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Structural Equation Modelling of the Relationship Between EFL Learners' Language Mindset and Individual Attributes: The Case of Speaking Anxiety, Demotivation, and Resilience

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Abstract

This study was conducted with the overarching aim of exploring a diverse set of objectives. The primary intent was to investigate the potential significance of language mindsets in predicting the levels of second language (L2) speaking anxiety, demotivation, and resilience. Furthermore, the study sought to delve into the intricate network of direct and indirect relationships existing among the aforementioned variables. To address these research goals, a correlational survey design was adopted. Employing survey questionnaires, including the Motivated Strategies for Learning Questionnaire (MSLQ), Foreign Language Speaking Anxiety (FLSA) scale, and Demotivation Questionnaire, data were collected from a sample of over 700 intermediate English as a Foreign Language (EFL) learners. This cohort was drawn through the convenient sampling technique from various language institutes situated in Isfahan, Iran. The gathered data were subjected to comprehensive statistical analysis employing the path analysis technique within the SmartPLS environment. The ensuing findings yielded noteworthy insights. Notably, it was revealed that there exists a partial relationship between all the variables under scrutiny and the construct of language mindset. This pivotal discovery carries valuable implications for language educators. Given the outcomes, it becomes imperative for educators to adeptly apprehend and model growth mindsets. Such understanding is pivotal for the efficacious execution of mindset interventions. By fostering an environment where learners comprehend their dynamic capacities as a manifestation of their exertions, educators can effectively cultivate attitudes and behaviors conducive to overall success in both educational pursuits and broader life endeavors.

Keywords: Demotivation, language mindset, resilience, speaking anxiety

INTRODUCTION

A comprehensive examination of the existing body of literature concerning language mindset reveals that recent studies have started integrating mindset theory, derived from the realm of educational psychology, into the sphere of second language (L2) learning (Lou & Noels, 2017, 2019a, 2019b). These investigations have underscored that learners' convictions regarding their inherent capabilities in L2 learning can significantly influence their levels of proficiency. In essence, students who embrace the belief that diligence can enhance their L2 skills are more likely to exhibit improved performance, while those who view L2 aptitude as predetermined and impervious to effort tend to exhibit diminished advancement.

The concept of language mindset pertains to students' perspectives on whether aptitude in L2 acquisition is innate or can be honed through exertion (Lou & Noels, 2016, 2020). This

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psychological disposition is domain-specific, implying that individuals might possess a growth-oriented mindset in a particular area of study while simultaneously harboring a fixed mindset in another (Dweck & Yeager, 2019; Lou & Noels, 2016, 2017). For instance, students might exhibit a high level of self-efficacy in mastering science subjects while concurrently maintaining a conviction of limited prowess in sports. Despite the acknowledged relevance of the construct of language mindset in various contexts, its interrelation with a diverse array of individual attributes such as L2 speaking anxiety, demotivation, and resilience necessitates further scholarly exploration.

Foreign language anxiety (FLA) is a widely documented phenomenon among English as a Foreign Language (EFL) learners (MacIntyre, 2014), and it profoundly affects language proficiency across various skills, particularly speaking. Altunel (2019) probed the connection between FLA and mindsets, suggesting a lack of meaningful correlation between attitudes and FLA. This discordant finding underscores the need to avoid hasty presumptions regarding the role of mindsets in FLA and L2 learning, urging a more nuanced comprehension that posits the potential influence of mindsets on these domains. Counter to Altunel's findings, the present research establishes a modest yet significant positive association between a growth mindset and L2 achievement, suggesting a plausible linkage between attitudes and language learning success, thereby hinting at a potential interplay with FLA.

Demotivation, as delineated by Dornyei (2001), encapsulates extrinsic factors that undermine or diminish the foundational motivations for behavioral intentions or ongoing actions. A further definition characterizes demotivation as the mitigating factor that curbs students' motivation to learn or the absence of the impetus that stimulates students' engagement within the instructional milieu (Zhang, 2007).

Resilience, a recently conceptualized cognitive attribute, is akin to a personality trait within individual students, denoting their capacity to navigate challenges and adversity successfully (Connor & Davidson, 2003, p.77). It empowers individuals to confront demanding situations, fostering their growth into well-adjusted, resourceful, and accomplished individuals. Scholars such as Krovetz (2008) and Thomsen (2002) emphasize the significance of nurturing resilience among children to maximize their prospects for success within educational environments and broader societal contexts. Nonetheless, within the field of foreign and second language acquisition and instruction, the roles and interconnections of resilience in language achievement warrant more comprehensive investigation. The present study, as delineated earlier, endeavors to scrutinize the interrelations between language mindset and L2 speaking anxiety, demotivation, and resilience.

