

**The strength of Self and L2 Willingness to Communicate: The role of L2 Grit,
Ideal L2 Self and Growth Language Mindset**

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Abstract

Positive psychology emphasizes the role that character strengths play in the achievement of goals. In this study, we examined character strengths in the context of second language (L2) learning and their role in a critical goal of L2 learning - the Willingness to Communicate (WTC) in the target language. Specifically, we examined the impact of L2 Grit, Ideal L2 Self, and Language Mindset as complex direct and indirect predictors of WTC. Data was collected from 450 EFL learners. The predictor of L2 Grit, and the possible mediators of Ideal L2 Self and Language Mindset, and the outcome variable of WTC was modelled in a latent mediation model. Results indicated that Ideal L2 Self and Language Mindset fully mediated the relationship between L2 Grit and WTC. As such, the study highlighted the role that personal strengths such as grittiness, self-motivation and a growth mindset can have in the L2 learning context.

Keywords: L2 willingness to communicate, L2 grit, ideal L2 self, growth language mindset, mediation analysis

Introduction

A well-known proverb states that ‘smooth seas do not make skillful sailors’, implying that in order to gain skills and develop, an individual has to face and overcome challenges and difficulties. The learning of an additional language is in itself fraught with difficulties, from the uncertainties and anxieties of language learning (Botes et al., 2020), to the boredom (Pawlak et al.,

202) and waning motivation (Williams et al., 2002) experienced in language classrooms, to perhaps the most difficult challenge: Communicating in the target language. L2 Willingness to Communicate (WTC), a readiness to enter communication using an L2 (MacIntyre et al., 1998), plays a pivotal role in second/foreign language acquisition and is considered to be a goal of this process.

Within positive psychology, the fulfillment of goals and achievements have been linked to character strengths (Park & Peterson, 2009), with these strengths defined as “manifestations of an individual’s potential” (Lavy, 2020, p. 573). The role that strength of character plays in achieving outcomes has been investigated within the general school context (Lavy, 2020), in higher education (Lounsbury et al., 2009), within the workplace (Harzer & Ruch, 2013), and in sporting achievements (Bradley & Worth, 2017). Character strengths that specifically play a role in education include love of learning, persistence, future-mindedness, self-regulation, and creativity (Lavy, 2020). Within this manuscript, we extend the idea of character strengths as a key factor in the achievement of goals in education to the realm of L2 learning. Specifically, we examine existing variables through the lens domain-specific character strengths and examine the role that these language learning strengths play on the outcome of L2 WTC. In particular, we examine three strengths, namely, L2 Grit, Ideal L2 Self, and Language Mindset.

L2 Grit was developed as a domain-specific form of grit, therefore adapting the popular individual difference variable of grit to the domain of L2 learning (Teimouri et al., 2022). Domain-general grit captures the differences between individuals’ achievements, with the same intellectual talent, in both educational and non-educational contexts (Duckworth & Quinn, 2009). Grit is therefore the sustained effort, perseverance and patience that sets individuals apart and that leads to achievement and the fulfillment of goals (Duckworth et al., 2007). Domain-general grit has also

been considered as a performance character strength (Christopoulou et al., 2018). L2 Grit, in turn, captures the perseverance of effort and consistency of interest in the L2 learning domain and has been linked to L2 achievement (Dörnyei & Ushioda, 2013; Sudina & Plonsky, 2021). Within this study, we further extend the domain specificity of L2 Grit research, by examining L2 Grit through the lens of a character strength in L2 learning.

Motivation has been proposed as a key influencer of classroom communication. Ideal L2 self (ILS) as one of the three components of Dörnyei's (2009) L2 motivational self-system (L2MSS), captures the ideal image of the future L2 user one wishes to become and can be seen as a future orientation. Within the literature of character strengths, future mindedness and future orientation have been linked with educational outcomes (Lavy, 2020) and specifically with academic achievement (Schmidt et al., 2006). As such, we examine ILS as a domain-specific form of future mindedness/future orientation, that in turn can be seen as a domain-specific character strength.

The last domain-specific character strength to be considered is that of mindset. Lou and Noels (2016) extended the general notion of mindset (Dweck, 1999) to the L2 field, explaining that it refers to diverse individuals' beliefs about the nature of language learning. They proposed that language learners with a growth LM hold the belief that the language learning process is malleable and that success in learning the L2 language is tied to hard work and effort. In contrast, language learners with a fixed LM accept the innate nature of language learning and believe that being gifted a natural talent is the only predictor of success in language learning (Lou & Noels, 2017). Mindset and beliefs about one's ability have been directly linked with character strengths (Sheehan & Ryan, 2017), particularly in education (Lottman et al., 2017), with some education intervention studies particularly targeted at developing a "strengths mindset" in students (see Lavy,

2020 for overview). As such, we also examine LM within the L2 context as a domain-specific character strength.

Therefore, the aim of this study is to examine character strengths as direct and indirect predictors of goal achievement, the foundational premise with which positive psychology approaches character strengths research (Peterson & Seligman, 2004). However, we examine the link between character strengths and goals within the context of L2 learning, where the outcome variable of WTC and the character strengths of L2 Grit, ILS, and LM are domain-specific variables aimed at capturing the unique process of language learning.

Literature Review

Positive Psychology and Character Strengths

Positive psychology, the field of psychology that studies ‘the good life’, is built upon three pillars of positivity: Positive subjective experiences, positive individual traits, and positive institutions (Seligman & Csikszentmihalyi, 2000). Of these, the second pillar of positive individual traits includes the examination of ‘good character’ – i.e. what characteristics contribute to a life well lead and what makes someone a good character? Park and Peterson (2004), defined good character as follows:

“Good character is what we look for in leaders, what we look for in teachers and students, what we look for in colleagues at work, what parents look for in their children, and what friends look for in one another. Good character is not the absence of deficits and problems, but rather a well-developed family of traits” (p. 1).

