# Developing and Validating a Multi-Faceted L2 Learner Agency Questionnaire: Enacted Complexity Theory in Iranian EFL Context

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| Article info | Abstract |
|---|---|
| | Second language learner agency (L2LA) has gained enormous attention as it directly contributes to the optimal foreign language learning achievement. Recent studies have highlighted the significance of socio-cultural norms to shape the quality of L2LA in different educational contexts. Yet, as a culture-bound construct, the underlying facets of learner agency have hardly been identified or systematically assessed in the Iranian EFL context. To configure and measure inherent components of L2LA, we followed Mercer's (2011) complexity model of learner agency to draft and validate a multi-faceted L2LA questionnaire. To this end, indicators of L2LA in practice were operationalized after conducting a comprehensive literature review and running semi-structured interviews with 20 EFL learners. Next, a sample of 200 Iranian English as a Foreign Language (EFL) learners from both genders, a wide age range, learning experiences, and educational backgrounds were recruited to participate in developing and validating the prototype L2LA questionnaire. After a series of exploratory and confirmatory factorial analysis and structural equation modeling (SEM), the final draft of the multi-faceted L2LA questionnaire with 22 5-point Likert-scale items represented three main facets of self-regulation and perseverance (14 items), belief system and motivation (4 items), and affection (4 items). Statistical findings showed that this questionnaire is a reliable and valid measure of L2LA in Iranian EFL context. Therefore, language pedagogical researchers and practitioners might largely benefit from applying a multi-faceted L2LA questionnaire for a more accurate and dynamic assessment of the Iranian EFL learners' agency.<br><br>***Keywords:*** affection, belief and motivation, complexity, learner agency, self-regulation and perseverance |

# 1. Introduction

According to Giddens' (1984) pivotal definition, *agency* refers to the capacity to act or choose a specific action from a range of options to behave *differently*. Thus, learner agency (LA) represents an individual's ability to enhance or change a challenging situation. It is the capacity to overcome limitations imposed by external factors and is described as the ability "to transcend a present situated activity context and create a new one" (Holland & Lachicotte, 2007, p. 116). From this perspective, Stetsenko (2017) argued that the primary task of education is "to work on developing learners' agency as actors of social transformation by providing them with access to the tools that afford such agency" (p. 347).

Current learner-oriented pedagogies significantly expand the context of school learning to encompass the broader society. As an outcome of such effective schooling, LA is an essential academic skill (Pourdana, 2023; Rajala, 2016). Therefore, LA is the result and the contributing factor in effective education. In other words, it can be seen as both a valuable outcome, reflecting the success of educational processes that empower students to take control of their learning, and a cause of success by enabling learners to actively seek and create learning opportunities beyond the classroom (Mercer, 2011).

In the same vein, L2 learner agency (L2LA) is presented by the Common European Framework of Reference for Languages (CEFR) as a prerequisite for successful language learning, resulting in "a real paradigm shift in both course planning and teaching, and promoting learner engagement and autonomy" (2020, p. 28). Aligning with this perspective, Gao and Zhang (2020) maintained that autonomous learning is triggered by agency and metacognition because agency is "a point of origin" for developing autonomy (Benson, 2007, p. 30). Agency focuses on self-conscious, reflexive learning actions, while autonomy is the sense of being in control of the learning process. This may imply that agency increases autonomy. While agency is deeply embedded in social relationships, power dynamics, and support systems, learner autonomy is independent of cultural, political, social, and economic constraints (Pennycook, 2014).

Ahearn (2001, p. 122) has defined L2LA as "the socio-culturally mediated capacity to act upon language". Similarly, Mercer (2011) argued that it is an invisible aspect of a successful L2 learner, which reflects a sense of control and the ability to utilize existing opportunities. The agentic behavior of L2 learners represents the visible dimension of learner agency, motivating them to make sound decisions, take control, act, and play an active role in shaping and directing their learning processes, language interactions, and behavior. L2LA is also situated in both space and time. This characteristic aligns with Bakhtin's concept of *Chronotope* (1981), which refers to the

interconnected features of time and space in real-world agentic actions (Rajala et al., 2013).

Previous studies have shown that learner agency is key to successful learning (Azizpour et al., 2023; Code, 2020; Kazemi et al., 2022; Mercer et al., 2018; van Lier, 2008; Zimmerman, 2008; 2015). Although research into the components of learner agency has matured and been integrated with self-regulated learning (Oxford, 2016), affection (Pekrun & Perry, 2014), motivation (Dörnyei & Clément, 2001; Gardner, 2004), perseverance or grit (Duckworth et al., 2007), and learner beliefs (Horwitz, 1999), a multi-faceted and integrated construct of learner agency in L2 contexts remains in its infancy. In other words, the SLA community still calls for a standardized and comprehensive scale for assessing the complex and dynamic system of L2LA to provide L2 teachers and learners with deeper insights into adopting a "strategic approach to achieve" learner agency (Gholamshahi et al., 2021, p. 92).

To address this void in the research literature, we planned to develop and validate a self-report multi-faceted L2 learner agency (L2LA) questionnaire for Iranian EFL learners, grounded in Mercer's (2011) complexity theory of learner agency. Moreover, to provide a more comprehensive insight into the L2 learner agency, we focused mainly on two research questions in developing this prototype questionnaire: (1) What are the core components of the L2LA? (2) What are the psychometric properties of the multi-faceted L2LA questionnaire?