Historically, the trajectory of mindset research and L2 learning research has remained distinct, with only recent attempts to bridge the gap and apply mindset theory to language learning (Yang & Priyadarshini, 2019). It is evident that the convergence of mindset research and L2 learning research has been a recent development. Concurrently, this investigation seeks to extend this nascent integration by connecting the relatively novel concept of language mindset with other well-established individual attributes. Notably, foreign language speaking anxiety (FLSA), demotivation, and resilience emerge as prime candidates for exploration in the context of attributes potentially influenced by language mindsets.

Despite the depth of inquiry into these individual attributes, extant scholarship offers no antecedents concerning the roles and relationships contemplated within the present study. Furthermore, it is noteworthy that the domain of mindset research in the realm of language learning and teaching is in its formative stages. Given the demonstrated influence of mindsets on L2 learner success, probing the intricate dynamics between mindset and other attributes of language learners appears both promising and warranted.

Literature Review

In a recent scholarly endeavor, Altunel (2019) undertook a comparative analysis between the language mindsets of second language (L2) learners and their Foreign Language Anxiety

(FLA) levels, utilizing a pair of Likert-scale instruments: the Dweck Mindset Instrument (DMI) and the Foreign Language Classroom Anxiety Scale (FLCAS). According to Altunel, FLA has long maintained prominence as a focal concern among educators globally, being regarded as one of the foremost predictors of language learning outcomes (Altunel, 2019, p. 690). Intriguingly, Altunel's empirical findings reveal a notable absence of a significant linkage between attitudes and FLA. Moreover, he contends that educators should relinquish the assumption of mindset's pertinence to FLA and L2 learning, advocating instead for a paradigm that posits the limited impact of mindsets on L2 learning.

Yang and Priyadarshini (2019) further delved into the association between L2 academic achievement and language mindset within an independent inquiry. Their study elucidated a modest yet statistically significant positive correlation between L2 students' achievements and their inclination towards a growth mindset. The measurement of the former was undertaken through the DMI, whereas the latter was gauged via results from a standardized L2 proficiency assessment. This observation diverges from Altunel's (2019) findings, which pointed to an absence of such a correlation between mindset and L2 accomplishment.

The infusion of mindset theory into the realm of L2 learning has been introduced by Brown and Siebert Hanson (2019). This initiative was driven by the intent to investigate whether positive experiences engender the belief that language acquisition is a malleable skill that can be refined through perseverance and exertion. This inquiry carries considerable import, given that numerous students harbor the notion that adult L2 acquisition is deterministically constrained by innate linguistic aptitude (Brown & Siebert Hanson, 2019; Lou & Noels, 2016, 2017). In essence, the study by Brown and Siebert Hanson sheds light on how the widely debated Critical Period Hypothesis is commonly perceived. It delineates the prevalent understanding that language learning is age-bound, favoring children and adolescents over adults. Through pretests and posttests administered immediately and two weeks following the experiment, the study demonstrates how a positive experiential encounter can heighten implicit self-belief and subsequently, the overall attitude towards language acquisition.

Brown and Siebert Hanson's (2019) investigation, while aimed at L2 educators in general rather than exclusively private school instructors, holds implications for language programs across diverse educational institutions. This study's design adheres to a robust quasi-experimental framework, encompassing participant selection, methodologies, procedures, and instrumentation, culminating in a comprehensive reporting of the pretest-posttest outcomes along with their implications (Creswell & Creswell, 2018). By elucidating the impact of implicit beliefs on actual skills and revealing the transformative potential of interventions on student attitudes and learning dispositions, this study extends the discourse on these dimensions within educational contexts.

A study by Yeagar and Dweck (2012) probed the interplay between students' attitudes and their resilience, specifically within academic and social challenges. Their research showcased that students who held the belief (or were instructed) that intelligence is a malleable attribute—rather than a fixed trait—displayed heightened success during challenging academic transitions and displayed increased completion rates in demanding mathematics courses. Furthermore, recent investigations indicate that adolescents' levels of anger and anxiety triggered by peer rejection can be mitigated if they hold the belief (or are taught) that social skills can be cultivated, consequently enhancing academic achievements. The study's discourse encompasses strategies for educators to promote these attitudes and foster resilience within an academic context, unraveling the effectiveness of psychological interventions in reshaping students' perspectives.

In a separate inquiry, Sadeghi et al. (2020) examined potential correlations between language mindset, goal orientation, and responses to failure. Their findings unveiled a substantial link between language mindset and learning objectives, while also revealing an emergent trend toward significance between language mindset and manifestations of helplessness and anxiety in response to setbacks.