Based on this concept of a good character, the Values in Action (VIA) project was initiated, which aimed to develop a practical framework of values and character strengths that contributes to overall well-being (Peterson & Seligman, 2004) – thus the ingredients to ‘the good life’. The

VIA framework identifies six core values, namely Wisdom and Knowledge, Courage, Humanity, Temperance, and Transcendence. Underlying each of these core values are character strengths with a total of 24 character strengths defined in the framework. For example, underlying the core value of Wisdom and Knowledge, is the character strengths of creativity, curiosity, open-mindedness, love and learning, and perspective (see Peterson & Seligman, 2004, for full list of strengths).

It should be noted that the VIA framework of character strengths is not a collection of wholly new or unique variables. Rather, the framework incorporated existing variables in positive psychology, educational psychology, social psychology and philosophy into one overarching framework of variables that may lead to success. For example, the variable of Open-Mindedness has long been a staple of personality psychology research (X) and is included under the core value of Wisdom and Knowledge in the VIA framework. It is therefore on this basis of identifying existing variables that can be classified as an individual strength that we examine domain-specific L2 learning strengths and outcomes¹.

Some previous research in the L2 domain have in part examined character strengths, however character strengths are under-researched in the field. Gregersen et al., (2021) utilized the VIA character strengths framework to develop a targeted intervention in order to reduce language writing anxiety. Similar to the approach taken in this study, Alrabai and Alamer (2022) classified existing variables in the nomological network of language learning individual differences, specifically trait emotional intelligence and effort, and examined these strengths as predictors of

¹ However, it should be noted that the VIA framework as well as other philosophical treaties on character strengths (e.g. the Aristotelian perspective, Kristjánsson, 2013) is based on morality judgements. The design and implementation of the VIA framework, rests upon the assumption that these traits are morally valued. However, within the application of character strengths as predictors of L2 learning outcomes, we do impose a morality judgement. Rather the variables identified as character strengths within this study (L2 Grit, ILS, and LM) are existing domain-specific strengths that are hypothesized to contribute to the goal of L2 WTC.

language emotions and L2 resilience. Lastly, in a qualitative study, Piasecka (2006) linked L2 reading (particularly reading of poetry) and character strengths development.

This study will therefore expand the literature on character strengths and L2 research by being the first to examine the domain-specific strengths of L2 Grit, ILS, and LM in conjunction as predictors of L2 WTC.

Ideal L2 Self

Language acquisition, like any other human endeavor, is a journey that requires motivation. To highlight the importance of motivation in language learning, Dörnyei (2005) argues that motivation is the key impetus to start learning an L2 and to carry on through the long and arduous journey. Dörnyei's (2005, 2009) L2MSS has its roots in self-discrepancy theory (Higgins, 1987) and possible selves theory (Markus & Nurius, 1986), with the L2MSS proposing three sources of motivation; namely, ILS, ought-to L2 self, and language learning experience. According to this theory, motivation constitutes the desire to reduce the discrepancy between one's actual self and ideal or ought to selves (Dörnyei, 2009). According to the research on the components of L2MSS, ILS has been introduced as the dominant factor within the system (Rattanaphumma, 2016; Teimouri, 2017).

ILS can be consider a language learning character strength. The variable captures an idealized future language learning self that can be linked to the strengths of hope, future mindedness and future orientations specified in the VIA framework, under the core value of Transcendence. This general strength "represents a cognitive, emotional and motivational stance towards the future" (Peterson & Seligman, 2004, p. 569), whereas ILS represents a specific stance towards the future as a language learner and is therefore theorized to predict goal outcomes such as WTC.

Building upon Dörnyei's (2005) hypothesis regarding a positive relationship between learners' ILS and their WTC, a strand of research has shed light on this connection (see Darling & Chanyoo, 2018; Pavelescu, 2023; Zulkepli, 2020). In 2013, Munezane corroborated Dörnyei's (2005) hypothesis for the first time and argued that language learners who imagine themselves as proficient English speakers enjoy higher levels of WTC. Ever since research has provided further evidence regarding the role of ILS on WTC. More recently, Lee and Lu (2021) investigated the relationship among 417 Korean EFL learners' WTC and L2MSS. According to their quantitative and qualitative data ILS was a significant predictor of WTC inside the classroom. ILS has also been studied in relation to ID variables and emotions. For instance, Zhang et al. (2022) have tested a model of growth mindset, ILS, boredom, and WTC in the Iranian EFL context. The data gathered from 437 Iranian EFL learners was analyzed through structural equation modeling (SEM) analysis and revealed that while ILS was the strongest predictor of WTC, growth mindset did not have a direct and significant role in WTC. Sadoughi and Hejazi (2023) have also reported the positive effect of ILS on the WTC of Iranian EFL learners. More relevant to the present study, Sadoughi et al. (2023) examined the possible mediation role of L2MSS components among growth LM and academic engagement and found that ILS mediated the path among growth mindsets and academic engagement. The authors argued that learners with a growth LM can imagine a clear and positive future ILS, which turns into a source of motivation for language learning leading to increased engagement. Building upon the available literature on the direct and indirect roles of ILS, it may be hypothesized that ILS would mediate the link between L2 Grit and WTC.

