

## Research Article

# Cultural Intelligence in EFL and ESP Learners: Metacognitive, Cognitive, Motivational, and Behavioral Knowledge

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One of the most significant current discussions in language learning is cultural intelligence. This research aims to study cultural learning determinants in EFL and ESP learners concerning their metacognitive, cognitive, motivational, and behavioral knowledge toward cultural intelligence in Iran. The studies so far indicate that cultural intelligence in EFL and ESP learners has not received as much attention as warranted. Moreover, rare studies have been done in this regard in the Iranian context. In this descriptive study, a nonrandom sampling method was applied to 323 university students who were 116 EFL learners (M.A and B.A English language students of Zanjan and Islamic Azad University) and 207 ESP (from the Zanjan University of Medical Sciences). The questionnaire was valid because it was standardized, and its reliability was checked via Cronbach's alpha ( $p < 0.000$ ). The result of data analysis showed that EFL students have more cultural intelligence compared to medical students. Thus, based on the results, the teachers should consider the importance of cultural factors in their classes. Regarding pedagogical implications, the findings of this study can be of great help to book designers, schoolteachers, and university lecturers.

## 1. Introduction

The relationship between culture and language has been studied by scholars [1, 2]. Different viewpoints are against or integrating culture in L2 teaching [3–6]. Scovel [7] and Makhmudov [8] agreed that culture and language are inseparable. As Duan [9] and Grossberg [10] suggest, the requisite for cultural literacy in ELT is primary because language learners will face significant obstacles in getting themselves across to local speakers. Ritlyova [11], Almutairi [12], and Richards and Schmidt [13] believe that the students expand both their perception of a foreign culture and their own culture by gaining knowledge of a foreign language.

The correlation between language, culture, and identity is proven [14, 15]. But teachers' ignorance of the learner's character and identity is a common and verifiable truth. Foreign language learners need to be taught and comprehend the cultural features and customs of native speakers' society. In addition, students ought to feel free to communicate and exchange information, ideas, and feelings in a

friendly and supportive class atmosphere. Nevertheless, stepping into the novel experience of foreign language acquiring can come along with cultural and identity confusions for the students and, in turn, cause difficulties for both the teacher and the students [16, 17].

Cultural intelligence is the competence to communicate effectively with people from other cultures and communities. Several attributions include comprehension of different aspects of a foreign culture, attentiveness, and some behavioral and social skills that are attributed to cultural intelligence. This set of skills and abilities helps individuals better understand cultural standards and act appropriately in cross-cultural circumstances [18, 19].

Cultural intelligence is a factor that has received the least attention in language curriculum by English teachers. A language learner carries their identity, culture, and values to the language classroom, as well. Culture is not separated from language; therefore, language learners simultaneously gain knowledge of language and culture [20, 21]. In this study, the research context includes students who study

English as a foreign language in universities of Iran. Generally, Iranian students are not sufficiently exposed to the English language and its culture. Thus, it seems vital that it explores how English may influence EFL and ESP learners' cultural intelligence in Iran. Although previous research [22, 23] has shown the effect of English on cultural intelligence, more studies are needed to shed further light on cultural intelligence.

## 2. Review of Literature

Language, culture, and intelligence are closely linked and cannot be separated. Culture, intelligence, and identity find their meanings in a language-based context. It is a language that social configurations are based on language, and the sense of identity and intelligence also derives from it [24, 25].

**2.1. Cultural Intelligence Theory.** Early and Ang [26] created the cultural intelligence (C.Q.) framework to measure internal and social cross-cultural competencies. They define C.Q. as "an individual's capability to function and manage effectively in culturally diverse settings" ([27], p. 32). Since its development in (2003), C.Q. has become a robust theoretical framework in cross-cultural proficiency research [5, 27, 28]. Early and Ang [26] patterned C.Q. after a framework of general intelligence developed by Sternberg [29]. Sternberg was among the first to move beyond traditional measures of intelligence (verbal comprehension, memory, and reasoning) to a more sociocultural and contextual view. Sternberg [30] defined intelligence as "mental activity directed toward purposive adaptation to, and the selection and shaping of, real-world environments relevant to one's life" (p. 45). He conceived several loci of intelligence as critical to adequately account for sociocultural aspects of intelligence. Similarly, Early and Ang [26] constructed the C.Q. framework on four essential loci. These loci measure mental activity (metacognition, cognition, and motivation). The fourth one measures social interaction (behavior). Ng et al. [27] and Mohammadi and Izadpanah [31] claimed that C.Q. is unique because it seeks to measure people's perception of their ability to reason with cross-cultural situations and solve real-world problems.

### 2.2. Metacognitive, Cognitive, Motivational, and Behavioral Knowledge

**2.2.1. Metacognitive C.Q.** Metacognitive C.Q. is the robustness and control of mental processes that help individuals effectively and correctly understand cultural differences. Those with high metacognitive C.Q. tend to possess a more consistent awareness of their thinking processes. This awareness is accompanied by a certain amount of mental flexibility, which allows individuals to revise mental models as they encounter novel cultural situations [9, 32, 33] [34].

**2.2.2. Cognitive C.Q.** Ang et al. [35], Bandura [36], and Pauluzzo (2020) conceived cognitive C.Q. to describe

knowledge of cultural norms, conventions, and practices. Typically gained through experience and formal education, this knowledge can include perceptions of a particular culture's economics, social standards, political systems, and religious practices.

**2.2.3. Motivational C.Q.** This construct describes the ability to focus energy on the complex task of learning about, and functioning within, culturally diverse situations. It outlined motivational C.Q. in the context of the expectancy-value theory of motivation, which states the amount of energy one will expend: (a) how much a person values cultural understanding and (b) how much that person believes cultural understanding is possible. Those with high amounts of motivational C.Q. have high expectations that cultural bridges can be successfully crossed, and such an endeavor is worth it [35].