Lou and Noel (2020) embarked on a series of three experiments designed to elucidate the influence of language mindsets on English as a Second Language (ESL) students' proclivity for sensitivity to rejection, perceived instances of rejection, avoidance of social interaction, enthusiasm for peer communication, and duration of engagement in social contexts. Their investigations unveiled an association between fixed language attitudes (versus growth-oriented ones) and avoidance behavior as observed by both experimenters and self-reports, coupled with adverse perceptions of rejection rooted in language-related contexts. Significantly, the cultivation of growth mindsets was found to enhance future communication among individuals with limited perceived English proficiency while concurrently mitigating instances of perceived language-based rejection. This underscores how growth mindsets, particularly among students with constrained English language abilities, bolster resilience throughout their academic journey.

Vaghei et al. (2020) undertook an inquiry into the language mindsets of intermediate Iranian EFL learners and their potential correlations with preferences in writing feedback. Involving 150 EFL students selected from diverse language schools in Isfahan, Iran, this study incorporated a proficiency assessment to ascertain language aptitude. Employing the Language Mindsets Questionnaire and the Feedback Preferences Scale, the study discerned that students manifested dissent—albeit non-significantly—with the entity-oriented facets of the mindsets questionnaire, specifically general language intelligence beliefs, second language aptitude beliefs, and age sensitivity beliefs pertaining to language learning. Conversely, strong agreement was evident with incremental items. Employing Structural Equation Modeling, the study revealed that while incremental mindsets demonstrated no significant predictive power over feedback preferences, entity mindsets exerted influence in this regard. Thus, the study advances an analytical model probing the connection between entity/incremental mindsets and feedback preferences.

Similarly, Zarrinabadi et al. (2021) enlisted 392 university-level EFL students in Iran to examine the influence of linguistic mindsets on communicative competence and willingness to communicate (WTC), while also exploring the predictive role of students' perceptions of instructor autonomy support. Path analyses illuminated a mediation effect of growth language mindsets between autonomy support for communicative competence and WTC. Notably, students were more inclined to adopt growth-oriented language mindsets and, consequently, exhibited enhanced confidence and motivation to employ English in instructional contexts upon perceiving instructors as more supportive of autonomy. Within this scholarly landscape, the present study endeavors to address the void in the literature by investigating the nexus between language mindset and various psychological and personal attributes—specifically, resilience, L2 speaking anxiety, and demotivation. Through this exploration, the study sought to offer insights into the following questions:

RQ.1 *Is Iranian EFL learners' language mindset a significant predictor of L2 speaking anxiety?*

RQ2. *Is Iranian EFL learners' language mindset a significant predictor of L2 demotivation?*

RQ3. *Is Iranian EFL learners' language mindset a significant predictor of resilience?*

In line with the aforementioned research questions, the following hypotheses were formulated:

H_{01}: *Iranian EFL learners' language mindset is not a significant predictor of L2 speaking anxiety.*

H_{02}: *Iranian EFL learners' language mindset is not a significant predictor of L2 demotivation.*

H_{03}: *Iranian EFL learners' language mindset is not a significant predictor of resilience.*

METHODOLOGY

Participants

The present study recruited its participants from the cohort of Iranian English as a Foreign Language (EFL) learners who were currently enrolled in diverse EFL courses across several language institutes situated in Isfahan. This

participant pool encompassed both male and female learners. Employing an availability sampling method, the study identified and invited over 700 intermediate-level EFL learners, aged between 20 and 40, to partake in the research. The selection of participants was contingent upon their voluntary willingness to engage in the study and complete the designated questionnaires which explored constructs related to language mindset, L2 speaking anxiety, demotivation, and resilience.

The study did not specifically consider the participants' level of language proficiency as a focal variable. However, in order to ensure that participants possessed the requisite English language skills to comprehend and respond to the questionnaire items, individuals were selected from the intermediate stratum of language proficiency. It is noteworthy that all participants shared Persian as their first language and were actively engaged in acquiring English as a foreign language within esteemed educational institutions located within the Isfahan locality.

Instruments

Oxford Quick Placement Test (OQPT)

The first instrument used in this research was an OQPT to make certain that learners were at the intermediate level of proficiency. The OQPT is an internationally recognized and widely used language proficiency test, which contains 60 multiple-choice items on vocabulary, grammar, and reading comprehension. Those who obtain a score between 30 and 47 will be labeled intermediate, as specified by the scoring rubric of the OQPT.

Language Mindsets Inventory (LMI)

Another data collection instrument used in this study was Lou and Noels's (2017) Language Mindsets Inventory (LMI), whose overall score shows the type of overall language mindset of participants and whose subscale scores indicate their subscale language mindsets. This questionnaire includes 18 items and uses a 6-point Likert scale that ranges from *strongly agree* to *strongly disagree*. More precisely, it includes *strongly agree* = 6, *moderately agree* = 5, *slightly agree* = 4, *slightly disagree* = 3, *moderately disagree* = 2, and *strongly disagree* = 1. The 18 items consist of three subscales, each has six items. These are general language intelligence beliefs (GLB), second language aptitude beliefs (L2B), and age sensitivity L2 learning beliefs (ASB). The instrument measures the overall language mindset of the learners. The questionnaire has been proven effective in terms of reliability and validity by Lou and Noels (2019).