Language Mindset

Over the last two decades, linguists have extended the general concept of mindset developed by Dweck and her colleagues (Dweck, 1999; Dweck & Leggett, 1988) to various educational and non-educational domains. Researchers have realized that individual mindsets can be highly domain-specific, which gives rise to the possibility of having different mindsets (i.e., fixed or growth) towards different domains (e.g., painting, language learning; Khajavy et al., 2021; Yao et al., 2021). More recently, mindsets have also been examined in terms of language learners' beliefs about foreign language (FL) learning, characterized as LM (e.g., Mercer & Ryan, 2010; Ryan & Mercer, 2012).

Among the early studies on language mindset, Ryan and Mercer (2012) explained the possibility of having different mindsets about different sub-domains of language learning (e.g., writing & speaking). These findings along with several other studies (Bodil & Roberts, 2013; Lüftenegger & Chen, 2017) were against the early reductionist conceptualization of mindset (e.g., Dweck, 1999; Dweck & Leggett, 1988) that considered fixed and growth mindset as the opposite end of a continuum. They claimed that individuals can endorse both categorical (fixed or growth) or mixed mindsets (both fixed and growth mindsets; Lou et al., 2022; Zarrinabadi & Afsharmehr, 2022).

In response to Ryan and Mercer's (2012) call for developing a language domain-specific mindset scale, Lou and Noels (2017) introduced the concept of LM, focusing on language learners' beliefs about learning a FL. Due to the complicated nature of learning a language that comprises multiple beliefs, Lou and Noels (2017) developed a domain-specific scale (i.e., language mindset inventory), that included three major parts, namely, general language intelligence beliefs (GLB), second language aptitude beliefs (L2B), and age sensitivity beliefs about language learning (ASB). GBL, which is similar to the general notion of implicit beliefs (Dweck, 2006), refers to the

learners' mindset about the fixed or malleable nature of language learning. L2B examines whether students believe that language aptitude can be improved with hard work or it is fixed. ASB discusses the importance of the critical period of learning a new language and examines how learners perceive the significance of age for this process (Lou & Noels, 2017). In terms of examining LM as a language learning character strength, the variable and its subscales can be likened to the VIA character strength of 'love of learning', a strength underlying the core value of Wisdom and Knowledge. 'Love of learning' encompasses a mastery orientation and beliefs about ability (Peterson & Seligman, 2004), which in the case of L2 learning would imply having a growth mindset with positive beliefs about one's own ability to master language learning.

Previous research into the nature of LM has indicated that learners who endorse a growth LM are more likely to adopt mastery goals (Lou & Noels, 2017), less prone to the negative feelings of boredom and anxiety (Zhang et al., 2022), and more engaged in the classroom (Eren & Rakıcioğlu-Söylemez, 2020; Ozdemir & Papi, 2022). On the other hand, EFL learners with a fixed LM feel more anxious facing challenges and rejection (Lou & Noels, 2020), and lose their interest during the process of language learning (Khajavy et al., 2021). Moreover, among the few studies that examined the antecedents of LM, Zarrinabadi et al. (2021) found that EFL learners who consider their teachers more autonomy supportive are more inclined to have a growth LM. Among the few studies that have examined growth LM as a mediator, Zarrinabadi et al. (2021) reported that growth LM mediated the path between autonomy support and WTC. Furthermore, this study is a response to previous research suggesting that LM "do not act alone" and is "systematically intertwined in a meaning system" with other motivational factors (Lou et al., 2022, p. 2). Therefore, examining growth LM as a mediator seems promising.

L2 Grit

Duckworth et al. (2007) proposed the concept of grit and defined it as “perseverance and passion for long-term goals” (p. 1087). They conceptualized grit as a higher-order construct that comprised two sub-dimensions: Perseverance of Effort (i.e., continued investment of energy and effort in long-term pursuits) and Consistency of Interest (i.e., sturdy passion for high-order goals over a long period regardless of failures). They explained that gritty individuals work effortlessly toward achieving their goals and maintain their interest during the process, despite challenges and failures. Since grit is not a fixed personality trait and is malleable and teachable (Park et al., 2018), the importance of measuring and promoting grit is gaining unprecedented attention. Duckworth and her colleagues developed two domain-general grit scales namely, Grit-O (Duckworth et al., 2007) and Grit-S (Duckworth & Quinn, 2009) that could be applied to different fields. General psychology scales of personality, however, are criticized by many other scholars for failing in achieving domain-specific valid results, urging researchers to develop domain-specific instruments (see Credé, 2018).

Responding to a call for developing L2 domain-specific instrument to measure L2 Grit, Teimouri et al. (2022) validated a questionnaire through principal component analysis (PCA) resulting in the reduction of the 12 items in the general grit scale to 9 items. They suggested that the lower components of grit should be examined separately. In their study, the researchers used a sample number of 191 Iranian language learners and established that unlike the observed results gained from the domain-general grit scale, L2 Grit correlates positively with students’ motivation and achievement. Following this line of inquiry, a growing number of studies have investigated the possible role that L2 Grit can play in the L2 process and how this variable is related to other psychological factors by employing domain-specific scales of grit (Yang et al., 2022). Previous

studies have found that gritty EFL learners had higher WTC (Ebn-Abbasi et al., 2022), tended to endorse a growth mindset (Khajavy et al., 2021), and were more likely to enjoy the classes (Lee, 2020). Moreover, regarding EFL teachers, grit was found to be positively correlated with their immunity and work engagement (Azari Noughabi et al., 2022), and teaching enjoyment (Derakhshan et al., 2022).

In terms of examining L2 Grit as a character strength, domain-general grit has long been defined and examined as such (see Christopoulou et al., 2018; Pryiomka, 2018; Singh & Jha, 2008). Specifically, grit (and by extension L2 Grit) is linked to the VIA character strength of persistence, which is categorized under the core value of Courage. Persistence in the VIA framework defined as the “voluntary continuation of a goal-directed action in spite of obstacles, difficulties, or discouragement” (Peterson & Seligman, 2004, p. 229) and can be directly linked to the two subscales of L2 Grit – Persistence of Effort and Consistency of Interest.

