*Journal of English language Teaching and Learning*

**University of Tabriz**

**Volume 16, Issue 33, (Spring & Summer 2024)**

# The Relationships between EFL Students' Cultural Intelligence, Emo-Sensory Intelligence, Language Learning Strategies, and English Language Achievement

**Hassan Hadi Abd Alsajjad Albalawee**

*Department of English Language & Literature, Ferdowsi University of Mashhad, Iran*
hassan.hadi9595@gmail.com

**Reza Pishghadam** (Corresponding Author)

*Department of English Language & Literature, Ferdowsi University of Mashhad, Iran; Gulf College, Muscat, Oman*
pishghadam@um.ac.ir, reza@gulfcollege.edu.om

**Shaghayegh Shayesteh**

*Department of English Language & Literature, Ferdowsi University of Mashhad, Iran*
shayesteh@um.ac.ir

**ARTICLE INFO:**

**Received date:**
**2023.09.28**
**Accepted date:**
**2023.11.16**

**Print ISSN: 2251-7995**
**Online ISSN: 2676-6876**

## Keywords:

Cultural Intelligence; Emo-Sensory Intelligence; Language Learning Strategy

## Abstract

The present research was targeted toward examining the relationship between cultural intelligence (CQ), emo-sensory intelligence (ESQ), language learning strategies (LLS), and students' language achievement (LA). A number of 300 EFL Iraqi students studying at the English Language Department of AL-Qadisiyah University, Iraq was selected through convenience sampling. The participants filled out the cultural intelligence questionnaire, emo-sensory intelligence scale, and the language learning strategy inventory. Students' final scores were used as a means through which their language achievement could be gauged. The data were analyzed using Pearson Product-Moment Correlation and Structural Equation Modeling (SEM) analysis. The findings indicated a significant relationship between ESQ, CQ, learning strategies, and students' language achievement. In addition, it was found that CQ and language learners' strategy could directly predict the language achievement of Iraqi EFL learners. ESQ, could only predict language learners' achievement through the mediation of language learning strategies.

DOI: 10.22034/ELT.2023.58599.2569
Citation: Abd Alsajjad Albalawee, H, H; Pishghadam, R; Shayesteh, SH. (2024). The Relationships between EFL Students' Cultural Intelligence, Emo-Sensory Intelligence, Language Learning Strategies, and English Language Achievement. *Journal of English Language Teaching and Learning*, 16(33), 1-22. DOI: 10.22034/ELT.2023.58599.2569

## Introduction

Intelligence has been a subject of debate since the beginning of civilization (Mohammadi & Modarresi, 2023), and Plato (1963) could hardly have predicted that his classification of individuals into cognition, emotion, and sense in his Republic would serve as a source of inspiration. Students who possess a higher intelligence quotient (IQ) tend to excel academically (Binet & Simon, 1905a, 1905b). According to Goleman (1995), emotional intelligence (EQ), which has the potential to control cognitive capacities and drive actions, surpasses IQ and performs a stronger role in the world and education than those who believe IQ is more significant. Furthermore, according to Lombard (2007), sensory intelligence (SQ), which is defined as knowledge of our basic sensory wiring, regulates IQ and EQ in accordance with embodied movements. In order to reconcile SQ and EQ, the current research examines sensory emotions and explores emo-sensory intelligence (ESQ) since it is one of the critical aspects of our daily experiences.

According to Thanasoulas (2001), language and culture are intertwined since culture helps people recognize not only the speaker and listener but also the subject of the discussion. Scholars conducted a thorough study of intercultural theory and intelligence approaches, which resulted in the early conceptualization of cultural intelligence (CQ). Based on Livermore (2011), CQ is the same as other intelligences, but it concentrates on having the skills needed to succeed in today's worldwide, interconnected society. Livermore (2011) further highlights how CQ works in conjunction with other forms of intelligence (IQ and EQ) and elaborates on the reasons some people thrive in diversified cultural settings while others may struggle. Research has identified several factors that can influence the selection of learning strategies and ultimately impact the achievement of second or foreign language learners. According to Gardner and MacIntyre (1993), language learning strategies have a complicated link with other individual qualities, including attitudes, intelligence, motivation, aptitude, and anxiety. According to Oxford (2003), beliefs, personality, personal circumstances, and learning style are all possible learner variables that may influence language learning strategies.

While there is much research that evaluates emotions and senses separately (e.g., Rouby et al., 2016), few studies have addressed how they interact. Several research studies have looked at the way sensory inputs can shape and affect individuals' cognitive processes (e.g., Pishghadam et al., 2016; Pishghadam et al., 2021). Hearing, seeing, or feeling anything can provoke a wide range of emotions in people, impacting how they see the world.

The other aspect of the present study deals with the essential role language learning strategy plays for a language learner. Studies have identified some factors that may affect the strategy's choice and implementation (Gardner & MacIntyre, 1993). Kussin et al. (2018) conducted a study on language learning strategies (LLS) and explored teachers' viewpoints regarding the strategies language learners use in their learning journey. Based on the findings, language learners have the potential to improve their adoption of strategies and expand their subject knowledge (schemata) to facilitate future progress in the language. Accordingly, they suggested that educators must integrate strategy instruction into their lesson plans.

The current research is an attempt to explore the role of CQ and ESQ as mediators of the relationships between language achievement and language learning strategies. This might add to the existing knowledge about CQ, ESQ, and language learners' strategy among Iraqi EFL learners living in one of the Middle Eastern nations. As a result, the current study examines the following research questions:

RQ1. Are there any significant relationships between ESQ, CQ, strategies, and EFL students' language achievement?

RQ2. What is the best predictor of EFL students' language achievement: ESQ, CQ, or students' strategy?

## 1. Review of Literature

### 1.1. What is Emo-sensory Intelligence?

Plenty of our identification of the outside world is made with the senses. According to Thomson et al. (2010), conceptual association forms what we perceive and triggers an emotional response. The word mom, for example, conjures up ideas of love, joy, and hugs. Our reactions to different noises, sights, scents, tastes, and sensations are also varied. This viewpoint was echoed when color-emotion connections were investigated by Pishghadam and Shayesteh (2017). In the mentioned study, colors were used to confirm how effectively participants could detect, mark, and manage their emotional responses to hues. They developed a three-fold model of emo-sensory after researching the variations in the participants' reactions, which finally resulted in a new concept of emo-sensory intelligence (ESQ).

The evolutionary definition of intelligence has expanded its scope, turning it into a complex and multifaceted concept. ESQ emerges as a combination of EQ and SQ (Akbari & Pishghadam, 2022; Ebrahimi et al., 2022; Naji Meidani et al., 2022). ESQ involves sensitivity to emotional responses triggered by sensory inputs. It focuses on the ability of a person to identify, describe, monitor, and regulate emotions evoked by sensory experiences. This ability enables individuals to guide their actions and establish effective communication through the integration of emotions and sensory perception (Shirzadeh & Jajarmi, 2023).