Foreign Language Speaking Anxiety (FLSA)

This questionnaire was the other instrument employed in the study. It was initially developed to explore whether or not speaking creates anxiety in the EFL classroom, and to identify factors that generate speaking anxiety, as well as teachers' and peers' behavior and classroom activities that may alleviate it. It consists of 22 close-ended items in the 5-point Likert Scale (5 = *strongly agree*, 4 = *agree*, 3 = *neutral*, 2 = *disagree*, and 1 = *strongly disagree*).

Demotivation Questionnaire

This questionnaire was developed by Kaivanpanah and Ghasemi (2011). With its 32 items, it examines the sources of demotivation related to the five factors of teachers, the experience of failure, attitudes towards the English-speaking community, learning contents/materials/facilities, and attitudes towards second language learning. To ensure the validity of the questionnaire, the developers conducted an exploratory factor analysis of the data obtained from the questionnaire and made modifications, additions, and deletions. They also reported a Cronbach's reliability index of .87 for this questionnaire.

Connor-Davidson (2003) Resilience Scale (CDRS)

Finally, the researcher used the 25-item Connor-Davidson (2003) Resilience Scale (Appendix VIII) to measure the participants' stress-coping ability. The scale has been developed as a brief self-rated assessment to help quantify resilience. It consists of components that represent various facets of resilience, such as a sense of one's own competence, the ability to tolerate negative emotions, a positive acceptance of change, the ability to trust one's

instincts, a sense of social support, a spiritual faith, and a problem-solving strategy that is action-oriented. (Connor & Davidson, 2003). The translation of the questionnaire into Persian and its adaptability to Iranian culture was done by Jokar et al. (2007). The reliability of the scale was calculated through Chronbach's alpha analysis amounting to .73 by Jokar et al. (2007).

Data Collection Procedures

The data collection protocol employed in this study involved the distribution of the aforementioned survey questionnaires to a cohort of more than 700 intermediate English as a Foreign Language (EFL) learners, encompassing both male and female participants, aged between 20 and 40. These participants were actively enrolled in English courses during the spring term of 2022, which were conducted across various language institutes located in Isfahan, Iran.

To initiate the data collection process, the study's objectives were communicated to the administrators of the aforementioned language institutes, and their consent to participate was formally secured. Subsequently, in collaboration with the institute officials, the instructors leading the respective classes were informed of the study's objectives, with a request to extend invitations to their students to partake in the research endeavor. Employing an availability sampling technique, contact information, specifically phone numbers coupled with WhatsApp accounts, was procured from willing participants through the instructors.

The researcher then proceeded to elucidate the study's objectives and the particulars of the questionnaires via an audio file disseminated on WhatsApp. During this communication, participants were assured of the anonymity and confidentiality of their responses, as well as the non-impact of their participation in their final class evaluations. Additionally, the administration of internet-based surveys was facilitated through Google Docs. Participants were directed to complete the online questionnaires via distinct Google Docs links, which were shared with them through the WhatsApp platform. To mitigate potential respondent fatigue, participants received a new questionnaire link on a weekly basis, ensuring that performance was unaffected by exhaustion. The motivation to provide accurate responses was reinforced by informing participants that access to the questionnaire results would be granted following submission.

Simultaneously, the Online Quick Placement Test (OQPT) scores of the learners were secured through an online platform. Once all requisite data were amassed, appropriate measures were instituted to facilitate the subsequent data analysis phase.

RESULTS

Before analyzing the models, the descriptive statistics for the used questionnaires are presented in Table 1 below. Mean, mode, median, min, and max values for each item are also shown in the following table.

Table 1
Descriptive Statistics for the Used Questionnaires

Language Mindset	4.97	2.94	5.67	0.32
Resilience	2.39	0.45	3.48	0.91
Speaking Anxiety	3.74	2.22	4.44	0.53
Demotivation	3.99	3.43	4.38	0.18

Results for Research Question 1: *RQ1.Is Iranian EFL learners' language mindset a significant predictor of L2 speaking anxiety?*

Table 2
ObOtained Statistics for the Mindset and Speaking Anxiety

Matrix	**Speaking Anxiety**	**Overall Load Factor**
Mindset	0.047	1.00

The path coefficient alpha level is between -1 and 1. As Table 2 shows, the obtained value is within the significant range. Since the obtained p-value for the relationship between language mindset and speaking anxiety is near 0.00 (p-value=0.01), it indicates a moderate effect of learners' mindset on learners' speaking anxiety. Moreover, since in this study, a total score for learners' mindset was

calculated for each individual, the path analysis showed a factor load of one for the relationship between language mindset and speaking anxiety.