There are, however, several inconsistencies in the results of grit studies. Several studies have reported the superior predictive power of Perseverance of Effort over the Consistency of Interest (e.g., Lee, 2020; Ebn-Abbasi et al., 2022). Feng and Papi (2020, p.8) claimed that perseverance of effort is the only valid construct of grit, and since perseverance has already been established as a personality ID, the concept of grit is merely an “old wine in new bottles.” Previous research has suggested that the major problem regarding studies on L2 Grit is the use of domain-general scales (Khajavy et al., 2021; Teimouri et al., 2022) which have questionable construct validity (Credé, 2018; Morell et al., 2021). These problems have led to criticism of the L2 Grit concept which calls for more comprehensive studies that examine grit from different perspectives and in relation to other related and similar variables. Moreover, there is a paucity of studies

examining the predictive power of L2 Grit over outcome goals by considering other psychological factors as mediating variables.

L2 Willingness to Communicate

Building upon the original concept of WTC in the first language (L1) proposed by McCroskey and Baer (1985), L2 researchers extended this construct to the SLA domain (see MacIntyre et al., 1998). Studies on L1 WTC tended to explain individuals' predisposition to engage in or avoid interpersonal communication and considered this concept as a trait-like tendency that is stable across different situations and over time (McCroskey & Baer, 1985). MacIntyre et al. (1998, p. 547), however, defined WTC in an L2 as a "readiness to enter into discourse at a particular time with a specific person or persons, using an L2" which highlighted the dynamic nature of WTC. They explained that, besides fixed personality variables, context variations could also directly affect students' WTC. MacIntyre et al. (1998) developed the Heuristic model of WTC (Figure 1) covering a series of influential linguistic, situational, and psychological variables regarding WTC. Theoretical developments and research in language learners' WTC have led to a better understanding of the convoluted nature of communication in the target language.

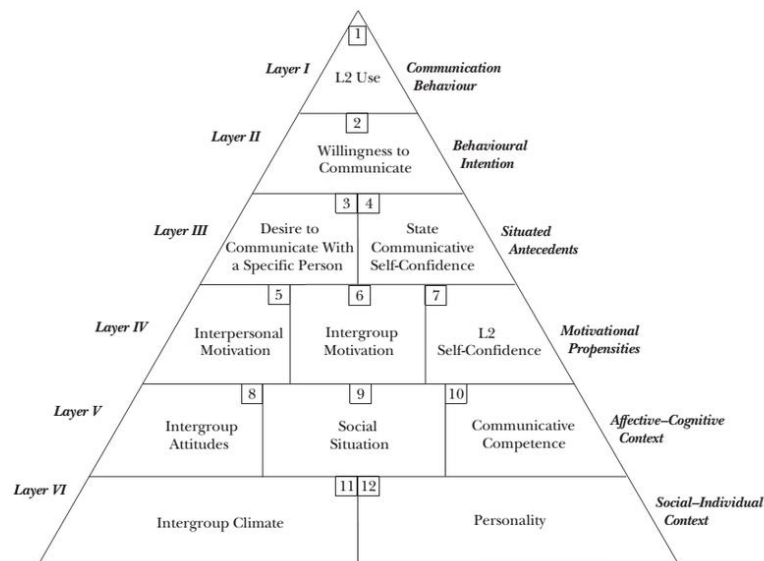


Figure 1.

The Heuristic model by MacIntyre et al. (1998)

Learning to speak and speaking to learn has garnered vast attention over the last decades in SLA research (e.g., Lee & Hsieh, 2019; Wang et al., 2021). As a result, numerous researchers have investigated the nature of EFL learners' WTC in different contexts and scrutinized significant promoting or hindering factors concerning learners' inclination to embrace or avoid communication opportunities. Previous studies adopting a situated and dynamic perspective have suggested that WTC is affected by situational state-like factors such as immediacy with the teacher and rapport (Cai, 2021), group cohesiveness (Dörnyei & Murphey, 2009), and the topic (Pawlak & Mystkowska-Wiertelak, 2015). Additionally, individual trait-like factors, such as perceived teachers' emotional support (Wei & Xu, 2022), psychological shyness (Lan et al., 2021), and L2 anxiety (Peng, 2015) were also found to exert an effect on WTC.

Next to the irrefutable role of cognitive variables in explaining language learners' success and achievement (Boykin, 2000; Henriksen et al., 2014), it has been argued that non-cognitive factors such as psychological and personality variables are also essential to include in models and theories predicting the academic achievement of learners (WTC in our case; Akos et al., 2022; Farruggia et al., 2018). Despite the vast research attention given to WTC in the literature over the last decades, more research into the nature of WTC and its antecedents is yet needed. Therefore, in the present study, we examine WTC as a goal outcome variable in L2 learning and we examine the impact of the L2 specific character strengths of L2 Grit, ILS, and growth LM on WTC.

Specifically, the possibility of ILS and growth LM mediating the relationship between L2 Grit and WTC was explored. A double mediation model is more likely to warrant a deeper understanding of the relationship between WTC and L2 Grit. Inspired by the reviewed literature and previous findings, we hypothesize that grittier students are more likely to believe that they can improve their linguistic knowledge and hold positive and ideal pictures of themselves using English in the future, which can consequently promote their WTC. More specifically, the following research hypotheses will be explored in this study:

H₁: L2 Grit positively predicts WTC.