## 2. Literature Review

### 2.1. Learner Agency

The history of learner agency in education can be traced back to two notions from the most influential philosophers of education: *What is Enlightenment* by Immanuel Kant (1784) and *Conscientization* by Paulo Freire (1974). The former is a human's emergence from his self-imposed immaturity to use one's cognition without external leads, and the latter means learning to embrace societal, political, and conflicting elements within an economic system by taking action against social inequalities and powerlessness. By these two means, learners are positioned as the agents of change. Therefore, creating an environment to foster an individual's agency has been the main task of pedagogy (Ghalajian et al., 2024; Nikmard et al., 2023; van Lier, 2010, Zarrinabadi et al., 2021). It is also argued that learner agency is one of the central concepts in the ecology of L2 learning, as agentic learners are successfully selective when they choose or refuse to use available resources in the environment.

L2 learner agency (L2LA) has a complex ecology of teaching materials, beliefs, and attitudes in terms of time and place and stakeholders,

including all participants who influence the learning process (Larsen-Freeman, 2019). Therefore, from the ecological perspective on agency, participants must collaborate and have a shared purpose to exercise collective agency (Keshanchi et al., 2023; Rafi et al., 2022). Gao (2010) aimed to find the role of L2LA in strategic language learning and provided an analytical framework, including four components: societal relationships and political conditions, setting or contextual resources, situated activity or specific learning setting, and self, where learner agency and power coexist. A year later, Mercer conceptualized agency as a contextually multi-faceted and temporally embedded construct. She argued that to shed light on the complexity of L2LA, its underlying factors need to be studied and interpreted holistically. Therefore, to fully examine the nature of agency and the role it plays in L2 learning, we need a comprehensive map (Mercer, 2011).

Among various frameworks of L2LA, Mercer's (2011) model has been of special interest due to its comprehensive approach to learner agency as a dynamic and context-dependent process. This model acknowledges the triggering impacts of social interactions and environmental factors on learners' capacity to act and interact, which is especially relevant in settings where cultural and institutional contexts play a submissive role. Therefore, Mercer's framework offers a suitable lens to explore L2LA in the divergent environment of Iranian EFL classrooms.

The first component of L2LA in Mercer's (2011) complexity model is self-regulation, or "self-generated thoughts, feelings, and actions that are planned and cyclically adapted to the attainment of personal goals" (p. 14). The second component is the belief system, which in Victori and Lockhart's (1995, p. 224) words refers to "general assumptions that learners hold about themselves as learners, about factors influencing language learning, and about the nature of language teaching". Affection, or an individual's feelings or subjective experience when receiving or processing information, is the third component of L2LA in Mercer's complexity model. Motivation, as the fourth component of L2LA, was conceptualized by Dörnyei and Clément (2001) as a dynamic, integral force that not only initiates but also sustains and regulates goal-directed behaviors. It involves an interplay of cognitive and emotional processes through which learners prioritize their desires and translate them into action (Sudina & Polansky, 2021).

## 2.2. Research on L2 Learner Agency

There is an emerging tendency in worldwide educational policy to acknowledge the role of L2 learner agency (e.g., Ahearn, 2001; Deters et al., 2015; Flowerdew & Miller, 2008; Gao, 2010; Gao & Zhang, 2020; Lantolf & Thorne, 2006). Adopting the narrative inquiry on the life histories of L2 learners, Flowerdew and Miller (2008) probed the relationship between

individual agency in social milieu in language learning. They reported that agentic learners are highly invested in their language learning by creating such discursive opportunities beyond the classroom as using English for e-mail correspondence with their teachers or classmates, working in a department store with foreign customers, and reading British newsletters about one's favorite soccer team.

In a case study, Zhang (2013) explored how learner agency might impact academic achievement in an online ESL writing course. He reported that employing effective self-regulation strategies as the core component of L2LA could significantly improve performance in an online learning environment. Following Zhang (2013), Lin (2013) investigated the role of learner agency in a task-based EFL writing course and reported that L2LA could positively reciprocate through applying strategies like active decision-making, peer support, and self-assessment. Muller (2015) likewise examined L2LA in Japanese EAP learners' written reflection journals in a medical English course. His observations indicated that agentic learners took full responsibility for their past learning by relating their past experiences to current circumstances. In addition, they looked to the future L2 selves and "surprising potential for demonstrating an agentive change in response to their language-learning experiences" (p. 248). Similarly, by conducting a narrative analysis of an Indonesian emigrant's life history in the United States, Miller (2016) argued that the L2 learner agency could enhance successful actions upon interactional necessities while doing vocational responsibilities in different situations.

Kohn and Hoffstaedter (2017) explored how authentic intercultural communication opportunities encouraged L2LA. They reported that face-to-face classroom communication, telecommunication with international students, and having a chance to talk about their preferred topics could help German EFL learners reinforce learner agency and transfer their school learning to real-life situations. In a quasi-experimental research, Luo et al. (2019) also investigated the level of impact of L2LA on learning performance in flipped classrooms. Their findings revealed that learner agency could significantly improve 46 participants' academic performance and learning experience. They also found that students with lower levels of L2LA had better performance in teacher-centered classroom environments.