Table 3
Obtained Statistics for the Language Mindset and Speaking Anxiety

Matrix	R^2	R^2 adjusted
Mindset and Speaking Anxiety	0.002	-0.008

The coefficient of determination (R-squared correlation) measures the degree of the linear relationship between two variables .R2 measures the proportion of changes in the dependent variable that can be attributed to the independent variable. In existing definitions, R2 is also called the determination coefficient or detection coefficient. In simple terms, it can be said that the coefficient of determination shows how many percent of changes in the dependent variables in a regression model is explained by the independent variable. Table 3 indicates that mindset explained -0.8% of the variance of speaking anxiety. The obtained R-Square, which is negative, indicates that there is an inverse relationship between the level of mindset and speaking anxiety. However, this inverse relationship is not significant because the obtained R square is close to zero.

Table 4
Bootstrapping Values for the Effectivity of Language Mindset on Speaking Anxiety

	Mean	S.D	T-value	P-value
Mindset and Speaking Anxiety	0.057	0.13	0.35	0.72

The standard t-value to prove the significance of the influence of the independent variable on the dependent variable is equal to 1.96. As Table 4 shows, the obtained t-value is 0.35. Therefore, the obtained effect is not significant. Also, the obtained p-value shows that the negative effect of language mindset on speaking anxiety is not significant.

Table 5 shows the appropriateness of the criteria. In the above model, the average extracted variance of the variables is within an acceptable range.

Table 5
Construct Reliability and Validity

Matrix	Cronbach alpha	Rho	CR	AVE
Language Mindset	1.00	1.00	1.00	1.00
Speaking Anxiety	1.00	1.00	1.00	1.00

CR= Composite Reliability

Thus, the first hypothesis is confirmed, and the obtained results did not indicate a significant relationship between Iranian EFL learners' language mindset and speaking anxiety. So, a language mindset cannot predict speaking anxiety.

Results for Research Question 2: *RQ2. Is Iranian EFL learners' language mindset a significant predictor of L2 demotivation?*

Table 6
Obtained Statistics for the Mindset and Demotivation

Matrix	Demotivation	Overall Load Factor
Mindset	-0.031	1.00

The alpha level of the path coefficient is between -1 and 1. As Table 6 shows, the obtained value is in the significant range. Since the obtained p-value for the relationship between attitude toward language and demotivation is close to 0.00 (p-value=0.03), this indicates a moderately negative effect of learner attitude on learner demotivation. Since a total learner attitude score was calculated for each person in this study, the path analysis yielded a factor loading of one for the relationship between attitude toward language and demotivation.

Table 7
Obtained Statistics for the Language Mindset and Demotivation

Matrix	R^2	R^2 adjusted
Mindset and Demotivation	0.001	-0.009

The coefficient of determination (R-squared correlation) measures the degree of the linear relationship between two variables. R2 measures the proportion of change in the dependent variable that can be attributed to the independent variable. In existing definitions, R2 is also referred to as the coefficient of determination or the coefficient of detection. Simply put, the coefficient of determination can be said to indicate what percentage of the changes in the dependent variable in a regression model is explained by the independent variable. Table 7 shows that mindset explains -0.9% of the variance in demotivation. The obtained R-squared, which is negative, indicates that there is an inverse relationship between the degree of mindset and demotivation. However, this inverse relationship is not significant as the obtained R-squared is close to zero.

Table 8
Bootstrapping Values for the Effectivity of Language Mindset on Demotivation

	Mean	S. D	T-value	P-value
Mindset and Demotivation	-0.020	0.091	0.34	0.73

The standard t-value to prove the significance of the influence of the independent variable on the dependent variable is equal to 1.96. As Table 24 shows, the obtained t-value is 0.34. Therefore, the obtained effect is not significant. Moreover, the obtained p-value shows that the negative effect of language attitude on demotivation is not significant. Table 9 shows the adequacy of the criteria. In the above model, the average extracted variance of the variables is in an acceptable range.

Table 9
Construct Reliability and Validity

Matrix	Cronbach alpha	Rho	CR	AVE
Language Mindset	1.00	1.00	1.00	1.00
Demotivation	1.00	1.00	1.00	1.00

CR= Composite Reliability

Thus, the sixth hypothesis is confirmed, and the obtained results did not indicate a significant relationship between Iranian EFL learners' language mindset and demotivation. So, a language mindset cannot predict demotivation.