H₂: ILS mediates the relationship between L2 Grit and WTC.

H₃: Growth LM mediates the relationship between L2 Grit and WTC.

Method

Participants

Participants in this study were from private English language schools in Iran and were selected through the snowball sampling method. Data were collected online through Google Forms. A total of $n = 450$ participants were included in the study (Male = 161; Female = 289). The average age of the sample was 19.97 years ($SD = 2.05$). No students had any immersion experiences with English, meaning that no participant had studied or lived in an English-speaking country. The majority of participants had a basic level proficiency in English ($n = 230$; A2 on the Common European Framework of Reference for Languages [CEFR]; Council of Europe, 2001), followed by beginner proficiency ($n = 156$; A1 on the CEFR), and intermediate ($n = 59$, B1 on the CEFR). Participants with lower levels of English proficiency were deliberately targeted, as previous studies on LM have suggested that LM is a more potent construct and can have a more

observable influence on EFL learners with lower language proficiencies (e.g., Lou & Noels, 2022; Yeager et al., 2019). The participants were fully informed of the purpose of the research by their teachers and were assured that their participation was voluntary.

Instruments

All questionnaires were translated into Persian via backward and forward translation methods with the help of one professional translator. The Persian language versions of scales can be found in the supplementary materials. An initial pilot study of $n = 15$ participants from the target population was also conducted to avoid any confusion among the participants, and their comments were discussed and addressed. Below, the employed instruments are discussed:

L2 Willingness to Communicate ($\alpha = .947$; $\omega = .948$). The 10-item WTC scale was utilized to examine WTC among the participants (Peng & Woodrow, 2010). Items included assessed students' WTC inside the classroom (e.g., 'I am willing to ask my peer sitting next to me in English the meaning of an English word'). WTC was modeled unidimensionally and items were measured on a 5-point Likert scale ranging from 1 (definitely not willing) to 5 (definitely willing).

L2 Motivational Self System ($\alpha = .926$; $\omega = .926$). ILS via the subscale from the original L2 Motivational Self System questionnaire (Taguchi et al., 2009), which in total consisted of 76 items, including 53 statements and 23 questions. The 10 items measuring ILS were utilised as a unidimensional measure to capture motivation to learn English. These items (e.g., ILS: 'I can imagine myself living abroad and having a discussion in English') were measured on a 5-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree).

Language Mindset Inventory (LMI; $\alpha = .927$; $\omega = .927$). LM was measured through a modified version of LMI adopted by Wang et al. (2021). The original questionnaire (Lou & Noels, 2017) included 18 items with three subcategories, namely, general language intelligence beliefs (e.g., ‘No matter who you are, you can significantly change your language intelligence level’; $\alpha = .903$; $\omega = .904$), second language aptitude beliefs (e.g., ‘In learning a foreign language, if you work hard at it, you will always get better’; $\alpha = .900$; $\omega = .903$), and age sensitivity beliefs about language learning (e.g., ‘Everyone could do well in a foreign language if they try hard, whether they are young or old’; $\alpha = .861$; $\omega = .867$). Each section included six items (three growth LM & three fixed LM items). The fixed mindset items needed to be reversed coded. Wang et al. (2021, p. 5) explained that based on the literature, “reverse-worded items are cognitively burdensome for respondents and thus contribute to measurement error and respondent fatigue”; therefore, they removed the nine reversed items. As such, growth LM was measured through nine positively worded items, with three items in each subcategory. The measure was modeled as a higher-order factor. The participants responded to the items on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

L2 Grit ($\alpha = .874$; $\omega = .866$) The L2 domain-specific grit scale developed by Teimouri et al. (2022) was used in this study. L2 Grit was modeled as a higher-order factor with two lower-order subfactors, namely Perseverance of Effort and Consistency of Interest. The Perseverance of Effort subscale included five items, e.g. ‘I am a diligent English language learner’ ($\alpha = .869$; $\omega = .873$), whereas the Consistency of Interest subscale included four reverse-scaled items such as ‘I think I have lost my interest in learning English.’ ($\alpha = .882$;

$\omega = .888$). The participants selected their responses on a 5-point response rate ranging from 1 (strongly agree) to 5 (strongly disagree).

Data Analysis

All data analysis occurred through JASP (version 0.17.1; JASP Team, 2023). Pearson correlation coefficients were calculated between all variables. As a first step, and in line with the best practice recommendations for structural equation modelling (Kline, 2023), the measurement models of the individual latent variables were examined. The measurement models were estimated using Diagonally Weighted Least Squares estimation, as all variables were ordinal and measured via 5-point Likert scales (Li, 2016). Model fit was determined via the recommendations of Kenny (2020), through the fit indices of the Comparative Fit Index (CFI; close fit $> .95$; reasonable fit $> .90$), Tucker-Lewis Index (TLI; close fit $> .95$; reasonable fit $> .90$), Standardised Root Mean Square Residual (SRMR close fit $< .05$; reasonable fit $< .08$), and the Root Mean Square Error of Approximation (RMSEA; close fit $< .05$; reasonable fit $< .08$). The modification indices of the measurement models were inspected for possible misspecifications.