**2.2.4. Behavioral C.Q.** Behavioral C.Q. is similar in its approach to early models of cross-cultural proficiency. Hammer et al. were the first to develop a behavior-focused cross-cultural competency model. Their theory of intercultural effectiveness proposed that three factors, above all others, determined a person's ability to navigate cross-cultural contexts. These factors include (a) an ability to handle the stress of cross-cultural situations (especially living/working in a foreign culture), (b) the ability to communicate effectively, and (c) the ability to establish relationships with those of other cultures. Unlike Hammer et al., Ang et al. [35] placed greater emphasis on verbal and nonverbal communication skills. This approach follows [37–39], who emphasized the implicit nature of cultural communication. Those with high levels of behavioral C.Q. have a diverse collection of situational appropriate verbal and nonverbal actions that include words, tone of voice, body language, and facial expressions.

Numerous studies have been conducted on C.Q. in terms of participants' study abroad experience, proficiency in English, gender, etc. (Pauluzzo, 2020; Markum, 2017; Rachmawaty et al., 2018). One study showed that students' cultural intelligence improved after short-term stays in foreign countries. It suggested that the students' cultural intelligence revealed significant improvement in the overall level of cultural intelligence and their metacognitive C.Q., cognitive C.Q., motivational C.Q., and behavioral C.Q. (Rustambekov and Mohan, 2017). This study showed that students' C.Q. did not show any statistical difference in the participants' ages. Several studies also revealed the significance of time spent in foreign countries to improve participants' C.Q. [14, 40].

Another study also suggested that even the short period of a cultural tour showed a significant relationship between travel and the participants' metacognitive C.Q., cognitive C.Q., and motivational C.Q. However, no significant statistical difference was found between a short-term cross-cultural tour and behavioral C.Q. [41]. Some studies suggested traveling abroad did not influence the students' cultural intelligence. On the contrary, participants who had

TABLE 1: Distribution of participants.

| Sample size | Society |                  |
|-------------|---------|------------------|
| 207         | 450     | Medical students |
| 116         | 162     | English students |
| 323         | 612     | Total            |

no experience traveling to foreign countries showed higher C.Q. [42]. On the other hand, Robert and Bariana [43] investigated whether the choice of the country influenced the learners' C.Q. At one of the universities in the USA, the results showed that having the experience of travel to foreign countries affected the learners' C.Q. and that the choice of countries did matter. It was interesting to note that the study also found that learners who traveled to non-Anglo-Saxon countries developed a higher level of cultural intelligence.

This research aims to assess the cultural intelligence in EFL and ESP students on their metacognitive, cognitive, motivational, and behavioral knowledge.

- (1) Is metacognitive knowledge of Iranian EFL and ESP students different from cultural intelligence?
- (2) Is cognitive knowledge of Iranian EFL and ESP students different from cultural intelligence?
- (3) Is motivational knowledge of Iranian EFL and ESP students different from cultural intelligence?
- (4) Is behavioral knowledge of Iranian EFL and ESP learners different from cultural intelligence?

### 3. Method

**3.1. Design of Study.** This descriptive study used a non-random sampling method among undergraduate and postgraduate students of the Zanjan Azad University of English language teaching and ESP language learners of the Zanjan University of Medical Sciences.

**3.2. Participants.** Based on a nonrandom sampling method, the number of statistical societies equals 450 medical students and 162 English students Table 1.

**3.3. Instrument.** A cultural intelligence questionnaire [35] was the main instrument in this study which consisted of 20 questions and four parts. These four areas referred to four aspects of cultural intelligence, including (1) metacognition, (2) cognition, (3) motivational knowledge, and (4) behavioral knowledge.

The metacognitive component included decision making and individual planning for familiarizing with other cultures and understanding relationships and differences. The cognitive part (or cultural knowledge) refers to the individual's cultural and intercultural ability. People who have a high cultural knowledge have a good experience of the similarities. The motivational element (or cultural motivation) is the amount of a person's willingness and desire to learn and interact in multicultural environments. People with high cultural motivations are trying to improve their cultural

TABLE 2: Frequency distribution and descriptive indices of medical student responses.

|               | Mean | Median | Std. deviation | Skewness | Kurtosis |
|---------------|------|--------|----------------|----------|----------|
| Cognitive     | 3.69 | 4.00   | 0.945          | 0.34     | -0.72    |
| Metacognitive | 4.84 | 5.00   | 0.751          | 0.28     | -0.69    |
| Motivational  | 3.49 | 3.60   | 1.03           | -0.21    | -0.34    |
| Behavioral    | 3.77 | 4.00   | 1.05           | -0.15    | -0.54    |

information and familiarity with different cultures. The behavioral component includes the proper verbal and nonverbal tools in dealing with new cultures. People with high sociocultural status can use the correct forms and matching of words, the tone of verification, and nonvoice messages, including movements (hands, face, and eyes).

**3.4. Procedure.** The first stage of the study was started by giving the questionnaire to participants. Since giving questions to 323 participants simultaneously was hard work, the researchers used social media on the Internet to interact with participants. The questionnaire was sent to participants by email or through social media with a deadline for sending the answer. The researchers were ready to answer any questions and gave the appropriate examples to confused participants. According to statistics science and central limitation theory, when the sample size is near to intolerable (over 25), the sample size has a normal distribution. After gathering all the answers to the questionnaire, the scores were sent to SPSS (version 22) to find out the results and the degree of difference between the two groups in each area. A Persian translation of the questionnaire was made available. Two proficient translators converted the questionnaire into Persian, and then two other experts translated them back into English. Subsequently, two experienced and knowledgeable English language experts compared both versions to the original English questionnaires. In the end, the most proper Persian adaptation was chosen.

**3.5. Data Analysis.** The main objectives of this research were cognitive, metacognitive, motivational knowledge, and behavioral dimensions in the cultural intelligence questionnaire. In the inferential analysis section, first, the reliability of the questionnaire and then, using the Kolmogorov-Smirnov test, the standard variables were examined. Then, a self-contained *t*-test was conducted to investigate societies' similarities and the research hypotheses for confirmation or disapproval. Descriptive statistics were presented about the status of the research variables using tables and graphs. Then, statistical methods and different tests such as correlation and regression were used to answer the research questions and conclusions. All the static tests were applied in SPSS (version 22) at a significant level  $\alpha = 0.05$ .