Results for Research Question 3: *RQ3. Is Iranian EFL learners' language mindset a significant predictor of resilience?*

Table 10
Obtained Statistics for the Mindset and Resilience

Matrix	Resilience	Overall Load Factor
Mindset	0.075	1.00

As Table 10 demonstrates, the gained value is within the significant range. Meanwhile, the obtained p-value for the relationship between language mindset and demotivation is near 0.00 (p-value=0.075), which specifies a sensible positive effect of learners' mindset on learners' resilience. Besides, since in this study, a total score for learners' mindset was calculated for each individual, the path analysis presented a factor load of one for the relationship between language mindset and resilience.

Table 11
Obtained Statistics for the Language Mindset and Resilience

Matrix	R^2	R^2 adjusted
Mindset and Resilience	0.006	-0.005

Table 11 indicates that mindset explained -0.5% of the variance of resilience. The obtained R-Square, which is negative, indicates that

there is an inverse relationship between the level of mindset and resilience. However, this inverse relationship is not significant because the obtained R square is close to zero.

Table 12
Bootstrapping Values for the Effectivity of Language Mindset on Resilience

	Mean	S.D	T-value	P-value
Mindset and Demotivation	0.085	0.109	0.681	0.496

As Table 12 displays, the obtained t-value is 0.68. Consequently, the obtained effect is not meaningful. Also, the obtained p-value illustrates that the negative effect of a language mindset on resilience is not significant.

Table 13 shows the appropriateness of the criteria. In the above model, the average extracted variance of the variables is within an acceptable range.

Table 13
Construct Reliability and Validity

Matrix	Cronbach alpha	Rho	CR	AVE
Language Mindset	1.00	1.00	1.00	1.00
Resilience	1.00	1.00	1.00	1.00

CR= Composite Reliability

Thus, the seventh research hypothesis is confirmed, and the obtained results did not indicate a significant relationship between Iranian EFL learners' language mindset and resilience. So, a language mindset cannot predict resilience.

DISCUSSION

The primary research hypothesis posited in this study was that "Iranian EFL learners' language mindset does not serve as a significant predictor of L2 speaking anxiety." The investigation involved an evaluation of the path coefficient between language mindset and L2 speaking anxiety. The resulting statistical analysis indicated a negative correlation between the extent of language mindset and L2 speaking anxiety; however, this correlation failed to attain statistical significance. Consequently, the affirmation of the first hypothesis transpired. It is well-documented that foreign language anxiety (FLA) is a widespread phenomenon among EFL learners (MacIntyre, 2014), with ramifications for their performance across language skills. Notably, the acquisition of speaking skills is particularly susceptible to the influence of FLA. In numerous instances, the impact of speaking anxiety on EFL learners is debilitating, as it obstructs their capacity for fluent verbal communication. This circumstance is exacerbated in EFL contexts such as Iran, where limited opportunities for English usage beyond the classroom exacerbate learners' challenges. Accordingly, learners commonly experience cognitive blocks, reticence, heightened distress, lexical lapses, and diminished motivation to engage in English-speaking situations (Mulyono et al., 2019).

The study findings converge with the conclusions drawn by Altunel (2019), who probed the nexus between FLA and language mindsets. Altunel's research unveiled the absence of a substantial correlation between these factors. Furthermore, Altunel urged educators to adopt an approach that discounts the influence of mindsets on L2 learning. These findings coalesce with the current research's outcomes.

Furthermore, the present findings align with the study conducted by Yang and Priyadarshini (2019), who ventured into the application of cognitive mindset research to the sphere of L2 learning. Like Altunel (2019), their study echoed a similar foundational oversight. The authors' investigation of the relationship between a growth mindset and L2 learners' achievements yielded a modest yet statistically significant positive association. This result counters Altunel's findings and suggests an interconnection between mindsets and FLA. It is discerned that individuals adhering to a fixed perspective of anxiety often perceive it as an inherent facet of

their identity, beyond their control. In contrast, those subscribing to a growth mindset tend to interpret anxiety as a transient albeit distressing sensation, manageable through skillful coping mechanisms. It's noteworthy that experiencing considerable anxiety is not strictly the purview of individuals with a fixed mindset; rather, varying degrees of anxiety can manifest in individuals possessing either a fixed or growth mindset.

Studies underscore the notion that individuals who believe in the malleability of anxiety, either through innate change or ameliorative strategies, tend to navigate challenges with greater adaptability. This contrasts with individuals who perceive anxiety as enduring. A growth mindset regarding anxiety can facilitate more constructive responses to stressors and setbacks, leading to improved resilience. Research by Hoyt et al. (2021) indicates that individuals with a growth mindset are more likely to experience greater therapeutic progress and reduced distress, potentially serving as a buffer against negative effects from pressure, stress, and depression. Schroder (2016) underscores the role of a growth mindset in mitigating the links between stress-induced psychological distress and coping mechanisms. In essence, a growth mindset can contribute to attenuating the deleterious impacts of stressors while fostering healthier coping strategies.