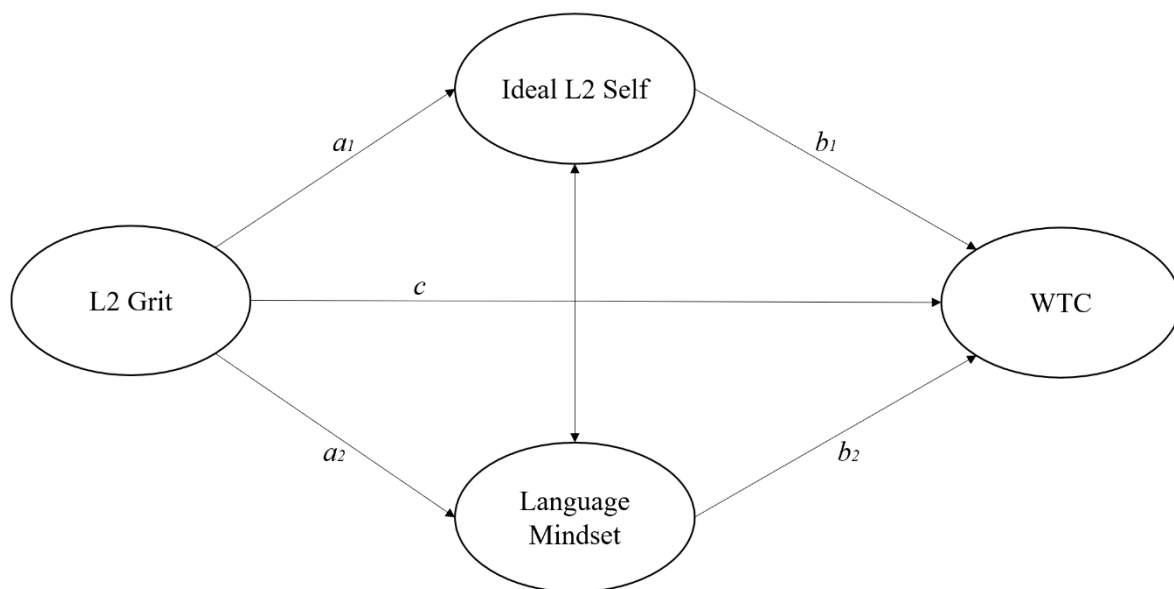
The main research aims of this study, namely possible direct and indirect effects between L2 Grit, ILS, growth LM, and WTC was explored via a latent mediation model (see Figure 2). The model was calculated in lavaan (Rosseel, 2012), following the recommendations of Kline (2015). A mediation effect was confirmed if the following expectations were met (Kline, 2015):

1. The predictor (L2 Grit) had a statistically significant effect on the outcome variable (WTC).
2. The predictor (L2 Grit) had a statistically significant effect on the mediators (ILS and growth LM), and as such paths a_1 and a_2 were not zero.

3. The mediators (ILS and growth LM) had a statistically significant effect on the outcome variable (WTC), and as such paths b_1 and b_2 were not zero.
4. Full mediation was declared if the mediators of ILS and growth LM were responsible for all variance explained between the predictor (L2 Grit) and outcome variable (WTC), and as such path c was zero. In turn, should path c be statistically significant, a partial mediation was declared.

Figure 2.

Theoretical Mediation Model.



The latent model was also estimated using Diagonally Weighted Least Squares estimation and a bias-corrected bootstrap of 1000 samples was used in the error calculation (Biesanz et al., 2010). The sample size of $n = 450$ was deemed sufficient to examine the latent model. A total of 37 observed variables were measured, which met the recommendation of 10 participants in the sample per observed variable (Nunnally, 1967). In addition, the statistical power to test the

covariance model via the RMSEA was checked via the Preacher and Coffman (2006) calculations and found to be sufficient ($> .80$).

Results

Descriptive Statistics and Correlation Coefficients

Descriptive statistics of all variables are depicted in Table 1 and the correlation matrix of Pearson correlation coefficients can be found in Table 2. No skewness, kurtosis, or multicollinearity concerns were found in the data (Field, 2013).

Table 1

Descriptive Statistics

	<i>M</i>	<i>SD</i>	Min	Max	Skewness	Kurtosis
L2 Grit	3.460	.912	1.20	5.00	-.398	-1.037
ILS	3.664	.949	1.10	5.00	-.923	-.418
Growth LM	3.585	1.020	1.33	5.00	-.653	-1.093
WTC	3.651	1.050	1.00	5.00	-.835	-.724

Table 2

Correlation Matrix

	1.	2.	3.	4.
1. L2 Grit	-	.324**	.252**	.236**
2. ILS		-	.571**	.636**
3. Growth LM			-	.499**
4. WTC				-

Measurement Models

Measurement models for each of the four latent variables were analyzed (see Table 3). L2 Grit was modeled as a higher-order factor, indicated by the latent variables of Perseverance of Effort (in turn indicated by 5 items) and Consistency of Interest (indicated by four items). The first measurement model tested indicated poor fit (RMSEA = .129; SRMR = .100) and an examination of the factor loadings and modification indices indicated that item 5 of the Perseverance of Effort subscale ('I put much time and effort into improving my foreign language weaknesses') cross-loaded onto the Consistency of Interest subscale. As such, item 5 of the Perseverance of Effort subscale was removed in order to measure L2 Grit as a clear two-factor latent structure as designed in Teimouri et al. (2022). In addition, Items 1 and 2 of the Perseverance of Effort subscale ('I am a diligent English language learner' and 'When it comes to English, I am a hard-working learner') correlated highly ($r = .756; p < .001$), which may be due to the interpretation of 'diligence' and 'hard-work' as synonymous. Correlating the error variances of these items was recommended in the modification indices and this modification was applied in the adapted measurement model. The adapted L2 Grit measurement model showed a significant improvement in fit (RMSEA = .081; SRMR = .061) and was used in the latent mediation model.