### 4. Results

**4.1. Explanatory Examination of Research Variables.** The following tables demonstrate principal indicators and the

TABLE 3: Frequency distribution and descriptive indicators of English student answers.

|               | Mean | Median | Std. deviation | Skewness | Kurtosis |
|---------------|------|--------|----------------|----------|----------|
| Cognitive     | 4.86 | 4.75   | 1.60           | 1.09     | 0.63     |
| Metacognitive | 5.72 | 5.67   | 1.69           | 1.09     | 0.49     |
| Motivational  | 4.90 | 4.80   | 0.20           | 0.59     | 0.69     |
| Behavioral    | 4.65 | 4.60   | 1.91           | 1.17     | 0.56     |

TABLE 4: Kolmogorov–Smirnov output to test variable normality.

|                        | Cognitive | Metacognitive | Motivational | Behavioral |
|------------------------|-----------|---------------|--------------|------------|
| N                      | 323       | 323           | 323          | 323        |
| Kolmogorov–Smirnov Z   | 1.36      | 1.32          | 1.23         | 1.38       |
| Asymp. Sig. (2-tailed) | 0.07      | 0.08          | 0.09         | 0.06       |

distribution of answers to the questions connected to each variable.

According to Table 2, the average observed in the responses of medical students in cognitive, metacognitive, motivational, and behavioral was 3.69, 4.84, 3.49, and 3.77, respectively. Respondents have chosen options 4 and 5 more. The metacognitive size has the highest standard; then, the behavioral and motivational variables have a higher mean. Finally, the behavioral variable has the lowest average. According to the skewness and kurtosis, these values are between 2 and  $-2$ ; therefore, the distribution of variables is close to normal distribution.

Based on Table 3, the observed mean of cognitive, metacognitive, motivational, and behavioral subcomponents in the responses of language students is 4.86, 5.72, 4.90, and 4.65, which shows that respondents have selected options 5 and 6 more than the others. Regarding the mean of sub-components, it is seen that the metacognitive has the highest mean. The motivational and cognitive variables and, finally, the behavioral variable have the highest mean. According to the skewness and kurtosis, these values are between 2 and  $-0.2$ , thus the distribution of variables is close to normal distribution.

#### 4.2. Inferential Analysis

**4.2.1. Checking the Normality of Variables.** Considering the significance levels obtained (Sig) in Table 4 and cognitive, metacognitive, motivational, and behavioral dimensions, it is more than 5%. Therefore, the null hypothesis means that the normal distribution of samples is confirmed at a level of error of 5%, with no considerable dissimilarity in the distribution of models with the normal one.

#### 4.3. Hypothesis Testing

**Hypothesis 1.** Cultural intelligence is significantly different between English language students and medical students. To do this test, the preliminary test and then the subtests related to the cultural intelligence dimensions are presented.

First, according to the above hypothesis, the test is as follows:

H0: the average cultural intelligence of the English language and medical students is the same.

H1: the average cultural intelligence between English and medical students is different.

To do the above hypothesis, considering the normality of the data, population's means were compared by the researchers, using  $t$ -test results presented in Table 5.

For variance equation analysis, first, the Levene's test was conducted. It is observed that the value of Sig. is equal to 0.001 and smaller than 0.05; thus, the assumption of variance equality is excluded. Therefore, the null hypothesis or the conjecture of average equality is excluded with 95% confidence. In other words, the mean of cultural intelligence variables is significantly different between English and ESP students. The means are shown in Table 6.

According to Table 5, it is seen that the mean cultural intelligence variable in medical students is 3.94, which is lower than the average of this variable in language students equal to 5.03, which shows that the cultural intelligence of students in the field of language is significantly higher than that of ESP students.

**Hypothesis 1.** Cultural intelligence has a significant difference in the cognitive dimension between English and ESP students.

To do the above hypothesis, considering the normality of the data, a  $t$ -test was conducted to compare societies' means. Test results are displayed in Table 7.

First, the Levene's test was used to analyze the variance equation for this hypothesis. It is observed that the value of Sig. is equal to 0.001 and less than 0.05; thus, the assumption of variance equality of  $s$  is cast aside. Considering  $t$ -test results, cultural intelligence is significant at the cognitive level. The value of Sig. is 0.001 and less than 0.05. Therefore, null hypothesis or any assumption of meaning equality is also cast aside with 95% confidence. In other words, the mean of cultural intelligence variable in the cognitive dimension is significantly different between English and medical students.

According to Table 8, the average cultural intelligence variable in the cognitive dimension in medical students is 3.69, which is less than the mean of this variable in English

TABLE 5: Independent *t*-test for comparing two communities in the cultural intelligence variable.

| Cultural identity           | Levene's test for equality of variances |      | T-test for equality of means |       |         |                 |                       |   |       |
|-----------------------------|---|------|------------------------------|-------|---------|-----------------|-----------------------|---|-------|
|                             | F                                       | Sig. | T                            | Df    | p value | Mean difference | Std. error difference | 95% confidence interval of the difference |       |
|                             |   |      |                              |       |         |                 |                       | Lower                                     | Upper |
| Equal variances assumed     | 43.27                                   | .000 | 13.19                        | 321   | 0.001   | -1.09           | 0.08                  | -1.25                                     | -0.93 |
| Equal variances not assumed |   |      | 15.60                        | 318.4 | 0.001   | -1.09           | 0.07                  | -1.22                                     | -0.95 |

TABLE 6: Mean cultural intelligence variable in two disciplines of English and medical sciences.

|                   | Group            | N   | Mean | Std. deviation | Std. error mean |
|-------------------|------------------|-----|------|----------------|-----------------|
| Cultural identity | Medical students | 207 | 3.94 | 0.83           | 0.06            |
|                   | English students | 116 | 5.03 | 0.42           | 0.04            |

TABLE 7: Comparing two communities in cultural intelligence variable in cognitive dimension utilizing *t*-test.