In recent years, the concept of learner agency has received growing attention in the Iranian EFL context. For instance, Zarrinabadi (2014) found that when Iranian EFL learners were engaged in supportive classroom practices, they were more likely to exercise agency by initiating and sustaining communication. The study emphasized empowering learners with LA to take more control of their communicative actions.

Pishghadam et al. (2015) examined how *emotioncy* (blending emotion and frequency) affected LA in Iranian EFL classrooms and reported that learners with higher levels of emotional engagement in classroom activities demonstrated stronger LA.

Similarly, Arabahmadi et al. (2023) investigated the multi-faceted nature of LA of Iranian EFL student teachers. They highlighted the interconnectedness of teacher and learner experiences by launching practices that supported LA development at multiple levels. Therefore, student teachers with a stronger sense of agency could generate learning environments that empowered students to take active roles in their language acquisition. Most recently, in an ethnographic study, Sabouri et al. (2024) investigated Iranian L2LA in light of language socialization and identified two sub-categories for LA: talent and experience. Their findings indicated that Iranian EFL learners actively exercise their agency by challenging or embracing specific identities, roles, and cultural norms, rather than passively conforming to them.

Surprisingly, a common point in the experimental studies on L2LA is the lack of a solid and operational definition of its complex and culture-sensitive construct (Brown, 2015; Code, 2020; Mohammadi & Izadpanah, 2019; Pishghadam & Saboori, 2014). Therefore, the necessity of viewing L2LA from a holistic perspective to interconnect the cognitive, affective, and social components of EFL learners in the Iranian EFL context has motivated us to develop and validate a multi-faceted L2LA questionnaire for Iranian EFL learners.

## 3. Method

### 3.1. Participants

This study used an exploratory sequential mixed-methods design of research to develop and validate this multi-faceted L2LA questionnaire (Creswell & Creswell, 2018). To do so, a convenience non-random sampling procedure was employed, and 220 Iranian EFL learners from five private language institutes voluntarily signed an online consent form and participated in two phases of the study (Appendix 3). In the qualitative phase, we initially interviewed 20 upper-intermediate EFL learners as they were presumed to be more capable of expressing their thoughts and experiences regarding learner agency in English. Their responses helped us generate thematically rich and relevant questionnaire items.

In the quantitative phase, we administered the finalized questionnaire to 200 intermediate-level learners. Their English proficiency level was determined through the Oxford Placement Test (OPT), and only those who scored within the B1 range (30–37) were included in order to ensure homogeneity and limit proficiency as a confounding variable. This criterion

was necessary to isolate learner agency from differences that might stem from varying proficiency levels.

The participants were invited to take part in an electronic version of the Oxford Placement Test (OPT) for 45 minutes. A highly reliable placement test, the OPT has been widely used in the Iranian EFL context. For instance, Nodoushan (2015) reported a high internal consistency (Cronbach's α = .97) and a strong criterion-related validity (r = .893) between the OPT and learners' performance on productive skills. Similarly, he found a reliability coefficient of .94 using the KR-21 formula, confirming the reliability of OPT in assessing Iranian learners' general proficiency (2008).

Among those candidates whose OPT scores determined their language proficiency at the intermediate level (30 - 37, B1 in OPT ranking system, M = 35.78, SD = .33), 20 were randomly selected to attend a semi-structured interview. The researchers selected the interview sample from those participants whose OPT scores skewed towards the upper side of the B1 band (ranging from 38 to 44, M = 41.26, SD = 1.84), ensuring their ability to articulate their thoughts fluently.

Moreover, three university faculty members majoring in Teaching English as a Foreign Language (TEFL) with over 10 years of teaching/doing research experience collaborated in drafting, proofreading, finalizing the interview questions, developing and validating the L2LA questionnaire.

In Phase 1, the researchers aimed to gain an in-depth insight into Iranian EFL learners' perspectives on L2LA and complete the qualitative data collection. Therefore, 20 EFL learners were non-randomly selected to participate in a 9-item semi-structured interview. The majority of participants (eight males and 12 females) had the experience of learning English for 5 to 10 years (N = 14, 70%) with university degrees (N = 12, 60%) (Table 1).

**Table 1**

*Demographics of the Participants in Phase 1*

| Participants' Characteristics | | F | % |
|---|---|---|---|
| | Highschool | 4 | 20 |
| | Diploma | 4 | 20 |
| | Associate | 2 | 10 |
| Educational Status | BA | 4 | 20 |
| | MA | 5 | 25 |
| | PhD | 1 | 5 |
| | Under 5 | 1 | 5 |
| Learning English (Year) | 5-10 | 14 | 70 |
| | Over 10 | 5 | 25 |
| | 16-24 | 8 | 40 |
| Age Range | 25-34 | 7 | 35 |
| | 35-44 | 5 | 25 |
| | Male | 8 | 40 |
| Gender | Female | 12 | 60 |

In Phase 2, to gather the required quantitative data using a maximum variation sampling method (Suri, 2011), the researchers non-randomly selected 200 Iranian EFL learners (56 males, 28%, and 144 females, 72%) whose demographic information is summarized in Table 2. Accordingly, most participants had university degrees (N = 109, 54.5%) and the experience of learning English for 5 to 10 years (N = 105, 52.05%) (Table 2).