### 1.2. Cultural Intelligence: Conceptual Frameworks and Sub-dimensions

Researchers conducted a thorough study of intercultural theory and intelligence approaches, which resulted in the primary conceptualization of CQ. It is an intellect that shares the same fundamental roots as other intelligences. However, as Livermore (2011) and Tabatabaee-Yazdi and Baghaei (2022) mentioned, it highlights the required skills for being successful in today's interconnected, globalized world. They also stressed that CQ complements other types of intelligence (IQ, EQ), describing the reasons certain people exhibit higher levels of success in culturally diverse contexts than others. The explanation for this stems from the fact that social norms vary from one society to the next.

Earley and Ang (2003) coined the term "cultural intelligence," and defined it as "a person's ability to properly adapt to new and different cultures, that seems to be, for unfamiliar settings due to cultural background" (p. 9). Early and Ang (2003) proposed a multidimensional model

of intelligence entailing four sub-dimensions, namely motivational, metacognitive, cognitive, and behavioral intelligence (Ward et al., 2011).

### 1.3. Learning Strategies

As mentioned by Hismanoglu (2000), language learning strategies—specific acts, behaviors, strategies, or methods—enable language learners to pick up a second/foreign language. It is universally understood that language learners utilize various strategies to enhance their language acquisition during the learning process. Therefore, the assumption that language learners utilize identical effective language learning strategies and should be guided towards the same approach for success is not viable. Various factors, including learning style, personality, age, motivation, gender, self-concept, excitement, life experience, and anxiety, significantly influence how language learners acquire the target language. Consequently, these individual factors necessitate a tailored approach to language instruction that acknowledges and accommodates learners' diverse needs and preferences to promote successful language learning outcomes. As mentioned by Oxford and Gkonou (2018), learners gain from adopting methods, which are defined as conscious, learner-controlled ideas and behavior used to develop specific skills and general competency. Oxford and Gkonou (2018) mentioned that learning strategies involve:

(a) predicting what will actually occur next in a story or news program using previous knowledge of culture and language,
(b) interacting with somebody to learn culture and language to communicate more productively in the language,
(c) integrating logic, intuition, and facts with cultural experience, and
(d) posing inquiries to a native speaker to obtain a deeper grasp of the language.

### 1.4. A Brief Review of Intelligence, Learning Strategies, Culture, and Language Achievement

Hasanzadeh and Shahmohamadi (2011) analyzed the relationship between learning strategies and emotional intelligence. Their results illustrated that for both girls and boys, there was a substantial association between overall EQ and learning processes. Furthermore, no correlation was found between students' EQ and their subject of study.

Regarding language achievement and its relationship with learning strategies, not only were Gardner and Lambert (1965) able to identify second-language skills related to language-learning aptitude, but they were also able to define the relationship of intelligence with language learners' achievement.

Regarding the advantages of knowing about culture, Genc and Bada (2005) reported that taking a lesson in culture increases ELT students' cultural sensitivity to both native and target societies. Their study demonstrates how some solid facts offered by the study's participants can support the arguments made by language teaching specialists advocating for the inclusion of a culture class in language learning and instruction.

## 2. Methodology

### 2.1. Participants

The study entailed 300 EFL Iraqi students (150 males and 150 females) studying at the BA level at the English Language Department of AL-Qadisiyah University, Iraq. The choice of students' selection was based on convenience sampling due to the accessibility criteria. The main reason for choosing Iraqi EFL learners was to do a contextual analysis in one of the Middle Eastern nations and investigate their cultural and emotional intelligence, the strategies they adopt in their learning, and their level of language achievement. All participants were originally from Iraq, and their mother tongue was Arabic. They ranged in age from 19 to 23. The instructional approach adopted by the university highlights promoting students' communicative skills in English. It should be mentioned that in the years of teaching English to sophomore, junior, and senior levels, English language teaching subjects are dealt with thoroughly and in detail.

### 2.2. Instrumentation

The following instruments were used to collect data.

#### 2.2.1. Cultural Intelligence Questionnaire

For the purposes of the study, Iraqi English language learners filled out the CQ questionnaire (Appendix A). The scale assessed CQ and was similar to the one employed to measure an individual's IQ. Individuals with higher CQ scores were considered to possess a greater ability to adapt to and thrive in diverse cultural environments.

The CQ questionnaire was designed and validated by Ang et al. (2007), comprising 20 items that assess various cultural intelligence subscales. The subscales include meta-cognitive CQ with 4 items (statements 1-4), cognitive CQ with 3 items (statements 5-10), motivational CQ with 5 items (statements 11-15), and behavioral CQ with 5 items (statements 16-20). Learners in the study provided their responses to each item using a five-point Likert scale, where the scale ranged from strongly agree (1) to strongly disagree (5).

#### 2.2.2. Language Learning Strategy Inventory

The language learning strategy inventory serves two primary purposes. Firstly, it aims to provide individuals with a deeper understanding of their strengths, weaknesses, and preferred approaches to language learning. Secondly, the inventory is designed to identify and explore effective strategies that can assist language learners in successfully acquiring a new language. This inventory consists of 50 items (Appendix B). It was developed and validated by Oxford (1990). He carried out extensive literature reviews on language learning strategies, suggesting that they can be classified as memory strategies (strategies for remembering language), cognitive strategies (strategies for acquiring linguistic skills), compensation strategies (strategies for dealing with minimal understanding), metacognitive strategies (strategies for dealing with the learning experience), affective strategies (strategies for dealing with students' emotions), and social strategies (strategies that entail communication with others).

### 2.2.3. Emo-Sensory Intelligence Scale

The ESQ scale was developed by Pishghadam et al. (2020). To meet the aims of the study, this scale was used to collect data on ESQ based on a five-point Likert scale, ranging from 1 to 5, indicating very little to very much, respectively (Appendix C). The scale encompasses six senses, namely visual, auditory, kinesthetic, tactile, smell, and taste. Each of these senses is associated with the measurement of six specific sense-induced emotions, which include fear, sadness, disgust, anger, happiness, and surprise.

## 2.3. Procedure

### 2.3.1. Data Collection

The study was initiated during the academic year 2021. Before administering the surveys, the researchers gave a brief overview of the study to all participants, addressing any concerns that students had about the study. The time of the last three sessions of the semester was dedicated to the administration of the questionnaires. Learners were given 40 minutes' time to fill out each questionnaire. The researchers benefited from students' final scores upon their approval and analyzed their language achievement in association with their level of intelligence (ESQ and CQ) and their preferred learning strategies. It should be pointed out that all participants involved in this study ensured the confidentiality of their answers to the questionnaires.

### 2.3.2. Data Analysis

The researchers conducted Pearson Product-Moment Correlation to answer the first research question and measure the links between ESQ, CQ, learning strategies, and language achievement of Iraqi EFL learners. Answering the second research question involved running a set of SEM analyses to explore the power of ESQ, CQ, and learners' strategies in predicting their language achievement.

## 3. Results

The first research question addressed the issue of finding the relationship between ESQ, CQ, language learning strategy, and language achievement. To answer the research question, the researchers did descriptive statistics and ran a correlational analysis.