Similarly, the measurement model of ILS indicated misfit (RMSEA = .123; SRMR = .112). Upon further inspection of the output and modification indices, it was found that items 1 and 2 if

the ILS Scale ('I can imagine myself living abroad and having a discussion in English' and 'I can imagine myself studying in a university where all my courses are taught in English') correlated highly ($r = .765$; $p < .001$). Both of these items imply an integrativeness motive (Gardner, 1985) and refer to living or studying in an international English-speaking environment. The error variances of these two items were correlated and an improvement in fit resulted (RMSEA = .086; SRMR = .082). The adapted ILS model was used in the latent mediation.

Both the higher-order growth LM measurement model, as well as the WTC measurement model, achieved close fit and were not modified (see Table 3).

Table 3

Fit Indices of Measurement Models

	χ^2	<i>df</i>	CFI	TLI	RMSEA	SRMR
L2 Grit	210.823	25	.955	.936	.129	.100
L2 Grit (adapted)	66.546	17	.984	.972	.081	.061
ILS	273.128	35	.958	.943	.123	.112
ILS (adapted)	142.458	33	.981	.970	.086	.082
Growth LM	39.266	24	.998	.996	.038	.043
WTC	120.738	35	.989	.983	.074	.071

Mediation Model

The latent model is depicted in Figure 3. The model achieved close fit ($\chi^2 (616) = 893.216$; $p < .001$), with CFI = .993, TLI = .993, and RMSEA = .032. All factor loadings were found to be sufficient, with the exception of the Consistency of Interest lower-order latent factor as an indicator of the higher-order L2 Grit ($\lambda = .222$), which can be considered low.

The latent model indicated a full mediation, as path *c* was not significant. The indirect effects and total effect of the model further support the conclusion of a full mediation, as the confidence intervals did not include zero (see Table 4). The indirect effect of ILS as a mediator had a moderate effect size ($\beta = .248, p < .001$) in comparison to the much smaller indirect effect of growth LM as a mediator ($\beta = .066, p < .001$).

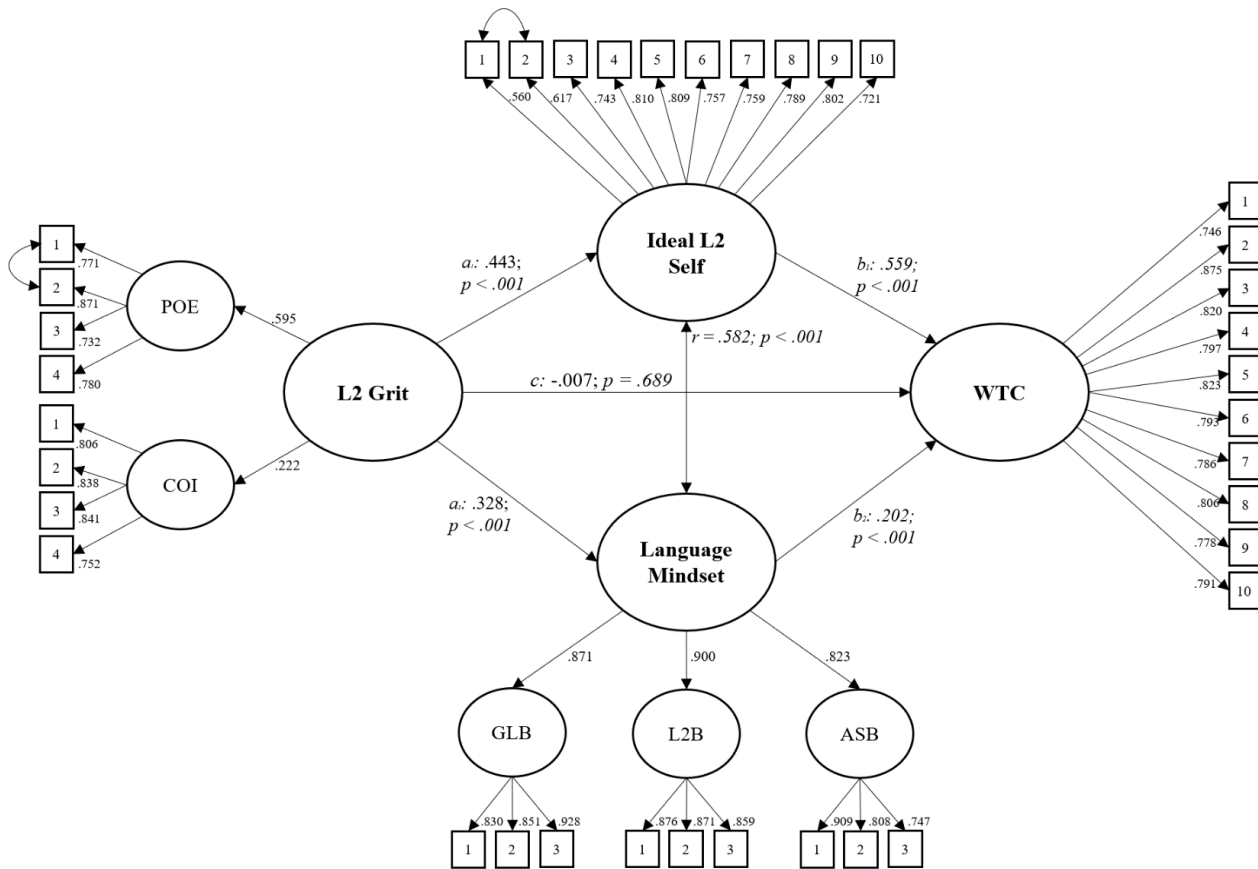
Table 4

Mediation Effects.