|                             | Levene's test for equality of variances |      | T-test for equality of means |        |                 |                 |                       |   |       |
|-----------------------------|---|------|------------------------------|--------|-----------------|-----------------|-----------------------|---|-------|
|                             | F                                       | Sig. | T                            | Df     | Sig. (2-tailed) | Mean difference | Std. error difference | 95% confidence interval of the difference |       |
|                             |   |      |                              |        |                 |                 |                       | Lower                                     | Upper |
| Equal variances assumed     | 23.67                                   | .000 | 11.94                        | 32     | .000            | -1.17           | 0.10                  | -1.36                                     | -.98  |
| Equal variances not assumed |   |      | 13.33                        | 311.83 | .000            | -1.17           | .09                   | -1.34                                     | -.10  |

TABLE 8: The mean of cultural intelligence in cognitive dimension in two disciplines of English language and medical sciences.

|  | Group            | N   | Mean | Std. deviation | Std. error mean |
|--|------------------|-----|------|----------------|-----------------|
| Cultural intelligence in the cognitive dimension | Medical students | 207 | 3.69 | 0.95           | 0.07            |
|  | English students | 116 | 4.86 | 0.63           | 0.06            |

TABLE 9: Comparing two societies in the cultural intelligence variable in the metacognitive dimension utilizing *t*-test.

|                             | Levene's test for equality of variances |      | T-test for equality of means |       |                 |                 |                       |   |       |
|-----------------------------|---|------|------------------------------|-------|-----------------|-----------------|-----------------------|---|-------|
|                             | F                                       | Sig. | T                            | Df    | Sig. (2-tailed) | Mean difference | Std. error difference | 95% confidence interval of the difference |       |
|                             |   |      |                              |       |                 |                 |                       | Lower                                     | Upper |
| Equal variances assumed     | 23.01                                   | .001 | 11.38                        | 321   | .001            | -.88            | 0.08                  | -1.04                                     | -0.73 |
| Equal variances not assumed |   |      | 12.76                        | 313.6 | .001            | -.88            | 0.07                  | -1.02                                     | -0.75 |

students who is 4.86, which shows that the cultural intelligence of English students in the field of cognitive science is significantly higher than that of medical students. Considering the normality of the data, a *t*-test was used to compare the mean of the societies. Results are presented in Table 9.

Analyzing variance equation was carried out first using the Levene's test. It is observed that the value of Sig. is equal to 0.001 and smaller than 0.05; thus, assuming variance equality cannot come into account. Considering *t*-test results, cultural intelligence is deemed to be metacognitive. The value of Sig. is 0.001 and smaller than 0.05, therefore

TABLE 10: Mean of cultural intelligence variable in metacognitive dimension in two branches of English language and medical sciences.

|  | Group            | N   | Mean | Std. deviation | Std. error mean |
|--|------------------|-----|------|----------------|-----------------|
| Cultural intelligence in metacognitive dimension | Medical students | 207 | 4.84 | 0.75           | 0.05            |
|  | English students | 116 | 5.72 | 0.49           | 0.05            |

TABLE 11: Comparison of two communities in cultural intelligence variable in the motivation dimension, using *t*-test.

|                             | Levene's test for equality of variances |      | T-test for equality of means |       |                 |                 |                       |   |       |
|-----------------------------|---|------|------------------------------|-------|-----------------|-----------------|-----------------------|---|-------|
|                             | F                                       | Sig. | T                            | Df    | Sig. (2-tailed) | Mean difference | Std. error difference | 95% confidence interval of the difference |       |
|                             |   |      |                              |       |                 |                 |                       | Lower                                     | Upper |
| Equal variances assumed     | 17.87                                   | .001 | 13.16                        | 321   | .001            | -1.41           | .11                   | -1.62                                     | -1.20 |
| Equal variances not assumed |   |      | 14.64                        | 310.5 | .000            | -1.41           | .10                   | -1.60                                     | -1.22 |

TABLE 12: The mean of cultural intelligence variable in motivational dimension in two disciplines of English language and medical sciences.

|   | Group            | N   | Mean | Std. deviation | Std. error mean |
|---|------------------|-----|------|----------------|-----------------|
| Cultural intelligence in the motivational dimension | Medical students | 207 | 3.49 | 1.03           | .07             |
|   | English students | 116 | 4.90 | 0.69           | .06             |

rejecting the null hypothesis or assuming average equality with 95% confidence. The mean cultural intelligence variable in the metacognitive dimension is significantly different between English and medical students.

According to Table 10, the average cultural intelligence variable in the metacognitive dimension in medical students is 4.84, which is lower than the mean of this variable in language students, which is 5.72, which shows that the cultural intelligence of English students in the metacognitive dimension is significantly higher than that of medical students.

*Hypothesis 3.* Cultural intelligence has a significant difference in the motivation dimension between English and medical students.

To do the above hypothesis, considering the normality of the data, a *t*-test was used to compare the mean of societies. Results are presented in Table 11.

Analyzing variance equation was accomplished first using the Levene's test (Table 11). It can be observed that the value of Sig. is equal to 0.001 and smaller than 0.05. Considering the results of the *t*-test, cultural intelligence is considered to be motivating at times. The mean of cultural intelligence variable in the motivational dimension between English and medical students is different.

Based on Table 12, it is seen that the average cultural intelligence variable in the motivational dimension in medical students is 3.49, which is less than the average of this variable in the students of English, which is equal to 4.90, which indicates that English language students' cultural intelligence in the dimension of motivation is significantly higher than that of medical students.

To do the above hypothesis, considering the normality of the data, a *t*-test was used to compare the mean of two societies.

After using the Levene's test for the analysis of the variance equation (Table 13), it could have been observed that the value of Sig. is equal to 0.001 and less than 0.05. Therefore, the assumption of the equality of variances is rejected. Considering the results of the *t*-test, cultural intelligence is known to be motivating at times. The value of Sig. is 0.001 and less than 0.05. Therefore, the null hypothesis or the assumption of the equality of means is also rejected with 95% confidence. In other words, the mean of cultural intelligence variable in the motivational dimension between English students and medical students is significantly different.