## 3.1. Descriptive Statistics

In Table 1, descriptive statistics (mean and standard deviation) were provided for language achievement and the ESQ, LLS, and CQ scales.

**Table 1.** *Descriptive Statistics for Language Achievement and ESQ, LLS, and CQ Scales*

| | Min | Max | Mean | SD |
|---|---|---|---|---|
| **ESQ** | 390 | 574 | 503.29 | 40.99 |
| Visual | 65 | 93 | 82.41 | 6.33 |
| Auditory | 63 | 95 | 83.08 | 6.46 |
| Olfactory | 64 | 103 | 85.43 | 7.74 |
| Taste | 63 | 98 | 85.11 | 7.80 |
| Touch | 65 | 95 | 82.93 | 6.80 |
| Kinesthetic | 65 | 97 | 84.33 | 7.06 |
| **LLS** | 74 | 131 | 111.22 | 15.86 |
| Memory Strategies | 11 | 25 | 19.98 | 3.58 |
| Cognitive Strategies | 19 | 36 | 30.90 | 4.45 |
| Compensation Strategies | 7 | 17 | 12.94 | 2.21 |
| Metacognitive Strategies | 12 | 26 | 20.82 | 3.40 |
| Affective Strategies | 8 | 18 | 13.15 | 2.32 |
| Social Strategies | 8 | 17 | 13.43 | 2.36 |
| **CQ** | 47 | 93 | 76.32 | 10.81 |
| Metacognitive | 6 | 19 | 14.13 | 2.69 |
| Cognitive | 16 | 29 | 21.72 | 3.30 |
| Motivational | 12 | 24 | 20.10 | 3.10 |
| Behavioral | 12 | 25 | 20.37 | 2.79 |
| **LA** | 60 | 85 | 73.24 | 5.71 |

### 3.2. Reliability Estimates

The internal reliability of the six-part ESQ questionnaire was investigated using Cronbach's alpha. The results of the study revealed that the alpha coefficient for the overall scale was 0.75. For the LLS scale, which consisted of 50 items, the alpha coefficient was 0.94. Similarly, for the CQ questionnaire, the alpha coefficient was 0.94. These estimates indicated that all surveys had acceptable reliability coefficients.

### 3.3. Correlational Analysis

The researchers employed Pearson product-moment correlation to find probable correlations among the variables. According to Table 2, significant correlations could be found among certain variables.

ESQ and its subconstructs were significantly correlated with LLS ($r = .68$, $p < 0.01$), and all its subconstructs (i.e., memory strategies [$r = .62$, $p < 0.01$], social strategies [$r = .54$, $p < 0.01$], compensation strategies [$r = .49$, $p < 0.01$], cognitive strategies [$r = .67$, $p < 0.01$], affective strategies [$r = .53$, $p < 0.01$], and metacognitive strategies [$r = .59$, $p < 0.01$]). ESQ was also correlated with CQ ($r = .13$, $p < 0.05$) along with some of its subconstructs, including metacognitive ($r = .16$, $p < 0.01$), motivational ($r = .14$, $p < 0.05$) and behavioral ($r = .13$, $p < 0.05$). Moreover, LLS showed a significant correlation with CQ ($r = .25$, $p < 0.01$) and all its subconstructs, including metacognitive ($r = .25$, $p < 0.01$), cognitive ($r = .17$, $p < 0.01$), motivational ($r = .26$, $p < 0.01$), and behavioral ($r = .24$, $p < 0.01$). LA was significantly correlated with ESQ ($r = .21$, $p < 0.01$), LLS ($r = .26$, $p < 0.01$), CQ ($r = .71$, $p < 0.01$), and all their subconstructs.

**Table 2.** *Correlational Analysis for the Relationships between the Variables*

| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **1. ESQ** | 1 | | | | | | | | | | | | | | | | | | | |
| 2. Visual | .96** | 1 | | | | | | | | | | | | | | | | | | |
| 3. Auditory | .96** | .89** | 1 | | | | | | | | | | | | | | | | | |
| 4. Olfactory | .97** | .91** | .92** | 1 | | | | | | | | | | | | | | | | |
| 5. Taste | .99** | .95** | .91** | .96** | 1 | | | | | | | | | | | | | | | |
| 6. Touch | .97** | .88** | .95** | .94** | .94** | 1 | | | | | | | | | | | | | | |
| 7. Kinesthetic | .98** | .98** | .92** | .93** | .98** | .91** | 1 | | | | | | | | | | | | | |
| **8. LLS** | .68** | .64** | .66** | .67** | .67** | .66** | .67** | 1 | | | | | | | | | | | | |
| 9. Memory | .62** | .59** | .61** | .61** | .61** | .61** | .61** | .87** | 1 | | | | | | | | | | | |
| 10. Cognitive | .67** | .64** | .65** | .66** | .66** | .65** | .66** | .93** | .80** | 1 | | | | | | | | | | |
| 11. Compensation | .49** | .47** | .49** | .49** | .47** | .48** | .48** | .81** | .69** | .69** | 1 | | | | | | | | | |
| 12. Metacognitive | .59** | .55** | .57** | .58** | .57** | .57** | .57** | .87** | .71** | .73** | .74** | 1 | | | | | | | | |
| 13. Affective | .53** | .51** | .49** | .51** | .53** | .50** | .53** | .81** | .64** | .74** | .53** | .61** | 1 | | | | | | | |
| 14. Social | .54** | .50** | .53** | .52** | .53** | .53** | .53** | .81** | .56** | .75** | .59** | .68** | .70** | 1 | | | | | | |
| **15. CQ** | .13* | .10 | .15** | .12* | .12* | .15** | .13* | .25** | .18** | .22** | .23** | .24** | .20** | .24** | 1 | | | | | |
| 16. Metacognitive | .16** | .13* | .17** | .14* | .12* | .17** | .16** | .25** | .19** | .22** | .23** | .25** | .21** | .21** | .92** | 1 | | | | |
| 17. Cognitive | .06 | .04 | .08 | .05 | .06 | .09 | .06 | .17** | .14* | .15* | .18** | .18** | .09 | .16** | .89** | .79** | 1 | | | |
| 18. Motivational | .14* | .11 | .16** | .13* | .13* | .16** | .13* | .26** | .16** | .24** | .22** | .25** | .23** | .26** | .93** | .83** | .74** | 1 | | |
| 19. Behavioral | .13* | .13* | .16** | .11 | .11 | .15* | .12* | .24** | .18** | .20** | .20** | .22** | .21** | .23** | .89** | .75** | .68** | .82** | 1 | |
| **20. LA** | .21** | .21** | .22** | .20** | .19** | .21** | .20** | .26** | .17** | .21** | .22** | .23** | .27** | .27** | .71** | .69** | .63** | .66** | .62** | 1 |

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).