**Table 2**
*Demographics of the Participants in Phase 2*

| Participants' Characteristics | | F | % |
|---|---|---|---|
| Educational status | Highschool | 88 | 44 |
| | Diploma | 3 | 1.5 |
| | Associate | 18 | 9 |
| | Bachelor | 37 | 18.5 |
| | Master | 35 | 17.5 |
| | Doctoral | 19 | 9.5 |
| Learning English (Year) | Under 5 | 66 | 33 |
| | 5-10 | 105 | 52.5 |
| | over 10 | 29 | 14.5 |
| Age range | 16-24 | 130 | 65 |
| | 25-34 | 45 | 22.5 |
| | 35-44 | 25 | 12.5 |
| Gender | Male | 56 | 28 |
| | Female | 144 | 72 |

## 3.2. Materials and Instruments

A comprehensive review of the research literature on learner agency was initiated and expanded to explore various implications across different fields of study, including L2 learning contexts. To encompass a broad spectrum of attributes defining agency in L2 learning contexts (L2LA), the researchers selected Mercer's (2011) complexity model of learner agency as the theoretical framework for the L2LA construct. Accordingly, L2LA consists of four components: (1) self-regulation, (2) belief system, (3) motivation, and (4) affection.

### 3.2.1 Semi-Structured Interview of L2LA

The developed semi-structured interview included nine items to operationalize four components of Mercer's (2011) complexity model of L2LA (Appendix 1). A semi-structured interview comprising nine open-ended questions was developed to operationalize the four dimensions of Mercer's (2011) complexity model by keeping an eye on the cultural tokens in the Iranian EFL context. The researchers evaluated the interview questions regarding the content's appropriateness and the accuracy of the wording and reached a consensus.

Each interview lasted 45 to 60 minutes. The interviewees were required to elaborate on their personal goals and strategies for learning English (Self-regulation), the extent to which they feel confident in their language-learning proficiency (Belief system), their ambitions to become proficient English writers or speakers (Motivation), and the range of feelings they experience while learning English, such as anxiety, excitement, or boredom (Affection). The audiotaped interviews were transcribed, coded, and analyzed by individual researchers.

### 3.2.2. Prototype Multi-faceted L2LA Questionnaire

The dimensions of Mercer's (2011) complexity model of L2LA demanded a comprehensive literature review. The compiled literature contents and the interview responses were coded and grouped into several overarching themes and their operational definitions (Table 3). The collected data were later used to draft a total of 40 5-point Likert-scale items in the developed L2LA questionnaire. These items were phrased as first-person statements and rated using a 5-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Sometimes, 4 = Agree, 5 = Strongly Agree).

**Table 3**

*Hypothetical Components of the L2LA Questionnaire and Extracted Themes*

| Theme | Extracted Code | Sample |
|---|---|---|
| Self-regulation | Goal selecting<br>Goal setting<br>Self-monitoring<br>Self-evaluating | *I set learning goals for myself and try to reach them.* |
| Belief System | Learning mindset<br>Beliefs about situational limits<br>Beliefs about language<br>Learning strategies | *I think practice makes perfect.* |
| Motivation | Instrumental motivation<br>Integrative motivation<br>L2 motivational self-system | *Learning English is an investment in myself.* |
| Affection | Enjoyment<br>Confidence<br>Pride<br>Boredom | *I am pleased when I understand native English speakers.* |
| Perseverance | Resilience<br>Hope<br>Optimism | *Learning a new language is a lifetime process.* |

The first draft of the L2LA questionnaire included nine items for self-regulation, eight for the belief system, six for affection, another six for motivation, and 10 for the hypothetical component of perseverance.

### 3.3. Procedure

After a comprehensive review of the available literature on learner agency, a semi-structured interview was generated, proofread, and conducted with 20 intermediate EFL learners selected based on their OPT scores. The interviews were held mostly in English, recorded, and transcribed. In case the participants requested, the researchers allowed them to respond in Persian. A copy of the transcribed responses was returned to the participants to make necessary changes to ensure that the data would reflect their accurate viewpoints.

Next, Gao and Zhang's (2020) step-wise qualitative data analysis was adopted so that open codes were generated, compared, and thematized by the researchers out of the corpus of collected responses. In this process, the interviewees' *perseverance* and hard work were extracted as the essential elements of goal achievement in the language learning journey in the Iranian EFL context.

Therefore, this new facet of L2LA was supplemented with Mercer's (2011) complexity model to prepare the L2LA questionnaire with 40 5-point Likert-scale items. The researchers collaborated to proofread the first draft of the L2LA questionnaire for the primary round of probing its content validity and theoretical saturation. Later, its digital version was piloted with 40 EFL learners from the pool of 200 participants in the study. After piloting the items, modifications were made in terms of item wordings as well as the elimination of items with low cross-loadings through the initial statistical phase.