In Table 14, it is seen that the mean cultural intelligence variable in the motivational dimension in medical students is equal to 3.77, which is lower than the mean of this variable in the English students, which is equal to 4.65, which indicates that the cultural intelligence of the English students in the dimension of motivation is significantly higher than that of medical students.

*Hypothesis 2.* The dimensions of cultural intelligence (cognitive, metacognitive, motivational, and behavioral) in English students are significantly different.

Researchers test the following to make the above hypothesis: ANOVA test is used to perform the above hypothesis due to normal variables.

According to Table 15, it is seen that the value of Sig. is 0.001, which is less than 0.05, which shows that the average dimensions of cultural intelligence are significantly different. Tukey test was used to determine this difference.

TABLE 13: Comparing two communities in the cultural intelligence variable in the motivational dimension, using *t*-test.

|                             | Levene's test for equality of variances |      | T-test for equality of means |       |                 |                 |                       |   |       |
|-----------------------------|---|------|------------------------------|-------|-----------------|-----------------|-----------------------|---|-------|
|                             | F                                       | Sig. | T                            | Df    | Sig. (2-tailed) | Mean difference | Std. error difference | 95% confidence interval of the difference |       |
|                             |   |      |                              |       |                 |                 |                       | Lower                                     | Upper |
| Equal variances assumed     | 46.16                                   | .001 | 8.42                         | 321   | .001            | -0.89           | .11                   | -1.09                                     | -0.68 |
| Equal variances not assumed |   |      | 9.89                         | 320.0 | .001            | -0.89           | .09                   | -1.06                                     | -0.71 |

TABLE 14: The mean cultural intelligence variable in the motivational dimension.

| Group            | N   | Mean | Std. deviation | Std. error mean |
|------------------|-----|------|----------------|-----------------|
| Medical students | 207 | 3.77 | 1.05           | 0.07            |
| English students | 116 | 4.65 | 0.58           | 0.05            |

Given Tukey test outputs in Table 16, Sig. values between some variables are less than 0.05, indicating that the variables have significant differences. This difference was between the mean metacognitive and cognitive subcategories with a mean of -0.86. Cognitive and behavioral differences, with an average of 0.21, and between the metacognitive and motivational submetrics with a difference of 0.82 and metacognitive and behavioral subscripts with a difference of 1.07 and an average motivational and behavioral subcomponent with a mean difference of 0.224 are significant. ANOVA test is used to perform the above hypothesis due to standard variables.

According to Table 17, it is seen that the value of Sig. is 0.001, which is less than 0.05, which shows that the average dimensions of cultural intelligence in the students of medical sciences are significantly different. Tukey test is used to determine this difference.

Tukey test outputs in Table 18 show that values of Sig. among some variables are less than 0.05, indicating that the variables have significant differences, namely, the difference between the mean metacognitive and cognitive subcomponents with a mean difference of -1.14, metacognitive and motivational with a mean difference of 1.34, and metacognitive and behavioral with a mean difference of 1.07.

Also, there is a noticeable difference between mean and subjective motivational and behavioral components with a mean of 0.28. According to the averages, it is seen that the highest mean for the metacognitive subelement is 4.83 and the lowest for the motivational variable with an average of 3.49.

4.4. Discussion of Findings. Regarding the first research question, the results of the cultural intelligence sample *t*-test on the measures of metacognitive knowledge revealed that the EFL learners significantly had more understanding of metacognitive (with the mean of 5.719), in comparison with

TABLE 15: ANOVA'S test for comparison of subjects of cultural intelligence in language students.

|                | Sum of squares | Df  | Mean square | F     | Sig.  |
|----------------|----------------|-----|-------------|-------|-------|
| Between groups | 76.98          | 3   | 25.66       | 72.13 | 0.001 |
| Within groups  | 163.65         | 460 | 0.356       |       |       |
| Total          | 240.63         | 463 |             |       |       |

the ESP learners (with the mean of 4.835) (Tables 2 and 3). Therefore, it can be declared that participating in English classes can enhance metacognitive knowledge. While the EFL learners were answering the questionnaire, it was sensible that they had some metacognitive knowledge because they asked some questions for more information. They expressed some examples of their experience in their English classes. In contrast, in the ESP learners' group, the participants had so many problems perceiving the questions, and most of them were unfamiliar with the concept. Thus, in the process of answering, they had some difficulties acquired when the researchers illustrated those questions. It was undeniable that they were alienated from the target language's culture because the school classes did not focus so much on the culture of the language.

According to Byram et al. [44], knowledge can be classified into two broad categories: (1) knowledge of social groups and culture of the target language's communities and (2) knowledge of concepts in interpersonal and social interactions, which comes to be known as culture-specific and culture-general knowledge. Culture-specific understanding about the individual's own country can also be referred to as cultural self-awareness and is often rephrased as understanding of oneself and one's own culture. However, there is no focus on this area in the Iranian school's context because of differences in culture and some religious and political reasons.

These findings match the results of some studies in which significant differences were found in comparison to the intercultural competence in EFL and ESP learners (such as [1, 45] Koh et al., 2009; [46] Liddicoat et al.; [6, 11, 47-49]). For example, the study of Bandura's [36] developmental model of intercultural sensitivity (DMIS) indicates that learners can advance their cultural intelligence on the

TABLE 16: Post hoc Tukey test.

| Tukey test for the mean difference of subscales (I) variable | (J) variable  | Mean difference (I-J) | Std. error | Sig.  | 95% confidence interval |             |
|--|---------------|-----------------------|------------|-------|-------------------------|-------------|
|  |               |                       |            |       | Lower bound             | Upper bound |
| Cognitive  | Metacognitive | -.86*                 | 0.08       | 0.001 | -1.06                   | -0.66       |
|  | Motivational  | -0.03                 | 0.08       | 0.971 | -0.24                   | 0.17        |
|  | Behavioral    | 0.21*                 | 0.08       | 0.040 | 0.01                    | 0.41        |
| Metacognitive  | Cognitive     | .86*                  | 0.08       | 0.001 | 0.66                    | 1.06        |
|  | Motivational  | .82*                  | 0.08       | .001  | 0.62                    | 1.03        |
|  | Behavioral    | 1.07*                 | 0.08       | .001  | 0.86                    | 1.27        |
| Motivational   | Cognitive     | 0.03                  | 0.08       | .971  | -0.17                   | 0.24        |
|  | Metacognitive | -0.82*                | 0.08       | .001  | -1.02                   | -0.62       |
|  | Behavioral    | 0.24*                 | 0.08       | .011  | 0.04                    | 0.45        |
| Behavioral   | Cognitive     | -0.21*                | 0.08       | .040  | -0.41                   | -0.01       |
|  | Metacognitive | -1.07*                | 0.08       | .001  | -1.27                   | -0.86       |
|  | Motivational  | -.24*                 | 0.08       | .011  | -0.45                   | -0.04       |

\*The mean difference is considerable at the 0.05 level.