### 2.4. SEM Analysis

The researchers ran structural equation modeling (SEM) using Amos to check the predictive power of the independent variables. & Three models (Figures ١' ٢ 3) wereproposed for the prediction of the students' language achievement. The bootstrap analysis of mediation was performed for the indirect effects. Goodness of fit indices were indicative of fit models (see Table 3).

#### 2.4.1. Model 1

The first model (Figure 1) verifies the power of ESQ, LLS, and CQ in predicting the students' LA. As Figure 1 illustrates, ESQ and LLS do not predict the students' LA directly. However, CQ is a positive predictor of LA ($\beta = .37$, $p < 0.05$).

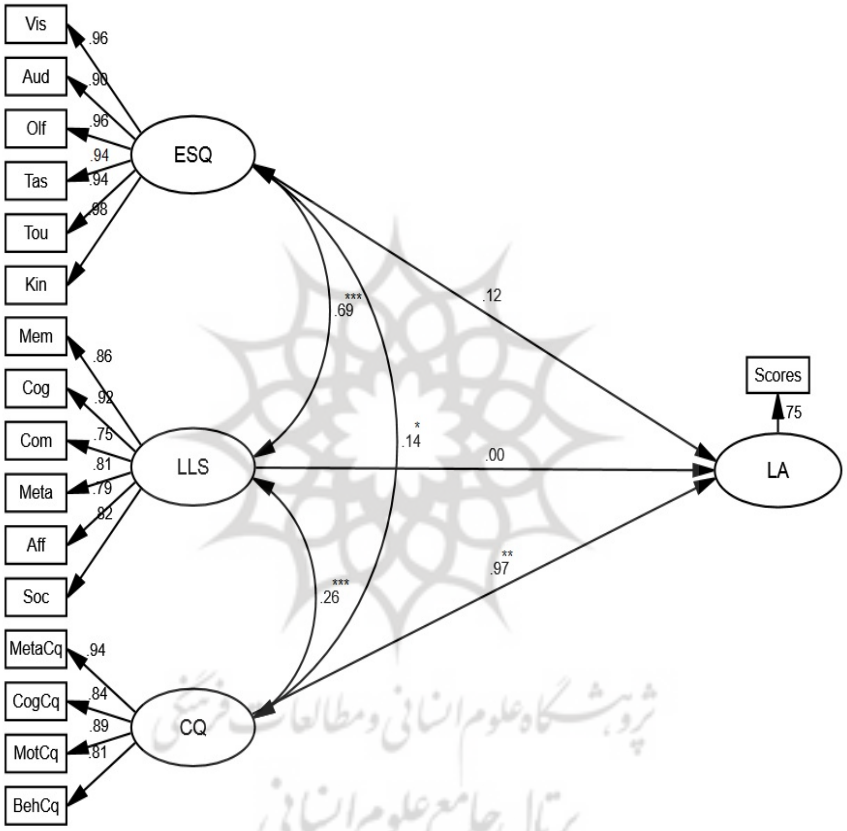


**Figure 1.** *The Schematic Representation of the Relationships among ESQ, LLS, CQ, and LA*

#### 2.4.2. Model 2

The second model (Figure 2) verifies the power of ESQ, mediated by LLS, in predicting the students' LA. As illustrated, ESQ does not predict the students' LA directly. However, mediated by LLS, ESQ is a positive predictor of LA ($\beta = .62$, $p < 0.01$). LLS is also a positive predictor of students' LA ($\beta = .92$, $p < 0.01$).

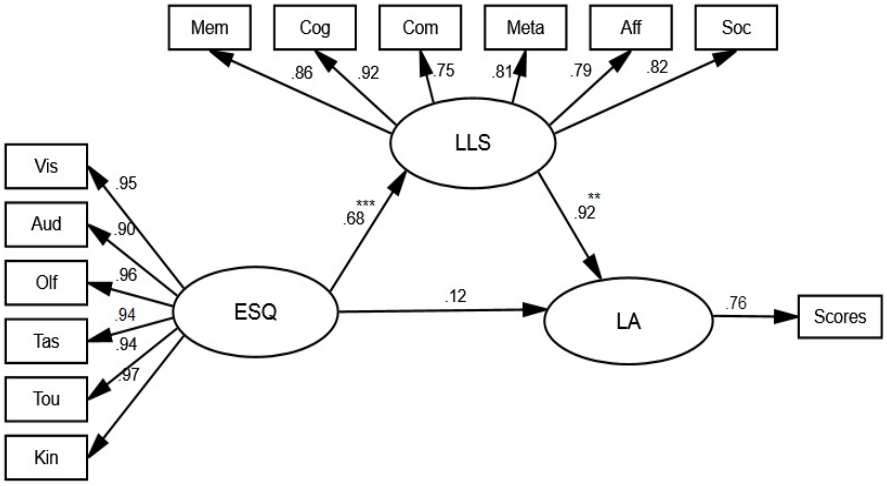


**Figure 2.** *The Schematic Representation of the Relationships among ESQ, LLS, & LA*

### 2.4.3. Model 3

The third model (Figure 3) verifies the power of CQ, mediated by LLS, in predicting the students' LA. As Figure 3 illustrates, CQ predicts the students' LA directly. Moreover, mediated by LLS, CQ is a positive predictor of LA ($\beta = .05$, $p < 0.05$). LLS is also a positive predictor of LA ($\beta = .19$, $p < 0.05$).

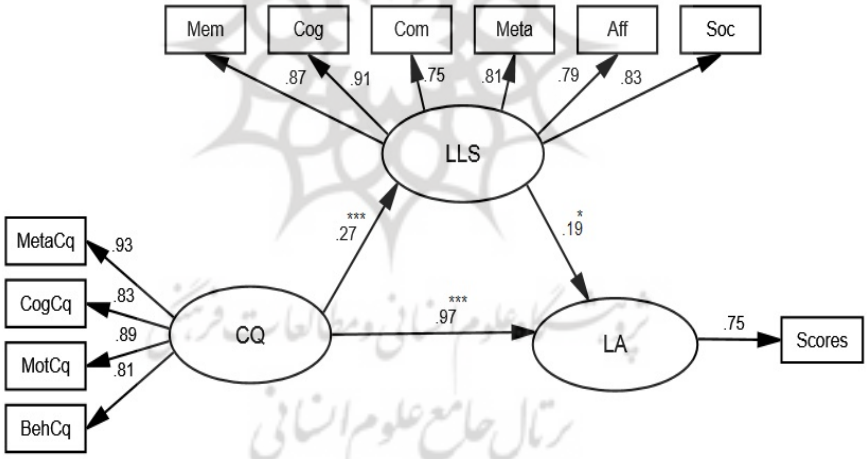


**Figure 3.** *The Schematic Representation of the Relationships among CQ, LLS, & LA*

Goodness of fit indices were measured using Amos to assess if the models fit the data. Table 3 presents the results, including Root Mean Square Error of Approximation (RMSEA), Comparative Fit Index (CFI), relative chi-square ($\chi^2$/df), Tucker-Lewis Index (TLI), and Standardized Root Mean Squared Error (SRMR). According to the criteria employed in this study, $\chi^2$/df values were set at less than 3 (Ullman, 2001). The TLI and CFI values should exceed .90. Additionally, the RMSEA and SRMR values should be equal to or less than 0.08 (Browne & Cudeck, 1993).