The second research hypothesis investigated the interplay between language mindsets and demotivation. However, the outcomes derived from path analysis failed to unveil a substantial correlation between these constructs. Accordingly, the validation of the second research hypothesis was confirmed. A growth mindset signifies a belief in the capacity for intellectual growth through sustained learning and effort. Conversely, intrinsic motivation denotes the volition to undertake a task based on inherent gratification. Both mindset and motivation concepts have been the focus of educational emphasis by educators, with intrinsic motivation considered pivotal for enabling independent knowledge acquisition (Akioka & Gilmore, 2013).

Empirical evidence underscores the role of a growth mindset in elevating student motivation and academic accomplishments (Dweck, 2008). Recent inquiries have further illuminated the linkage between student performance, attitudes, and mindset, encompassing aspects such as academic achievement, engagement, and proclivity for embracing novel challenges (Yeager & Dweck, 2012). Remarkably, the impact of growth mindset interventions on academic performance transcends age brackets, as demonstrated across multiple studies. Dweck's (2008) research showcased the efficacy of instilling a growth mindset among middle school students, culminating in enhanced motivation and heightened academic performance. The intervention group outperformed their counterparts in the control group, which underwent advanced study skills instruction. The intervention instilled in students the understanding that intelligence is not an immutable trait but rather evolves through arduous effort and engagement with demanding tasks. Of note, the efficacy of growth mindset interventions appears particularly pronounced in certain subjects such as science and mathematics (Grant & Dweck, 2003). An intriguing facet lies in the disparity between the findings of prior studies and the present research, likely stemming from the divergence in subject matter, with the current study centering on language mindsets.

The third research hypothesis delved into the nexus between language mindset and resilience among Iranian EFL learners. The outcome of pathway analysis revealed an absence of a significant correlation between the two constructs, thereby corroborating the third research hypothesis. As highlighted earlier, resilience is a construct indicative of adaptive coping mechanisms, facilitating individuals' ability to navigate challenges and evolve into well-adjusted, productive individuals (Connor & Davidson, 2003).

Numerous studies within cognitive research have underscored the repercussions of praising intelligence, as opposed to valuing the process (effort or strategy), which may bolster fixed mindsets, dampen motivation, erode resilience in the face of setbacks, undermine academic performance, and even incentivize dishonesty regarding test results in a bid to project erudition.

For instance, Pomerantz and Kempner (2013) found that increased employment of "person praise" by mothers was associated with the cultivation of a fixed mindset among children, leading to heightened avoidance of challenges. Similarly, Rattan et al. (2012) directed adults to offer feedback to seventh-grade students who scored 65% on an exam. Notably, educators espousing the belief in the fixed nature of mathematical prowess were inclined to administer superficial solace to the student. In contrast, educators trained in fostering a growth mindset extended more comprehensive support, furnishing effective strategies for improvement.

Dweck (2008) asserts that an extended duration of observation is necessary to ascertain the persistence of changes in students. The contextual backdrop, including instructional content framed within a growth mindset framework and feedback reinforcing such perspectives, is pivotal in sustaining these changes. Growth mindset interventions primarily deliver two central messages: (a) intelligence and ability can evolve through diligent engagement with challenging tasks, and (b) failures and mistakes signify opportunities for growth rather than reflections of limited capacity. Typically, these interventions are succinct and adaptable, often taking an hour or less, and are administered through standardized materials or explicit approaches involving direct and indirect messaging to address a singular foundational belief. In essence, interventions leverage conventional narratives, anecdotes from more experienced peers, and empirical evidence (Grant & Dweck, 2003).

The present research holds implications within the realm of language learning by building upon prior investigations. Primarily, the conceptualization of resilience as a dynamic process acknowledges the varied influences of protective attributes such as resilience in diverse contexts, circumstances, and life stages. This underscores the notion that while individuals may exhibit resilience and respond unfavorably to specific challenges in certain environments, their reactions may differ in distinct settings or contexts (Ungar & Liebenberg, 2011). The variegated nature of situations and contexts explored in this study potentially contributes to the observed absence of a correlation between language mindsets and resilience.

Moreover, the adaptability and malleability of psychological resilience emerge as essential themes. The findings align with the perspective that psychological resilience is modifiable and amenable to enhancement (Connor & Davidson, 2003). This assertion gains support from a collection of studies that have demonstrated the capacity for resilience augmentation (Fourier et al., 2013; Padesky & Mooney, 2012). In this vein, the research of Rattan et al. (2012) and Pomerantz and Kempner (2013) has illuminated the role of mindset interventions in shaping perceptions of capability, motivation, and resilience, with implications for instructional contexts.