TABLE 17: ANOVA test for comparisons of cultural intelligence elements in language students.

|                | Sum of squares | Df  | Mean square | F      | Sig.  |
|----------------|----------------|-----|-------------|--------|-------|
| Between groups | 227.17         | 3   | 75.72       | 83.497 | 0.001 |
| Within groups  | 747.28         | 824 | 0.91        |        |       |
| Total          | 974.45         | 827 |             |        |       |

continuum from ethnocentric stages to ethnorelative phases. Findings of the present study support Bennett's model that Vietnamese EFL learners developed their cultural intelligence linearly across different topics. However, results did not show linear development across time. Shaules [48] argues that learners can be found simultaneously in mixed states of resistance, acceptance, and adaptation. Positive results of the intercultural intervention indicated a lack of ethnocentric attitudes evident in the I.C. class. This suggests that focusing on developing learners' intercultural awareness and knowledge at the beginning of language learning is crucial. It can primarily help them minimize ethnocentric attitudes and develop ethnorelative awareness and attitudes towards cultures.

**4.5. Cognitive Knowledge.** Regarding the second research question, the results showed that EFL significantly had more cognitive knowledge (with the mean of 4.862) in comparison with the ESP learners (with the mean of 3.692) (Tables 2 and 3).

Therefore, it can be said that participating in English classes can enhance cognitive knowledge. While EFL participants were answering the questionnaire, it was sensible that they had a positive attitude towards cultural intelligence. On the other hand, in the ESP learners' group, the participants had so many problems perceiving the question, and most of them were unfamiliar with the concept. Thus, in the process of answering, they had some difficulties acquired when the researcher illustrated those questions. It was undeniable that they were unfamiliar with the target language's

culture because school classes did not focus sufficiently on the culture. In addition, ESP learners were passive and not eager to learn about the target language's culture because they asked some questions for more information and examples.

Bandura's developmental model of intercultural sensitivity (DMIS) study indicates that learners should develop their cultural intelligence from ethnocentric stages to ethnorelative phases. Findings of the current study support Bandura's [36] model that Vietnamese EFL learners developed their cultural intelligence linear across different topics. However, linear development across time was not concluded.

Although there are some differences in some aspects of the study, for instance, in Genc and Bada's [50] research, students did not get familiar with the cultural factors. Still, EFL learners were eager to learn about cultural intelligence in this study. Thus, it can be concluded that having keen cultural intelligence depends on too many factors, including individual characteristics and the needs of learners. In addition, in another survey (Weedon [51] studied on Chinese students living in France for a two weeks' workshop; they tend to learn about the culture of language because of their needs to interact appropriately in the workshop context.

In the second research question, it was claimed that the result of most studies is in line with the present research in which the importance of focusing on cultural factors enhances intercultural competence in terms of intercultural attitudes. This appears to support Ang [35] and Van Dyne [52], who emphasized the importance of cross-cultural interaction in developing cultural intelligence.

**4.6. Motivational Knowledge.** Regarding the third research question, the results showed that Iranian EFL significantly had more skill of motivational knowledge (with the mean of 4.896) in comparison with the ESP students (with the mean of 3.488) (Tables 2 and 3). Therefore, it can be declared that participating in English classes can enhance the skill of cultural intelligence. While the EFL learners answered the questionnaire, they had more cultural intelligence skills



TABLE 18: Tukey test for the mean difference of subscales.

| (I) variable  | (J) variable  | Mean difference (I-J) | Std. error | Sig.  | 95% confidence interval |             |
|---------------|---------------|-----------------------|------------|-------|-------------------------|-------------|
|               |               |                       |            |       | Lower bound             | Upper bound |
| Cognitive     | Metacognitive | -1.14*                | 0.09       | 0.001 | -1.38                   | -0.90       |
|               | Motivational  | 0.20                  | 0.09       | 0.13  | -0.04                   | 0.44        |
|               | Behavioral    | -0.07                 | 0.09       | 0.86  | -0.32                   | 0.18        |
| Metacognitive | Cognitive     | 1.14*                 | 0.09       | 0.001 | 0.90                    | 1.38        |
|               | Motivational  | 1.34*                 | 0.09       | 0.001 | 1.11                    | 1.59        |
|               | Behavioral    | 1.07*                 | 0.09       | 0.001 | 0.83                    | 1.31        |
| Motivational  | Cognitive     | -0.20                 | 0.09       | 0.132 | -0.44                   | 0.04        |
|               | Metacognitive | -1.34*                | 0.09       | 0.001 | -1.59                   | -1.11       |
|               | Behavioral    | -.28*                 | 0.09       | 0.017 | -0.52                   | -0.04       |
| Behavioral    | Cognitive     | .07                   | 0.09       | 0.858 | -0.17                   | 0.32        |
|               | Metacognitive | -1.07*                | 0.09       | 0.001 | -1.31                   | -0.83       |
|               | Motivational  | .28*                  | 0.09       | 0.017 | 0.04                    | 0.52        |

\*The mean difference is significant at 0.05 level.

because they answered the questions quickly. Still, they also expressed some examples of their interaction with other cultures. For instance, they explained that they got familiar with some strategies to interact appropriately in a different situation.