**Table 3.** *Goodness of Fit Indices for the Models*

| Models | $\chi^2$/df | Df | CFI | TLI | RMSEA | SRMR |
|---|---|---|---|---|---|---|
| Model 1 (Figure 1) | 2.28 | 106 | .98 | .97 | .06 | .03 |
| Model 2 (Figure 2) | 1.81 | 53 | .99 | .98 | .05 | .03 |
| Model 3 (Figure 3) | 1.83 | 38 | .99 | .98 | .05 | .03 |

## 3. Discussion

As for the purpose of this study, two kinds of intelligence (ESQ and CQ) and learning strategies of Iraqi EFL students have been examined by the researchers. To do so, the researchers aimed to find the relationship between these variables and find which one of these variables could best predict students' achievement. Therefore, the researchers administered a number of questionnaires (including ESQ, CQ, and LLS) to a group of EFL Iraqi students.

With regard to the study's findings, there was a significant relationship between the variables. The was a relationship between ESQ and the subcategories of CQ (motivational, metacognitive, and behavioral). There were different relationships between language learning strategies, CQ, and English language achievement. The study provided empirical evidence confirming the hypothesized relationships among these variables.

The findings related to the second research question regarding the three SEM models proposed in this study manifested that except for ESQ, which did not predict students' LA directly, CQ was regarded as a positive predictor of LA in the first model. This may be due to the learners' high interest in being culturally immersed in the English language. As far as the researchers are concerned, many Iraqi English language learners are interested in learning the target language culture (i.e., English), and they try to acculturate with Americans, and this could be one of the best goals that they set in their minds. The more immersed you are in the target culture, the better you can learn its language.

The second model could only indirectly confirm the connection between ESQ and language achievement. This may imply that using successful classroom strategies while learning a foreign language is the only way for learners to gain greater academic achievement in terms of their English language abilities. The researchers acknowledged that to be competent in gaining ESQ and attaining success in terms of language skills, learners may first need to learn about some effective strategies of learning (compensation, memory, metacognitive, affective, cognitive, and social). However, further research is necessary to validate and strengthen this claim.

The third model represented the power of CQ in predicting LA. It was reported that when mediated by LLS, CQ is the best in predicting the language success of Iraqi EFL learners. It is assumed that in the process of learning a foreign language like English, students make use of language learning strategies to be able to learn about the cultural aspect of the target language, and as a result, they learn the language more effectively.

Because culture is entrenched in the setting where the learner lives, it is considered that culture has an impact on the language acquisition processes utilized by a second and foreign language learner (Nouraey, 2022). As reported by Oxford (1990), factors, including the level of learning, maturity level, the degree of knowledge of learning strategies, task characteristics, sex, culture and native language history, the goal of learning, character qualities, and motivation, affect the frequency and kind of learning strategies used. The observed results provide support for Oxford's (1990) argument that culture plays a vital role in influencing the quantity and nature of language learning. The findings of Riley and Harsch's (1999) study prompted further research on the impact of culture on language learning processes. In the present study, as Iraqi EFL learners are not comprehensively familiar with Western culture, their CQ was lower than expected, and so this construct could not be regarded as the best and main predictor of students' achievement in their language learning.

Altogether, engaging in cross-cultural experiences can indeed be beneficial in a language learning journey. However, to maximize the benefits of such experiences, incorporating deliberate cultural instruction and analysis can enhance the language learning process. Likewise, to put findings in the perspective of different language-learning contexts, a comparative study would be required. Also, this study suggests that future research employ evaluation tools that more specifically encompass the four fundamental language skills, including writing, speaking, listening, and reading. All in all, as this study was conducted with a limited number of Iraqi participants, more intricate analyses would be possible with a greater sample size from diverse cultural and geographical backgrounds.

پژوهشگاه علوم انسانی و مطالعات فرهنگی
پرتال جامع علوم انسانی

## References

Akbari, M., Pishghadam, R. (2022). Developing new software to analyze the emosensory load of language. Journal of Business, Communication & Technology, 1(1), 1-13. https://doi.org/10.56632/bct.2022.1101

Al-Omairi, M. (2020). The use of vocabulary learning strategies by EFL and EAP undergraduate university learners in the Iraqi context. *Arab World English Journal (AWEJ) Special Issue on the English Language in Iraqi Context*. https://doi.org/10.24093/awej/elt2.7

Ang, S., Van Dyne, L., Koh, C., Ng, K. Y., Templer, K. J., Tay, C., & Chandrasekar, N. A. (2007). Cultural intelligence: Its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance. *Management and Organization Review, 3*(3), 335-371. https://doi.org/10.1111/j.1740-8784.2007.00082.x

Binet, A., & Simon, T. (1905a). On the need to establish a scientific diagnosis of lower states of intelligence. *The Psychological Year, 11*(4), 163–190.

Binet, A., & Simon, T. (1905b). New methods for diagnosing the intellectual level of abnormals. *L'Anne´e Psychologique, 11*(2), 191–244.

Browne, M. W., & Cudeck, R. (1989). Single sample cross-validation indices for covariance structures. *Multivariate behavioral research*, *24*(4), 445-455. https://doi.org/10.1207/s15327906mbr2404_4

Chen, S. K., Yeh, Y. C., Hwang, F. M., & Lin, S. S. (2013). The relationship between academic self-concept and achievement: A multicohort–multioccasion study. *Learning and Individual Differences*, *23*, 172-178. https://doi.org/10.1016/j.lindif.2012.07.021

Earley, C., & Ang, S. (2003). *Cultural intelligence.* Stanford University Press.

Ebrahimi, S., Tabatabaeian, M., & Al Abdwani, T. (2022). Enhancing the communicative skills of normal and mentally-challenged learners through emo-sensory textbooks. *Journal of Business, Communication & Technology, 1*(2), 1-12. https://doi.org/10.56632/bct.2022.1201

Gardner, R. C., & MacIntyre, P. (1993). A learner's contributions to second language acquisition. Part II. Affective variables. *Language Teaching*, *26*(1), 1-11. https://doi.org/10.1017/S0261444800000045

Genc, B., & Bada, E. (2005). Culture in language learning and teaching. *The Reading Matrix*, 5(1). https://www.readingmatrix.com/articles/genc_bada/article.

Goleman, D. (1995). *Emotional intelligence: Why it can matter more than IQ*. Bantam.

Harsch, K., & Riley, D. (1998). Language learning strategies development and use: An ESL. In *EFL comparison, paper given at the second language research forum university of Hawaii at Manoa, USA.* https://doi.org/10.1111/j.1473-4192.2009.00221.x

Hasanzadeh, R., & Shahmohamadi, F. (2011). Study of emotional intelligence and learning strategies. *Procedia-Social and Behavioral Sciences*, *29*, 1824-1839. https://doi.org/10.1016/j.sbspro.2011.11.430

Hismanoglu, M. (2000). Language learning strategies in foreign language learning and teaching. *The Internet TESL Journal*, 6(8), 12-12.