### 3.4. Data Analysis

The quantitative data from 200 Iranian EFL learners were processed using the $26^{th}$ version of SPSS. Next, a structural equation modeling (SEM) was run in AMOS 26 to determine the goodness of fit, factor loadings, and path orientations of the underlying facets in the L2LA questionnaire. For the qualitative data analysis, an inductive content analysis was utilized. The three-step process consisted of data familiarization, collaborative code generation based on Mercer's complexity model of L2LA, and theme extraction. To safeguard the consistency in data coding and analysis, the individual researchers independently coded and analyzed the interview data. The initial inter-coder reliability stood at 90.2%. Any discrepancies were later addressed through critical dialogues and mutual clarifications, resulting in a 96% agreement rate. The refined codebook was applied to the entire interview dataset. Axial coding was used to group conceptually similar codes into potential themes. For example, codes related to "learning mindset", "learning strategies", or "beliefs about situational limits" were mapped to the theme "Belief System."

## 4. Results and Discussion

### 4.1. Results

To develop and validate the L2LA questionnaire, the collected data was subjected to exploratory and confirmatory factor analyses (EFA and CFA). The Cronbach alpha reliability indices of the four facets of the L2LA questionnaire were .80, .91, .95, and .82, respectively, indicating a strong reliability index (Blair, 2022). The assumptions of univariate and multivariate normality were met in the collected data through the skewness and kurtosis measures. Since the absolute values were within ± 2 (Tabachnick & Fidell, 2013), the normality of the collected data was supported.

The assumption of factorability of the data was examined with the Kaiser–Meyer–Olkin (KMO) test of sampling adequacy and Bartlett's test of sphericity. The KMO values above .5 are usually optimal and indicate the adequacy of the collected data, while Bartlett test values below .05 allow for the execution of the EFA (Hinton et al., 2004). The KMO value was .663. Additionally, the significant results of Bartlett's test of sphericity ($\chi^2$ (780) = 1814.262, $p$ =.00, < .05) indicated that the correlation matrix was factorable. Therefore, an EFA was conducted to examine the underlying facets of the 40-item L2LA questionnaire.

**Table 4**

*Total Variance Explained by 16-factor Solution*

| | Total Variance Explained | | | | | |
|---|---|---|---|---|---|---|
| Component | Initial Eigenvalues | | | Extraction Sums of Squared Loadings | | |
| | Total | % of Variance | Cumulative % | Total | % of Variance | Cumulative % |
| 1 | 5.42 | 13.55 | 13.55 | 5.42 | 13.55 | 13.55 |
| 2 | 2.25 | 5.62 | 19.17 | 2.25 | 5.62 | 19.17 |
| 3 | 1.96 | 4.90 | 24.08 | 1.96 | 4.90 | 24.08 |
| 4 | 1.81 | 4.54 | 28.63 | 1.81 | 4.54 | 28.63 |
| 5 | 1.77 | 4.44 | 33.07 | 1.77 | 4.44 | 33.07 |
| 6 | 1.57 | 3.94 | 37.01 | 1.57 | 3.94 | 37.01 |
| 7 | 1.51 | 3.77 | 40.79 | 1.51 | 3.77 | 40.79 |
| 8 | 1.42 | 3.55 | 44.34 | 1.42 | 3.55 | 44.34 |
| 9 | 1.31 | 3.28 | 47.63 | 1.31 | 3.28 | 47.63 |
| 10 | 1.25 | 3.13 | 50.76 | 1.25 | 3.13 | 50.76 |
| 11 | 1.19 | 2.97 | 53.74 | 1.19 | 2.97 | 53.74 |
| 12 | 1.15 | 2.88 | 56.62 | 1.15 | 2.88 | 56.62 |
| 13 | 1.11 | 2.79 | 59.41 | 1.11 | 2.79 | 59.41 |
| 14 | 1.07 | 2.68 | 62.10 | 1.07 | 2.68 | 62.10 |
| 15 | 1.05 | 2.62 | 64.73 | 1.05 | 2.62 | 64.73 |
| 16 | 1.00 | 2.50 | 67.24 | 1.00 | 2.50 | 67.24 |

Extraction Method: Principal Component Analysis.

A 16-factor solution with eigenvalues above 1.00 emerged after conducting a parallel analysis (PA) (Table 4). They explained 24.08% of the total variance. In the scree plot, the elbow was located after the third factor (Figure 1). Therefore, 13 factors with insignificant variance differences were eliminated.