In contrast, on the other hand, in the ESP learners group, the participants had so many problems in perceiving the question, and most of them were unfamiliar with the concept. Therefore, they had some difficulties in the process of answering, which were acquired when the researcher illustrated those questions. It was undeniable that they were unfamiliar with the target language's culture because school classes did not focus adequately on culture but merely on the tongue. In addition, ESP learners were friendly and were not eager to learn about intercultural strategies in the target language.

These results also match the findings of some studies in which significant differences were found in comparison to the intercultural competence in EFL and ESP learners, such as [53]; Khodadady et al. [54]; Nejad et al. [55]; Ritlyova [11]; Presbitero [14]; Shahsavadi et al. [56]; and Van et al. [57]. It is also vital to mention learners' underdeveloped consciousness in applying various sources to understand different relationships and analyses differing sociocultural interpretations as a defect that needs attention.

Although there are some differences in some aspects of the study in some studies, for instance, in Hopkyns' [58] research, students did not have so much tendency to get familiar with the cultural factors. Still, EFL learners were eager to learn about cultural intelligence in these studies. So, it can be concluded that being eager to learn motivational knowledge depends on too many factors, including individual characteristics and the needs of learners.

In addition, in another survey, Zuengler and Miller [59] studied on Chinese students living in France for a two weeks' workshop; they have too much tendency to learn about the culture languages because of their needs to interact appropriately in the workshop context. To sum up, the third research question claimed that the result of most studies is in

line with the present research in which the importance of focusing on cultural factors enhances cultural intelligence in terms of motivational knowledge.

*4.7. Behavioral Knowledge.* Regarding the fourth research question, the results showed that EFL significantly had more behavioral knowledge (with the mean of 4.653) in comparison with the ESP learners (with the mean of 3.677) (Tables 2 and 3). Therefore, it can be declared that participating in English classes can enhance behavioral knowledge. While EFL participants were answering the questionnaire, it was sensible that they were more aware of cultural intelligence because they asked some questions for more information. They expressed some examples of their experience in their English classes. For instance, they explained that they got familiar with cultural differences and some cultural values in movies or songs that they have listened to.

In contrast, on the other hand, in the ESP learners' group, the participants had so many problems in perceiving the question, and most of them were unfamiliar with the concept. Thus, in the process of answering, they had some difficulties acquired when the researcher illustrated those questions. They were out of contact with the target language's culture because the school classes did not focus so much on the culture of the language. In addition, ESP learners were passive and not eager to learn about the target language's culture.

The study's results equal the findings of some researches in which significant differences were found in comparison to the cultural intelligence in EFL and ESP learners (such as Karataş and Arpacı [5] and Liddicoat et al. [46]). For example, it can be argued that learners can be found in mixed states of resistance, acceptance, and adaptation simultaneously.

Although in some studies, there are some differences in some aspects of the study, students did not tend to get familiar with the cultural factors. Still, EFL learners were eager to learn about cultural intelligence in this study. Thus, it can

be concluded that having eagerness for cultural intelligence depends on too many factors, including individual characteristics and the needs of learners. Another survey [60] studied Chinese students living in France for a two-week workshop; they have too much tendency to learn about the culture of language because of their need to interact appropriately in the workshop context. To sum up, the last research question was claimed that the result of most studies is in line with the present research in which the importance of focusing on cultural factors enhances cultural intelligence in terms of behavioral knowledge.

## 5. Conclusion

This study was set out to determine the differences in cultural factors in English learning between EFL and ESP learners in Iran regarding four aspects of metacognitive, cognitive, motivational, and behavioral knowledge. Findings show that schoolteachers spent less time teaching in institutions on cultural intelligence than their peers. In high school, concentration was on language teaching because it was important for students to pass examinations. Still, in the institution, learning English mainly was communication and the ability to interact appropriately in the target language. Results show that it is crucial to put the main focus of the teaching process on intercultural competence and cultural intelligence. A second notable finding indicated that when researchers address cultural intelligence in class, EFL learners tend to focus on rather superficial aspects of intercultural communication, such as isolated facts about an English-speaking country. Still, ESP learners did not manage to get familiar with cultural intelligence. While EFL participants were answering the questionnaire, it was sensible that they had a positive attitude towards cultural intelligence because they asked some questions for more information and expressed some examples about their experience in English interactions.

In contrast, ESP learners had many problems perceiving the questions, and most were unfamiliar with the concept. Therefore, in the process of answering, they had some difficulties acquired when the researcher illustrated those questions. It was undeniable that they were unfamiliar with the target language's culture because school classes had not paid enough attention to culture. In addition, ESP learners were not keen on learning about the target language's culture.

**5.1. Limitations and Future Work.** The current research had several limitations. First, the study was restricted to universities in Zanjan city because of time and financial constraints. This city is a small city which has not so much tourists or native English speakers. These conditions create a situation where citizens are not exposed to native English speakers. The same conditions do not exist in bigger cities of Iran. Second, the study would be enhanced with several students involved in the survey, the interviews, and the classroom observations. However, time constraints and financial constraints limited the number of participants in the

study. A more significant number of participants would have increased the generalizability of the study's findings. Another point is that this study is a quantitative study that does not consider any interview or treatment; future studies can include these factors, too. University students have been selected because their proficiency in English is higher, so they have a better understanding of cultural intelligence.

Finally, the study identified significant differences between English and medical students regarding their focus on cultural intelligence and their strategies to develop abilities. It emerged that English was operated differently from medical students. They had better facilities, had greater freedom in running their classrooms, had access to more training opportunities, and had students with higher levels of English skills. This information could inform government programs designed to improve the teaching of cultural intelligence in high schools in Iran and inform university teacher preparation programs.

## Abbreviations

C.Q.: Cultural intelligence  
TEFL: Teaching English as a Foreign Language  
EFL: English as a Foreign Language  
ESL: English as a Second Language.

## Data Availability

The data will be available upon request from the corresponding author (Siros Izadpanah, email ID: cyrosizadpanah@yahoo.com).

## Disclosure

The abstract of this article was presented in the "2nd International Baku Conference on Scientific Research in 2021."

