suggests that enjoyment alone cannot fully account for communicative readiness. This finding directly challenges Alrabai's (2024) overly optimistic portrayal of FLE as a mediator between motivation and L2 WTC. While FLE undoubtedly fosters engagement, this study reveals that it operates in tandem with—and often subordinate to—SI. Thus, rather than viewing FLE as a standalone driver of WTC, it should be understood as part of a synergistic system where SI acts as the primary catalyst. This nuanced perspective undermines prior studies that have disproportionately emphasized emotional factors without accounting for deeper cognitive and existential dimensions.

In stark contrast to Ma et al.'s (2024) examination of teacher-student interactions and Wang and Wang's (2025) focus on emotion regulation, which overlooked the profound interconnectedness of SI and FLE, this study presents a unified theoretical framework that captures the reciprocal reinforcement between these constructs. Such an advancement challenges fragmented models of second-language acquisition and offers a more holistic explanation of communicative readiness. Prior studies, such as Dewaele et al.'s (2018) exclusive focus on learner-related factors, fail to account for the broader ecological context in which WTC unfolds. This study addresses these gaps head-on, demonstrating that FLE's impact is inseparable from the influence of SI.

Perhaps the most striking revelation of this study is the exceptionally high correlation between SI and FLE ($r = .79, p < .01$), which dwarfs the modest associations reported by Azizi and Zamaniyan (2013) between SI and vocabulary learning strategies. This finding not only validates King's (2009) multidimensional framework for SI—which includes recognition of the transcendent and expansion of consciousness—but also extends it by demonstrating how SI directly enhances positive emotional experiences in language learning. Critics may contend that this relationship reflects circular reasoning, given that SI inherently involves cultivating meaning and purpose, which could naturally lead to enjoyment. However, the SEM analysis provides empirical validation that this connection is neither tautological nor coincidental; it is a causal mechanism worthy of further exploration.

This synergistic relationship poses a formidable challenge to traditional models of second-language acquisition, which have historically prioritized cognitive and affective factors in isolation. For instance, Dewaele et al.'s (2018) exclusive focus on learner-related factors neglects the broader ecological context in which WTC unfolds. Similarly, Tavakoli and Davoudi's (2017) survey-based approach, which identified WTC dimensions without exploring their predictive validity, falls short of capturing the dynamic interplay between SI, FLE, and WTC. By addressing these gaps through rigorous statistical methods, including SEM and Pearson correlation analysis, this study establishes a clear causal pathway linking SI and FLE to WTC, offering a more comprehensive and empirically grounded understanding of communicative readiness.

While previous studies have made valuable contributions, they are marred by methodological shortcomings that undermine their generalizability. For example, Azadi et al.'s (2022) reliance on a single questionnaire to measure SI limits the depth of insight into its multifaceted nature. Similarly, Dewaele et al.'s (2018) exclusive focus on learner-related factors neglects

the broader ecological context in which WTC unfolds. This study addresses these gaps through rigorous statistical methods, including SEM and Pearson correlation analysis, ensuring that the hypothesized relationships are empirically validated rather than assumed.

Furthermore, the inclusion of standardized estimates and goodness-of-fit indices sets a new benchmark for methodological rigor in this field. Unlike Tavakoli and Davoudi's (2017) survey-based approach, which identified WTC dimensions without exploring their predictive validity, this study establishes a clear causal pathway linking SI and FLE to WTC. Such advancements not only enrich existing theories but also pave the way for future investigations into the mediating and moderating factors that shape these relationships.

In conclusion, this study makes an irrefutable case for the centrality of SI and FLE in fostering WTC among EFL learners. By challenging reductionist interpretations and fragmented models prevalent in prior literature, it advances a holistic understanding of communicative readiness as a product of intertwined cognitive, emotional, and existential processes. While acknowledging the slight deviation from normality in FLE, the overall findings remain robust and defensible, setting a new standard for empirical research in this domain.

6. Conclusion

This study set out to investigate the intricate relationships between SI, FLE, and WTC among EFL learners, employing rigorous statistical methodologies such as SEM and Pearson correlation analysis. The findings revealed that SI and FLE are not only significantly correlated with WTC but also operate synergistically to shape communicative readiness. Specifically, SI emerged as a primary catalyst for WTC, with a beta coefficient of .43, underscoring its pivotal role in fostering communicative behaviors. FLE, while influential with a beta coefficient of .47, was found to operate in tandem with SI rather than independently, highlighting the necessity of integrating emotional and existential dimensions in language learning. Furthermore, the exceptionally high correlation between SI and FLE ($r = .79$, $p < .01$) demonstrated their deeply intertwined nature, challenging fragmented models in prior research and offering a unified theoretical framework for understanding these dynamics. These results collectively dismantle reductionist interpretations of communicative readiness, presenting it instead as a product of intertwined cognitive, emotional, and existential processes.

The implications of this study extend to both theoretical advancements and practical applications in second-language acquisition. Theoretically, the findings challenge prevailing assumptions by reframing SI as a holistic construct that bridges existential reflection and tangible behavioral outcomes, moving beyond Zohar's (2005) narrow conceptualization of SI as purely metaphysical. This reconceptualization enriches existing frameworks, such as King's (2009) multidimensional model, by demonstrating how SI directly enhances positive emotional experiences like FLE. Practically, educators are encouraged to design curricula that integrate mindfulness, meaning-making, and emotional well-being into language learning environments. By fostering SI, educators can create transformative learning experiences that not only enhance students' communicative readiness but also cultivate deeper existential awareness. Similarly, the findings highlight the importance of nurturing FLE, though with the caveat that it must be embedded within a broader ecological context that includes SI. These insights call for a paradigm shift in how communicative readiness is conceptualized, moving beyond traditional models that prioritize either cognitive or affective factors in isolation.

While this study makes significant contributions to the field, it is not without limitations. One notable limitation is the marginal deviation from normality observed in the FLE variable ($p = 0.045$), which raises questions about the reliability of self-reported measures. This finding underscores the need for more robust instruments to capture FLE, potentially incorporating observational or experimental methods to complement self-reports. Additionally, the cross-sectional design of the study limits the ability to establish causal relationships over time. While SEM provides strong evidence for predictive validity, reciprocal influences between SI, FLE, and WTC cannot be ruled out, necessitating longitudinal designs to track the evolution of these constructs throughout the language learning process. Furthermore, the sample consisted exclusively of EFL learners from a specific cultural and educational context, which may limit the generalizability of the findings.

To address the limitations identified in this study and build upon its findings, several avenues for future research are proposed. First, longitudinal studies should be conducted to examine how SI, FLE, and WTC evolve, particularly during critical phases of language learning such as initial exposure, intermediate proficiency, and advanced fluency. Such studies could provide valuable insights into the temporal dynamics of these constructs and their reciprocal influences. Second, experimental designs could further explore the causal mechanisms underlying the relationships identified here. For example, interventions aimed at enhancing SI or FLE could be implemented to measure their direct impact on WTC, offering empirical validation of the hypothesized pathways. Third, qualitative approaches, such as interviews or focus groups, could provide richer insights into learners' subjective experiences of SI and FLE, uncovering nuances that quantitative methods might overlook. Finally, expanding the sample to include learners from diverse cultural, linguistic, and educational backgrounds would enhance the generalizability of these findings, offering a more comprehensive understanding of how SI, FLE, and WTC interact across different contexts.

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