**Figure 1**
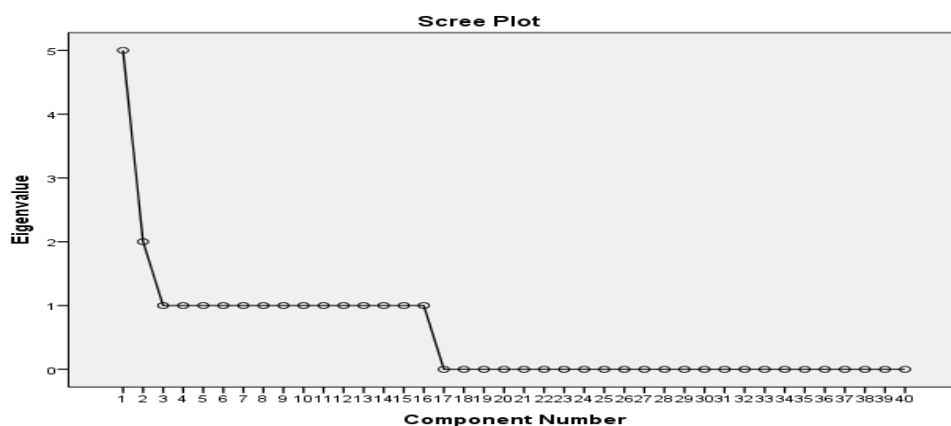
*The Distribution of the Extracted Factors*



**Table 5**

*Rotated Factor Matrix*

| Item | Factor 1 | 2 | 3 |
|------|----------|---|---|
| 1 | .593 | | |
| 2 | .754 | | |
| 3 | .762 | | |
| 7 | .315 | | |
| 8 | .414 | | |
| 9 | .468 | | |
| 32 | .416 | | |
| 33 | .450 | | |
| 34 | .664 | | |
| 35 | .458 | | |
| 36 | .580 | | |
| 38 | .302 | | |
| 39 | .304 | | |
| 40 | .754 | | |
| 15 | | .464 | |
| 16 | | .364 | |
| 24 | | .608 | |
| 27 | | .761 | |
| 19 | | | .647 |
| 20 | | | .578 |
| 29 | | | .426 |
| 38 | | | .416 |

To determine the items that contributed least to the common variance, the items with cross-loadings below .20 were removed from the set (N = 18) (Sosik et al., 2009). Next, a structural equation modeling (SEM) was run with the remaining items (N = 22) to develop the trait structure of the L2LA questionnaire (Figure 2).

**Figure 2**
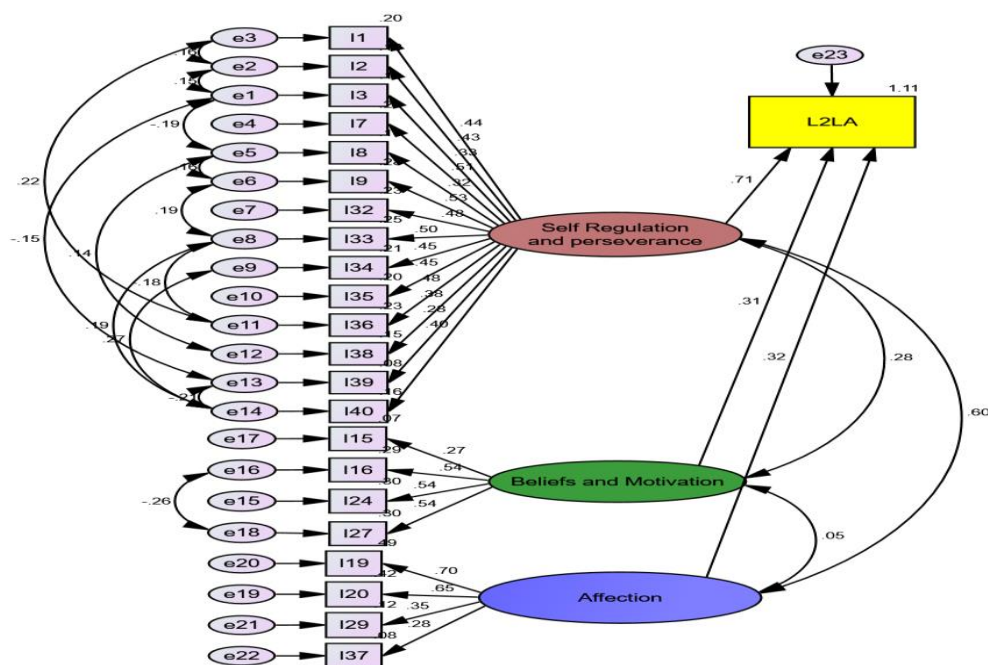*Structural Model of the Facets in the L2LA Questionnaire*



Figure 2 illustrates the standardized relationship among the items (purple squares) and their related facets (self-regulation and perseverance, beliefs and motivation, and affection), eventually contributing to the L2LA construct. All items had significant contributions to their respective facets (> .302). The chi-square indices and RMSEA indicated a meaningful value ($\chi^2$ (298) = 1.40, $p$ = .00) and suggested that the L2LA model enjoyed a good fit. Moreover, the goodness of fit statistics of CFI, IFI, and TLI were reported as .91, .92, and .90, respectively. The RMSEA statistic and its 90% confidence interval (RMSEA = .045, 90% CI [.000 - .15]. Following Kline's (2023) range of above .80 for the acceptable goodness-of-fit (GFI), the obtained measures of GFI were reported as high.

**4.2. Discussion**

The present study re-examined the core components of L2 learner agency in the Iranian EFL context and investigated the psychometric characteristics of a prototype L2LA questionnaire based on Mercer's (2011) complexity model. Therefore, a statistical foundation was established to develop and validate the newly developed multi-faceted L2LA questionnaire (Appendix 2). Exploratory and confirmatory factor analysis, along with structural equation modeling, indicated a new componential configuration of learner agency, comprising (1) self-regulation and perseverance, (2) belief system and motivation, and (3) affection within the Iranian EFL context.

*Self-regulation and perseverance* formed the largest portion of items (N = 14) and the first facet of the L2LA questionnaire. Numerous researchers have supported the synergy of self-regulation and perseverance in achieving successful language learning outcomes (Griffiths, 2013; Larsen-Freeman, 2019; Pourdana et al., 2014a, 2014b). Moreover, several studies have demonstrated the close relationship or sheer overlap between self-regulation and perseverance (or L2 grit) in second language learning (Teimouri et al., 2022).