Jajarmi, H., & Pishghadam, R. (2019). Emotioncy-based language instruction: A key to enhancing EFL learners' vocabulary retention. *Applied Research on English Language*, *8*(2), 207-226. https://doi.org/10.22108/are.2019.114399.1388

Kussin, H. J., Omar, A., & Kepol, N. (2018). Language learning strategies (LLS): Teachers' notions and practice. *Dinamika Ilmu*, 109-122. http://doi.org/10.21093/di.v18i1.1086

Livermore, D. (2011). *The cultural intelligence difference-special eBook edition: Master the one skill you can't do without in today's global economy*. Amacom.

Lombard, A. (2007). *Sensory intelligence: Why it matters more than IQ and EQ*. Metz Press.

Macaro, E. (2001). *Learning strategies in foreign and second language classrooms: The role of learner strategies*. A&C Black.

Marcum, J. (2017). *Language Proficiency and Cultural Intelligence in Distance English-Language Learning* (Doctoral dissertation, Utah State University). https://digitalcommons.usu.edu/etd/6691

McInerney, D. M., Cheng, R. W. Y., Mok, M. M. C., & Lam, A. K. H. (2012). Academic self-concept and learning strategies: Direction of effect on student academic achievement. *Journal of Advanced Academics*, *23*(3), 249-269. https://doi.org/10.1177/1932202X12451020

McNemar, Q. (1942). *The revision of the Stanford-Binet Scale: An analysis of the standardization data*. Houghton Mifflin Company.

Mohammadi, J., & Modarresi, G. (2023). Conceptions of intelligence, teaching motivation and teacher creativity: A mixed-methods study. *Journal of Cognition, Emotion & Education, 1*(2), 47-58. http://doi.org/10.22034/cee.2023.174746

Naji Meidani, E., Makiabadi, H., Zabetipour, M., Abbasnejad, H., Firoozian Pooresfehani, A., & Shayesteh, S. (2022). Emo-Sensory Communication, Emo-SensoryIntelligence and Gender .*Journal of Business, Communication & Technology, 1*(2), 54-66. http://doi.org/10.56632/bct.2022.1206

Nouraey, P. (2022). National learning outcome standards: a case of the computing element in Oman. *Journal of Business, Communication & Technology, 1*(2), 24-33. http://doi.org/10.56632/bct.2022.1203

Oxford, R. L. (1990). *Language learning strategies: What every teacher should know*. Newbury House.

Oxford, R. L. (2003, October). *Language learning styles and strategies: An overview*. Gala.

Oxford, R. L., & Gkonou, C. (2018). Interwoven: Culture, language, and learning strategies. *Studies in Second Language Learning and Teaching*, 8(2), 403-426. http://dx.doi.org/10.14746/ssllt.2018.8.2.10

Pishghadam, R., & Kamyabi, A. (2008). On the relationship between cultural attachment and accent mimicry. *Unpublished manuscript, Ferdowsi University of Mashhad*.

Pishghadam, R., & Shayesteh, S. (2017). Emo-sensory expression at the crossroads of emotion, sense, and language: a case of color-emotion associations. *International Journal of Society, Culture & Language*, 5(2), 15-25.

Pishghadam, R., Ebrahimi, S., Miri, M. A., & Shayesteh, S. (2021). Sapioemotionality as a new attribute in socio-cultural studies. *International Journal of Society, Culture & Language*, 9(3), 16-27.

Pishghadam, R., Faribi, M., Shadloo, F., Gholami, M., & Shayesteh, S. (2022). Intelligence, emotional intelligence, and emo-sensory intelligence: Which one is a better predictor of university students' academic success?. *Frontiers in Psychology, 13*. https://doi.org/10.3389/fpsyg.2022.995988

Pishghadam, R., Jajarmi, H., & Shayesteh, S. (2016). Conceptualizing sensory relativism in light of emotioncy: A movement beyond linguistic relativism. *International Journal of Society, Culture & Language*, *4*(2), 11-21.

Pishghadam, R., Makiabadi, H., Zabetipour, M., Abbasnejad, H., Firoozian Pooresfahani, A., & Shayesteh, S. (2020). Development, validation and application of an inventory on emo-sensory intelligence. *Teaching English Language*, *14*(2), 173-216. https://doi.org/10.22132/tel.2020.120213

Plato, D. (1963). E. Hamilton and H. Cairns. *Collected dialogues of Plato*. https://adams.marmot.org/Record/.b10752766

Rachmawaty, N., Wello, M. B., Akil, M., & Dollah, S. (2018). Do Cultural Intelligence and Language Learning Strategies Influence Students' English Language Proficiency? *Journal of Language Teaching and Research*, *9*(3), 655-663. http://doi.org/10.17507/jltr.0903.27

Riley, L. D., & Harsch, K. (1999, July). Enhancing the learning experience with strategy journals: Supporting the diverse learning styles of ESL/EFL students. In *Proceedings of the HERDSA Annual International Conference* (pp. 1-18). http://www2.hawaii.edu/~kenton/srl/riley-harsch-99

Rouby, C., Fournel, A., & Bensafi, M. (2016). The role of the senses in emotion. In *Emotion measurement* (pp. 65-81). Woodhead Publishing. https://doi.org/10.1016/B978-0-08-100508-8.00003-5

Shadiev, R., Wang, X., Halubitskaya, Y., & Huang, Y. M. (2022). Enhancing foreign language learning outcomes and mitigating cultural attributes inherent in Asian culture in a mobile-assisted language learning environment. *Sustainability*, *14*(14), 8428. https://doi.org/10.3390/su14148428

Shirzadeh, F., & Jajarmi, H. (2023). Teachers' stroking behavior in anxiety, willingness to communicate, and achievement. *Journal of Cognition, Emotion & Education*, *1*(1), 43-57. https://doi.org/10.22034/cee.2023.172167

Tabatabaee-Yazdi, M., & Baghaei, P. (2022). Persian translation and Rasch model-based validation of an .intercultural intelligence scale*International Journal of Society, Culture & Language*, *10*(1), 71-82. https://doi.org/10.22034/ijscl.2021.245308

Thanasoulas, D. (2001). The importance of teaching culture in the foreign language classroom. *Radical Pedagogy*, *3*(3), 1-25.