	Std. Estimate	Std. Error	z-value	p-value	95% Confidence Interval	
					Lower	Upper
Indirect Effect 1: L2 Grit → ILS → WTC	.248	.023	10.600	<.001	.200	.290
Indirect Effect 2: L2 Grit → Language Mindset → WTC	.066	.009	7.362	<.001	.048	.083
Total Effect: Grit → WTC	.307	.026	11.875	<.001	.254	.354

In summary, the latent model found that ILS and Language Mindset fully mediated the relationship between L2 Grit and WTC, resulting in an overall positive total effect ($\beta = .307; p < .001$).

Figure 3
Latent Mediation Model



Note. POE = Perseverance of Effort, COI = Consistency of Interest, GLB = General Language Intelligence Beliefs, L2B = Second Language Aptitude Beliefs, ASB = Age Sensitivity Beliefs. All factor loadings significant to $p < .001$.

Discussion

The present study is among the few works framing positive individual difference variables in L2 within the context of character strengths and examining the impact of these character strengths individually and in conjunction on a key outcome variable such as WTC. Moreover, growth LM had not been investigated as a mediating variable, linking another individual difference variable (i.e., L2 Grit) to an outcome variable (i.e., WTC). The findings supported all three character

strengths as individual predictors of WTC, thus supporting Hypothesis 1. This finding is consistent with the reported empirical findings in Lee and Dražati (2019) and Lee (2020) where they found that EFL learners with higher levels of L2 Grit had a greater WTC. The key finding of this research is the full mediation roles of ILS and growth LM in the relationship between L2 Grit and WTC, supporting the second and third hypotheses; underlining the pivotal role of positive character strengths in language acquisition. In other words, these character strengths resembled a ladder leading to being more willing to use the target language.

Among the two mediating variables, ILS was the stronger mediator explaining the relative priority of having a positive picture of oneself using English over holding a growth LM. In other words, gritty language learners, who hold positive and strong future self-images using English, are more motivated to continue their long-term, sometimes tedious, language journey and reach their goals (e.g., WTC). In fact, having a positive vision of a future L2 user one wishes to become, can be a strong source of motivation for EFL learners (Dornyei, 2009). Consequently, highly motivated language learners with the character strength of ILS would consistently and passionately pursue their long-term goals, while investing energy and effort in the process, which can ultimately enhance their readiness to enter discourse. The positive effect of ILS on EFL learners' WTC is also supported in previous studies (e.g., Sadoughi & Hejazi, 2023; Zhang et al., 2022).

The relationship between L2 Grit and WTC was also mediated through growth LM. While previous research had suggested varying findings regarding the predictive role of LM on WTC (e.g., Wang, 2021; Zarrinabadi et al., 2021), our results attest to the fact that gritty students who believe that the ability to learn a new language is malleable in nature and that their communicative competence can be developed through hard work and perseverance would be more likely to initiate or engage in the communication. In other words, developing and adopting the strength of a growth

LM would give rise to dedicating more time and energy (Ucar & Sungur, 2017). In comparison, EFL learners with a fixed LM believe that the capability regarding learning a new language is immutable, so they tend to blame their failure on a lack of ability and natural talent, avoid risks and contact, and become hesitant to set long-term goals (Lou & Noels, 2017, 2020).

Furthermore, ILS and growth LM were found to fully mediate the relationship between L2 Grit and WTC, highlighting the critical role these language learning strengths can play among gritty EFL learners to push them towards communication. These findings can be translated into specific and practical implications for EFL classrooms, especially for those teachers who struggle to motivate their students to participate in or start communication in the target language. Regarding the positive role of ILS on the relationship between L2 Grit and WTC and the necessity of promoting this variable among EFL learners, teachers can use some explicit techniques to help learners create clear and positive future self-images, such as defining long-term goals, writing future-oriented autobiographies (Al-Murtadha, 2019; Safdari 2019), and using highly communicative tasks, icebreakers, and warmers (Dornyei & Murphey, 2003). Additionally, both L2 Grit and growth LM can be cultivated among the learners. This goal can be accomplished by introducing the flexible nature of language learning and assuring the students that the talent for learning a new language is not carved in stone and can be improved through maintaining effort, passion, and persistence. Stakeholders, in a similar vein, are also suggested to include some specific courses and workshops to introduce these concepts to the learners and suggest ways to increase their communicative intentions in the L2. As suggested by earlier studies (e.g., Dweck, 2015; Lou & Noels, 2019; Yeager et al., 2016), workshops and interventions are effective in nurturing these variables among the learners. This would further promote their WTC and, subsequently, their tendency to communicate in L2.

Finally, some limitations should be taken into account while interpreting the results of this study. First, the data for this study was obtained through a self-reported questionnaire, which can be prone to socially desirable responses. Moreover, this method of data collection does not explain the *whys* behind the language learners' complicated language learning character strengths. Therefore, in order to attain an enriched understanding of the variables under study, the complex interplay between them, and how they affect EFL learners' communicative intentions, future studies can employ various methods of data collection. Second, it must also be mentioned that the relationships between the studied variables can be influenced by the age and gender of the participants which were not examined in this study; further studies can assess the effect of these constructs as well. Third, the present study investigated the relationship between L2 Grit, ILS, WTC, and growth LM in the context of Iran. Thus, exploring this topic in different L2 learning contexts through experimental and longitudinal designs could generalize our understanding of the dynamics of character strengths and make it easier to draw conclusions about the underlying relations among these variables.

Conclusion

In our opening paragraph, we likened language learning to the proverb of 'smooth seas do not make skillful sailors'. We hypothesized that in order to weather the challenges posed by language learning and specifically the challenge of communicating in the target language, a language learner may require strength of character in order to become the 'skillful sailor'. Specifically, our findings unveiled the positive impact of L2 Grit, ILS, and LM can have (both directly and indirectly) on WTC in a latent mediation model. As such, our study demonstrates the role of strength of self in the language learning process.

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