The results of EFA in this study suggested that 14 items representing both constructs consistently loaded on a single factor, indicating a strong empirical convergence. This supports the idea that, in practice, learners who exhibit higher self-regulation also tend to show greater perseverance over time (Mei et al., 2024; Mikami & Shiozawa, 2024). In other words, self-regulatory behaviors and strategies can help L2 learners manage and monitor the (meta)cognitive aspects of their learning process (Esfandiari & Noor, 2018).

The findings of this study also showed that the concept of L2 learner agency was closely linked to setting goals and being committed to the intensity of effort invested in achieving those goals. Gao (2010) also argued that successful individuals possess "the ability combined with zeal and with capacity for hard labor" (p. 38), while Feng and Papi (2020) contended that persevering second language learners set long-term goals that motivate them to work hard and persist in their language-learning journey. Several research findings indicate a strong connection between self-regulation and academic success (Luo et al., 2019; Nour et al., 2021; Wolters & Hussain, 2015; Xu et al., 2020), between the perseverance of efforts and L2 learners' academic achievement (Duckworth et al., 2007; Sudina & Polansky, 2021; Zimmerman, 2008; 2015), and between perseverance and L2 learning engagement (Jiang et al., 2022; Wu et al., 2024).

*Belief system and motivation* conjured the second facet of the L2LA questionnaire with four items. They represented Iranian EFL learners' confidence in the whole process of language learning and their sources of motivation to persist in the process. This concept is aligned with Brown (2014)

and Peng and Woodrow (2010), who supported the direct impact of trust in the teacher and classroom environment on maximizing L2 learners' motivation and self-confidence. From a different perspective, Huang and Tsai (2003) argued that agentic L2 learners usually hold more positive beliefs toward language learning and show more enthusiasm to engage in problem-solving tasks. In other words, agentic L2 learners know how to capitalize on learning opportunities to improve performance and stimulate intrinsic motivation (Cheng & Lam, 2013; Cutumisu, 2019; Tao & Hong, 2014). Also, the ideal L2 self in Dörnyei's L2 motivational self-system was reported to be significantly overlapped with traits like perseverance and motivational persistence (L2 grit), indicating that learners' beliefs about their future L2 selves are not only motivational but also tied up to their confidence and belief systems (Ebn-Abbasi & Nushi, 2022). The integration of motivation and positive beliefs was interpreted through the cultural lens and a function of Eastern collectivist culture in Trommsdorff's (2012) report. By comparing children in European and Asian communities, Trommsdorff (2012) reported that in Eastern cultures like Iranian or Hindi, agentic self-regulation is often cultivated as a means to maintain social harmony and stability. Research in the Iranian EFL context (e.g., Pishghadam et al., 2015; Zarrinabadi et al., 2021) has shown that learner agency is most often mediated by collective expectations, teacher authority, and moral values emphasized in both religious discourse and formal education. These factors contribute to a form of agency that blends internal motivation with externally reinforced beliefs.

Lastly, *affection* was the third facet of the L2LA questionnaire, with four items targeted to EFL learners' emotional responses to the L2 learning process, such as amusement, disappointment, stress, and acceptance. The significance of affection in L2LA was also highlighted by Pan (2022), who argued that positivity might enhance EFL learners' cognitive capability to learn and deeply process the target language. Similarly, several research findings indicated that L2 learning needs positive drives more than the absence of negative feelings (Lin, 2013; MacIntyre, 2021), or fostering L2 learners' positive emotions helps them pursue their challenging academic goals (Pekrun & Perry, 2014).

## 5. Conclusion and Implications

The current research on developing and validating a solid measurement of L2 learner agency in Iranian EFL learners was initiated based on Mercer's (2011) complexity model of learner agency. Through carrying out this inquiry, a multi-faceted L2LA questionnaire was developed with three compound facets of (1) self-regulation and perseverance, (2) belief system and motivation, and (3) affection as the building blocks of Iranian EFL learners' L2 learner agency. The researchers' major contribution to the research

literature on L2LA was to redefine it as a multi-faceted, culturally-bound construct, and the analytical techniques of EFA, CFA, and SEM statistically supported this premise.

The current study foregrounds several implications for educational researchers and language teachers. Using the L2LA questionnaire, as a diagnostic tool to identify language learners' agency status and inform pedagogical decision-making, can help researchers identify the availability of requisite learning strategies and positive well-being skills for L2 learners. Language teachers can also optimize their teaching qualities by using the L2LA questionnaire as a needs analysis tool to assess L2 learners' level of agency development. Based on the results, they can tailor their pedagogy to support learners in specific areas. For example, learners with low self-regulation and perseverance scores might benefit from goal-setting tasks, peer support, and celebrating small achievements. In cases where learners show low belief or motivation, teachers can foster a supportive environment, build trust, and design confidence-boosting tasks. Finally, the findings of this study are a reminder for L2 teachers to shift toward a more "learner-focused teaching" (Richards, 2010), where students are encouraged to make informed choices about their learning paths. In doing so, teachers can emancipate L2 learners to exercise their agency and become more agentic, confident language users.