Thomson, D. M., Crocker, C., & Marketo, C. G. (2010). Linking sensory characteristics to emotions: An example using dark chocolate. *Food Quality and Preference*, *21*(8), 1117-1125. https://doi.org/10.1016/j.foodqual.2010.04.011

Ullman, J. B. (2006). Structural equation modeling: Reviewing the basics and moving forward. *Journal of Personality Assessment*, *87*(1), 35-50. https://doi.org/10.1207/s15327752jpa8701_03

Ward, C., Wilson, J., & Fischer, R. (2011). Assessing the predictive validity of cultural intelligence overtime. *Personality & Individual Differences*, *51*(2), 138–142. https://doi.org/10.1016/j.paid.2011.03.032

پژوهشگاه علوم انسانی و مطالعات فرهنگی
پرتال جامع علوم انسانی

## Appendices

Appendix A. Cultural Intelligence Scale (CQ)

Directions:

This section contains items. Please read each item and indicate whether you:

(1) Strongly disagree, (2) disagree, (3) neutral, (4) agree, (5) strongly agree

| | | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|---|
| 1 | I am conscious of the cultural knowledge I use when interacting with people with different cultural backgrounds. | | | | | |
| 2 | I adjust my cultural knowledge as I interact with people from a culture that is unfamiliar to me. | | | | | |
| 3 | I am conscious of the cultural knowledge I apply to cross-cultural interactions. | | | | | |
| 4 | I check the accuracy of my cultural knowledge as I interact with people from different cultures. | | | | | |
| 5 | I know the legal and economic systems of other cultures. | | | | | |
| 6 | I know the rules (e.g., vocabulary, grammar) of other languages. | | | | | |
| 7 | I know the cultural values and religious beliefs of other cultures. | | | | | |
| 8 | I know the marriage systems of other cultures. | | | | | |
| 9 | I know the arts and crafts of other cultures. | | | | | |
| 10 | I know the rules for expressing non-verbal behaviors in other cultures | | | | | |
| 11 | I enjoy interacting with people from different cultures. | | | | | |
| 12 | I am confident that I can socialize with locals in a culture that is unfamiliar to me. | | | | | |
| 13 | I am sure I can deal with the stresses of adjusting to a culture that is new to me | | | | | |
| 14 | I enjoy living in cultures that are unfamiliar to me | | | | | |
| 15 | I am confident that I can get accustomed to the shopping conditions in a different culture. | | | | | |
| 16 | I change my verbal behavior (e.g., accent, tone) when a cross-cultural interaction requires it. | | | | | |
| 17 | I use pause and silence differently to suit different cross-cultural situations | | | | | |
| 18 | I vary the rate of my speaking when a cross-cultural situation requires it. | | | | | |
| 19 | I change my non-verbal behavior when a cross-cultural situation requires it. | | | | | |
| 20 | I alter my facial expressions when a cross-cultural interaction requires it. | | | | | |

Appendix B. Strategy Inventory for Language Learning (SILL)

Directions

This form of the STRATEGY INVENTORY FOR LANGUAGE LEARNING (SILL) is for students of English as a second or foreign language. You will find statements about learning English. Please read each statement and tick the response (1, 2, or 3) that tells US WHETHER YOU OFTEN USE A GIVEN STRATEGY (1) OR SOMETIMES (2) USING IT OR NEVER (3)

1. Often
2. Sometimes
3. Never

Answer in terms of how well the statement describes you. Do not answer how you think you should be, or what other people do. There are no right or wrong answers to these statements.

| | **OFTEN (1)** | **SOMETIMES (2)** | **NEVER (3)** |
|---|---|---|---|
| **PART A: MEMORY STRATEGIES** | | | |
| Q1. I think of relationships between what I already know and new things I learn in English | | | |
| Q2. I use new English words in a sentence so I can remember | | | |
| Q3. I connect the sound of a new English and an image of the word to help me remember the word | | | |
| Q4. I remember a new word by making a mental picture of a situation in which the word might be used | | | |
| Q5. I use rhymes to remember new English words | | | |
| Q6. I use flashcards to remember new English words | | | |
| Q7. I physically act out new English words | | | |
| Q8. I review English lessons often | | | |
| Q9. I remember new words or phrases by remembering their location on the page, on the board… | | | |
| **PART B: COGNITIVE STRATEGIES** | | | |
| Q10. I say or write new English words several times | | | |
| Q11. I try to talk like native English speakers. | | | |
| Q12. I practice the sounds of English. | | | |
| Q13. I use the English words I know in different ways. | | | |
| Q14. I start conversations in English. | | | |
| Q15. I watch English language TV shows or go to movies spoken in English | | | |
| Q16. I read for pleasure in English | | | |
| Q17. I write notes, messages, letters, or reports in English | | | |
| Q18. I first skim an English passage (read it quickly) then go back and read carefully. | | | |
| Q19. I look for words in my own language that are similar to new words in English. | | | |
| Q20. I try to find patterns in English. | | | |

| | | | |
|---|---|---|---|
| Q21. I find the meaning of an English word by dividing it into parts that I understand. | | | |
| Q22. I try not to translate word-for-word. | | | |
| Q23. I make summaries of information that I hear or read in English. | | | |
| **PART C: COMPENSATION STRATEGIES** | | | |
| Q24. To understand unfamiliar English words, I make guesses. | | | |
| Q25. When I can't think of a word during a conversation in English, I use gestures. | | | |
| Q26. I make up new words if I do not know the right ones in English. | | | |
| Q27. I read English without looking up every new word. | | | |
| Q28. I try to guess what the other person will say next in English. | | | |
| Q29. If I can't think of an English word, I use a word or phrase that means the same thing. | | | |
| **PART D: METACOGNITIVE STRATEGIES** | | | |
| Q30. I try to find as many ways as I can to use my English. | | | |
| Q31. I notice my English mistakes and use that information to help me do better. | | | |
| Q32. I pay attention when someone is speaking English. | | | |
| Q33. I try to find out how to be a better learner of English. | | | |
| Q34. I plan my schedule so I will have enough time to study English. | | | |
| Q35. I look for people I can talk to in English. | | | |
| Q36. I look for opportunities to read as much as possible in English. | | | |
| Q37. I have clear goals for improving my English skills. | | | |
| Q38. I think about my progress in learning English. | | | |
| **PART E: AFFECTIVE STRATEGIES** | | | |
| Q39. I try to relax whenever I feel afraid of using English. | | | |
| Q40. I encourage myself to speak English even when I am afraid of making a mistake. | | | |
| Q41. I give myself a reward or treat when I do well in English. | | | |
| Q42. I notice if I am tense or nervous when I am studying or using English | | | |
| Q43. I write down my feelings in a language learning diary. | | | |
| Q44. I talk to someone else about how I feel when I am learning English. | | | |
| **PART F: SOCIAL STRATEGIES** | | | |
| Q45. If I do not understand something in English, I ask the other person to slow down or to say it again. | | | |

| | | | |
|---|---|---|---|
| Q46. I ask English speakers to correct me when I talk. | | | |
| Q47. I practice English with other students. | | | |
| Q48. I ask for help from English speakers. | | | |
| Q49. I ask questions in English. | | | |
| Q50. I try to learn about the culture of English speakers. | | | |

Appendix C. The Emo-Sensory Intelligence Scale

Gender: Age: Marital status: Occupation: Residential area:

Educational background: Field of study:

Place of living: Educational level:

Please read the items below and choose numbers 1 to 5 based on the instructions given below.