Finally, the study yielded insights into the relationships among language mindsets, L2 speaking anxiety, demotivation, and resilience within the Iranian EFL learner context. The findings revealed that language mindset did not significantly predict L2 speaking anxiety, demotivation, or resilience among the participants. These outcomes aligned with the observations made by previous researchers such as Altunel (2019) and Yang and Priyadarshini (2019), while also contributing nuanced insights into the interplay between these factors within the realm of language learning. It is noteworthy that this research advances our understanding of these associations, specifically within the context of language education, offering a basis for further exploration and targeted interventions to bolster learners' well-being and academic achievements.

Moreover, the findings underscore the multifaceted nature of psychological constructs like resilience, which are subject to various influences and modifications. The differential impact of instructional interventions on students' mindset, motivation, and resilience underscores the critical role of educators in cultivating adaptive attitudes and enhancing the capacity to navigate challenges effectively. While this study contributes significantly to our understanding of the interplay between language mindsets and affective factors, further research could delve deeper into the nuances of these relationships and explore potential mediators or moderators

that may influence the observed associations. Such investigations hold the potential to enrich our comprehension of the intricate interactions between psychological attributes and language learning outcomes, fostering more tailored and effective pedagogical strategies for language educators and learners alike.

CONCLUSION

The principal aim of this study was to elucidate the correlations between language mindsets and demotivation, resilience, and speaking anxiety. Additionally, it sought to ascertain which among these variables exhibited a more robust association with language mindsets. Although the results indicated that all examined variables displayed some degree of relationship with language mindsets, no statistically significant connections were observed between language mindsets and the mentioned variables. Grounded in the concept that intellect is a malleable attribute, a growth mindset entails the belief that cognitive capabilities can be cultivated over time. Individuals adhering to a growth mindset tend to interpret their educational achievements as outcomes of their efforts and learning endeavors. These learners assume responsibility for their own educational progress and achievements, as they perceive skills as attainable through deliberate practice (Altunel, 2019).

The findings of this study hold implications for educators by highlighting the importance of students' perceptions of learning and their impact on academic accomplishments, transcending mere academic performance. Educators should contemplate fostering pedagogical approaches that embrace a growth mindset paradigm. These approaches should encourage resilience in the face of challenges, promote constructive critique as a means of advancement, and underscore the adaptable nature of intellectual abilities. While interventions like growth mindset interventions have been shown to influence academic achievement (Walton & Cohen, 2011), their alignment with the educational context is pivotal for their effectiveness (Saunders, 2013). Incorporating growth mindset training strategies into conventional classroom curricula could enhance their efficacy.

The present study extends prior research in several meaningful dimensions, most notably in the specific constellation of variables examined. Although many relationships between these variables and demographics mirrored prior research and intuitive expectations, a small subset of outcomes contradicted these established patterns. Evidently, the outcomes of this study underscore the existence of a relationship, particularly within the context of growth mindsets, with demotivation, resilience enhancement, and attenuation of anxiety

Learners who embrace a growth mindset were found to exhibit increased persistence in tackling challenges, a willingness to engage in academic risks, and an inclination to seek assistance when confronted with obstacles, thus enhancing their potential for success (Dweck & Master, 2009). On the contrary, individuals with a fixed mindset tended to be preoccupied with their academic outcomes and typically exerted lesser effort when confronted with demanding tasks (Dweck, 2008). Notably, divergent perceptions of intelligence fostered by distinct mindsets can result in varying levels of achievement among children (Blackwell et al., 2007). This divergence in achievement outcomes is particularly salient for struggling students and those in special education settings. Nonetheless, the research underscores that fostering an environment that provides appropriate feedback and a clear understanding of cognitive processes can induce a shift toward a growth mindset (Dweck & Master, 2009). In this context, promoting awareness of cognitive functioning and self-directed responsibility for performance can enhance students' motivation, particularly within specialized learning domains like L2, thereby contributing to academic advancement.

The findings of this study bear remarkable implications for language educators. Successful implementation of mindset interventions necessitates educators' demonstration of a growth mindset, conveying the idea that adaptable abilities are cultivated through exertion. This can help students internalize attitudes and behaviors that foster success in various aspects of life (Blazar & Kraft, 2017). Instructors should orient their feedback to students around the

process and effort invested in tasks, thus promoting resilience. As a result, professional development initiatives for teachers and support staff could emphasize strategies for phrasing queries and providing constructive feedback that aligns with the tenets of a growth mindset. Furthermore, educators and support personnel could encourage active student engagement in nurturing growth mindset attitudes through discourse on the learning process and the challenges encountered in the classroom.

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