Yet, there are certain limitations in this study that need to be addressed. Firstly, as a contextually, temporally, and personally situated construct (Mercer, 2011), L2 learner agency can better be studied and assessed with both self-assessment and observational data. However, this research was only devoted to designing a self-report L2LA questionnaire to explore EFL learners' internal aspect of learner agency. The second limitation was logistical, as the research sample was confined to 200 Iranian EFL learners, mostly women (i.e., 72%), in one of the districts of Iran. In addition, the use of a convenience non-random sampling procedure and the possibility of self-selection bias, due to the voluntary nature of participation, may have limited the generalizability of the findings. Thirdly, in the process of qualitative data collection, current researchers were limited to conducting interviews with volunteer participants whose high engagement, enthusiasm, and readiness could not be induced in the target population of Iranian EFL learners. Therefore, the researchers' possible overrating of their assumptions in developing the L2LA questionnaire might jeopardize Cohn's (2012) so-called *coherence in practice*.

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# Appendix 1

*Semi-Structured Interview of L2LA*

| Functions | Item |
|---|---|
| Self-regulation | 1. What language learning strategies do you apply? What are you most favorites and why? |
| | 2. Do you have goals in mind when you study English? How do you track your progress toward those goals? |
| | 3. How do you cope with setbacks and challenges in language learning? |
| Motivation | 4. What kinds of motivation do you have for learning English during these years (fun, job, education, …)? What's your most motivative drive and why? |
| | 5. Where will you be in 10 years' time? What's the effect of English on that future self? |
| Belief System | 6. Do you think that language learning mostly depends on fixed and inborn factors like language talent or controllable factors like hard work and using of language learning strategies? How? |
| | 7. How much confident are you in your ability to learn English? What's the effect of teacher or class atmosphere on your learning? How do you react to negative feedback from others (teachers, peers, colleagues, etc.)? |
| Affection | 8. When do you experience emotions like enjoyment, pleasure, anxiety in the process of English language learning? |
| | 9. How do you relax whenever you feel afraid of making mistakes in real situations? |

# Appendix 2
*The Prototype L2LA Questionnaire*

Dear English Language learners

We would like to ask you to help us by answering the following questions concerning foreign language learning. We believe that your valuable perceptions will add to the quality of our research. Thank you very much in advance for your time and cooperation. Please circle the most appropriate response.

**Name:**

**Gender:** Male Female

**Age:** 16-24 25-34 35-44

**Years of English learning experience**: Under 5 5-10 over 10

**Level of education:**

High school    Diploma    Associate    Bachelor    Master    Doctoral

| | | Strongly Agree | Agree | Disagree | Strongly Disagree | No comment |
|---|---|---|---|---|---|---|
| 1 | To learn English more effectively if I have a plan. | | | | | |
| 2 | I set learning goals for myself and try to reach them. | | | | | |
| 3 | To make sure I progress toward my goals, I reflect on my successes and failures every day. | | | | | |
| 4 | I look for my weaknesses and manage to improve them. | | | | | |
| 5 | As a daily routine, I read English texts, listen to podcasts, and watch English TV programs. | | | | | |
| 6 | I seek opportunities to speak/write English in real-time. | | | | | |
| 7 | I find the solutions to my language learning problems. | | | | | |
| 8 | Challenges that I face in language learning do not discourage me. | | | | | |
| 9 | I stay focused on my language learning. | | | | | |
| 10 | Ambiguities in the new language do not disappoint me. | | | | | |
| 11 | I practice English everyday no matter how busy I am. | | | | | |

| 12 | Learning a new language is a lifetime process. | | | | | |
|----|---|---|---|---|---|---|
| 13 | I celebrate small wins in language learning. | | | | | |
| 14 | I do not give up on learning English. | | | | | |
| 15 | I think practice makes perfect. | | | | | |
| 16 | I need a friendly classroom to learn English. | | | | | |
| 17 | To work harder, I need an encouraging teacher. | | | | | |
| 18 | Good marks in English tests are a big source of motivation to me. | | | | | |
| 19 | I feel safe when I speak English. | | | | | |
| 20 | I feel comfortable expressing my opinions in English. | | | | | |
| 21 | I am pleased when I understand English native speakers. | | | | | |
| 22 | I feel confident when I plan my English practice in advance. | | | | | |

# Appendix 3
## *Online Consent Form*

Dear participant,

The aim of this research is to explore and measure the various dimensions of learner agency among Iranian EFL learners. You will participate in a 50–65-minute semi-structured interview consisting of nine open-ended questions about your language learning experiences, beliefs, and strategies. You may also be invited to complete an online questionnaire in a subsequent phase.

Your participation is entirely voluntary. You may withdraw at any time without any consequences. All information you provide will be kept strictly confidential. Results will be reported in aggregate form without any identifying details. The researchers offer you an opportunity to reflect on your own language learning process. There are no physical or financial risks associated with this study. You have the right to withdraw from the study at any point, for any reason, without penalty.

If you have any questions or concerns, please contact f.mirvani@gmail.com

By clicking "I Agree," you acknowledge that:

1. You have read and understood the purpose of the study.

2. You agree to participate voluntarily.

3. You understand you can withdraw from this study at any time.