very little = 1, little = 2, average = 3, much = 4, very much = 5

| **I know (can distinguish) sounds that make me feel** | | **1** | **2** | **3** | **4** | **5** | **Example** |
|---|---|---|---|---|---|---|---|
| 1 | sad | | | | | | |
| 2 | Surprised | | | | | | |
| 3 | Delighted | | | | | | |
| 4 | Disgusted | | | | | | |
| 5 | Enraged | | | | | | |
| 6 | Frightened | | | | | | |
| **Expressing my feelings toward sounds that are …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 7 | surprising is hard for me | | | | | | |
| 8 | frightening is easy for me | | | | | | |
| 9 | delighting is hard for me | | | | | | |
| 10 | saddening is easy for me | | | | | | |
| 11 | enraging is hard for me | | | | | | |
| 12 | disgusting is easy for me | | | | | | |
| **I can control and monitor the sorts of sounds that have … in the past.** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 13 | frightened me | | | | | | |
| 14 | delighted me | | | | | | |
| 15 | enraged me | | | | | | |
| 16 | saddened me | | | | | | |
| 17 | surprised me | | | | | | |
| 18 | disgusted me | | | | | | |
| **Refraining from listening to sounds that …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 19 | sadden me is easy for me | | | | | | |
| 20 | delight me is hard for me | | | | | | |
| 21 | surprise me is possible for me | | | | | | |
| 22 | enrage me is easy for me | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 23 | disgust me is hard for me | | | | | | |
| 24 | frighten me is hard for me | | | | | | |
| **I know (can distinguish) images that make me feel** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 1 | sad | | | | | | |
| 2 | Surprised | | | | | | |
| 3 | Delighted | | | | | | |
| 4 | Disgusted | | | | | | |
| 5 | Enraged | | | | | | |
| 6 | Frightened | | | | | | |
| **Expressing my feelings toward images that are …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 7 | surprising is hard for me | | | | | | |
| 8 | frightening is easy for me | | | | | | |
| 9 | delighting is hard for me | | | | | | |
| 10 | saddening is easy for me | | | | | | |
| 11 | enraging is hard for me | | | | | | |
| 12 | disgusting is easy for me | | | | | | |
| **I can control and monitor the sorts of images that have … in the past.** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 13 | frightened me | | | | | | |
| 14 | delighted me | | | | | | |
| 15 | enraged me | | | | | | |
| 16 | saddened me | | | | | | |
| 17 | surprised me | | | | | | |
| 18 | disgusted me | | | | | | |
| **Refraining from looking at things that …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 19 | sadden me is easy for me | | | | | | |
| 20 | delight me is hard for me | | | | | | |
| 21 | surprise me is possible for me | | | | | | |
| 22 | enrage me is easy for me | | | | | | |
| 23 | disgust me is hard for me | | | | | | |
| 24 | frighten me is hard for me | | | | | | |
| **I know (can distinguish) whose touch makes me feel** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 1 | sad | | | | | | |
| 2 | Surprised | | | | | | |
| 3 | Delighted | | | | | | |
| 4 | Disgusted | | | | | | |
| 5 | Enraged | | | | | | |
| 6 | Frightened | | | | | | |
| **I know (can distinguish) things whose touch makes me feel …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 7 | surprising is hard for me | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 8 | frightening is easy for me | | | | | | |
| 9 | delighting is hard for me | | | | | | |
| 10 | saddening is easy for me | | | | | | |
| 11 | enraging is hard for me | | | | | | |
| 12 | disgusting is easy for me | | | | | | |
| **I can control and monitor the things whose touch has … in the past.** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 13 | frightened me | | | | | | |
| 14 | delighted me | | | | | | |
| 15 | enraged me | | | | | | |
| 16 | saddened me | | | | | | |
| 17 | surprised me | | | | | | |
| 18 | disgusted me | | | | | | |
| **Refraining from touching things that …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 19 | sadden me is easy for me | | | | | | |
| 20 | delight me is hard for me | | | | | | |
| 21 | surprise me is possible for me | | | | | | |
| 22 | enrage me is easy for me | | | | | | |
| 23 | disgust me is hard for me | | | | | | |
| 24 | frighten me is hard for me | | | | | | |
| **I know (can distinguish) physical movements that make me feel** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 1 | sad | | | | | | |
| 2 | Surprised | | | | | | |
| 3 | Delighted | | | | | | |
| 4 | Disgusted | | | | | | |
| 5 | Enraged | | | | | | |
| 6 | Frightened | | | | | | |
| **I know (can distinguish) physical movements make me feel …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 7 | surprising is hard for me | | | | | | |
| 8 | frightening is easy for me | | | | | | |
| 9 | delighting is hard for me | | | | | | |
| 10 | saddening is easy for me | | | | | | |
| 11 | enraging is hard for me | | | | | | |
| 12 | disgusting is easy for me | | | | | | |
| **I can control and monitor the sort of physical movements that have … in the past.** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 13 | frightened me | | | | | | |
| 14 | delighted me | | | | | | |
| 15 | enraged me | | | | | | |
| 16 | saddened me | | | | | | |

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| 17 | surprised me | | | | | | |
| 18 | disgusted me | | | | | | |
| **Refraining from making physical movements that …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 19 | sadden me is easy for me | | | | | | |
| 20 | delight me is hard for me | | | | | | |
| 21 | surprise me is possible for me | | | | | | |
| 22 | enrage me is easy for me | | | | | | |
| 23 | disgust me is hard for me | | | | | | |
| 24 | frighten me is hard for me | | | | | | |
| **I know (can distinguish) what smells make me feel** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 1 | sad | | | | | | |
| 2 | surprised | | | | | | |
| 3 | delighted | | | | | | |
| 4 | disgusted | | | | | | |
| 5 | enraged | | | | | | |
| 6 | frightened | | | | | | |
| **Experessing my feelingstoward smells that are ….** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 7 | surprising is hard for me | | | | | | |
| 8 | frightening is easy for me | | | | | | |
| 9 | delighting is hard for me | | | | | | |
| 10 | saddening is easy for me | | | | | | |
| 11 | enraging is hard for me | | | | | | |
| 12 | disgusting is easy for me | | | | | | |
| **I can control and monitor the sort of smells that have … in the past.** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 13 | frightened me | | | | | | |
| 14 | delighted me | | | | | | |
| 15 | enraged me | | | | | | |
| 16 | saddened me | | | | | | |
| 17 | surprised me | | | | | | |
| 18 | disgusted me | | | | | | |
| **Refraining from smelling things that …** | | **1** | **2** | **3** | **4** | **5** | **Example** |
| 19 | sadden me is easy for me | | | | | | |
| 20 | delight me is hard for me | | | | | | |
| 21 | surprise me is possible for me | | | | | | |
| 22 | enrage me is easy for me | | | | | | |
| 23 | disgust me is hard for me | | | | | | |
| 24 | frighten me is hard for me | | | | | | |

پژوهشگاه علوم انسانی و مطالعات فرهنگی
پرتال جامع علوم انسانی