## Conflicts of Interest

The authors declare that they have no conflicts of interest.

## References

- [1] X. Gao and Z. Hua, "Experiencing Chinese education: learning of language and culture by international students in Chinese universities," *Language Culture and Curriculum*, vol. 1, pp. 1-7, 2021.
- [2] N. Ramirez-Lizcano and M. A. Cabrera-Tovar, "EFL learners' perceptions about language learning and culture when using telecollaboration," *Profile - Issues in Teachers' Professional Development*, vol. 22, no. 2, pp. 95-113, 2020.
- [3] R. Ahmed and A. AL-Kadi, "Online and face-to-face peer review in academic writing: Frequency and preferences," *Eurasian Journal of Applied Linguistics*, vol. 7, no. 1, pp. 169-201, 2021.
- [4] Ö. Ardiç and H. Çiftçi, "ICT competence and needs of Turkish EFL instructors: the role of gender, institution and experience," *Eurasian Journal of Applied Linguistics*, vol. 5, no. 1, pp. 153-173, 2019.

- [5] K. Karataş and I. Arpacı, "The mediating role of tolerance in the relationship between cultural intelligence and xenophobia," *Asia Pacific Education Review*, vol. 2, pp. 1–9, 2021.
- [6] K. Naidu, "Attending to 'culture' in intercultural language learning: a study of Indonesian language teachers in Australia. Discourse," *Studies in the Cultural Politics of Education*, vol. 41, no. 4, pp. 653–665, 2020.
- [7] T. Scovel, "The role of culture in second language pedagogy," *System*, vol. 22, no. 2, pp. 205–219, 1994.
- [8] K. Makhmudov, "Ways of forming intercultural communication in foreign language teaching," *Science and Education*, vol. 1, no. 4, pp. 10–29, 2020.
- [9] J. Duan, "Study on the interaction between college students' cultural literacy and "bottom-line thinking," in *Proceedings of the 4th International Conference on Culture, Education and Economic Development of Modern Society (ICCESE 2020)*, pp. 578–581, Atlantis Press, Moscow, Russia, March 2020.
- [10] L. Grossberg, "Identity and cultural studies: is that all there is," *Questions of cultural intelligence*, vol. 7, pp. 87–107, 1996.
- [11] A. Ritlyová, "Cultural studies in language teaching language, literature and culture in a changing transatlantic world," *International Conference Proceedings*, pp. 93–97, 2009.
- [12] M. Almutairi, "Kuwaiti parents' perceptions towards introducing a foreign culture into their children's EFL textbooks in public elementary schools," *Journal of Language Teaching and Research*, vol. 11, no. 1, pp. 45–53, 2020.
- [13] J. C. Richards and R. W. Schmidt, *Longman Dictionary of Language Teaching and Applied Linguistics*, Routledge, London, UK, 2013.
- [14] A. Presbitero, "Communication accommodation within global virtual team: the influence of cultural intelligence and the impact on interpersonal process effectiveness," *Journal of International Management*, vol. 27, no. 1, pp. 100–119, 2021.
- [15] S. Shahidi, "Comparing the effectiveness of conventional and Kano model questionnaire for gathering requirement of online bus reservation system," *International Journal of Innovative Research and Scientific Studies*, vol. 3, no. 1, pp. 27–32, 2020.
- [16] K. Fartash, S. M. M. Davoudi, T. A. Baklashova et al., "The impact of technology acquisition & exploitation on organizational innovation and organizational performance in knowledge-intensive organizations," *Eurasia Journal of Mathematics, Science and Technology Education*, vol. 14, no. 4, pp. 1497–1507, 2018.
- [17] L. T. Ingersoll, "Examining the effects of an on-campus cultural training course combined with faculty-led, short-term study abroad experiences on undergraduate students' cultural intelligence," vol. 2, pp. 3–15, Purdue University Graduate School, West Lafayette, IN, USA, 2021, Doctoral dissertation.
- [18] P. T. Esteves, J. Arede, B. Travassos, and M. Dicks, "Gaze and shoot: examining the effects of player height and attacker-defender interpersonal distances on gaze behavior and shooting accuracy of elite basketball players," *Revista de Psicologia del Deporte*, vol. 30, no. 3, pp. 1–8, 2021.
- [19] J. Kim, "The influence of empathy and communicative competence on cultural competence in nursing students," *The Journal of the Korea Contents Association*, vol. 20, no. 5, pp. 367–374, 2020.
- [20] L. L. Kong, Z. Q. Ma, S. H. Ji, and J. Li, "The mediating effect of empathy on the relationship between cultural intelligence and intercultural adaptation in intercultural service encounters," *The Journal of Asian Finance, Economics and Business*, vol. 7, no. 2, pp. 169–180, 2020.
- [21] Z. Qinghua, "Evaluation and prediction of sports health literacy of college students based on artificial neural network," *Revista de Psicologia del Deporte*, vol. 30, no. 3, pp. 9–18, 2021.
- [22] F. A. Ibrahim and J. R. Heuer, "Cultural identity: components and assessment," in *Cultural and Social Justice Counseling*, pp. 15–49, Springer, Cham, Switzerland, 2016.
- [23] N. R. Moşteanu, "Teaching and learning techniques for the online environment. how to maintain students' attention and achieve learning outcomes in a virtual environment using new technology," *International Journal of Innovative Research and Scientific Studies*, vol. 4, no. 4, pp. 278–290, 2021.
- [24] Q. Li and R. Zeng, "Implementation of ideological and political education in China's foreign language teaching," in *Proceedings of the 2019 3rd International Conference on Education, Economics and Management Research (ICEEMR 2019)*, pp. 549–552, Atlantis Press, Singapore, November 2020.
- [25] M. Mohammadi and N. Danesh Pouya, "The relationship between EFL learners' mental toughness and critical thinking," *Journal of Social science and Humanities Research*, vol. 9, no. 2, pp. 25–36, 2021.
- [26] P. C. Earley and S. Ang, *Cultural Intelligence: Individual Interactions across Cultures*, Stanford University Press, California, CA, USA, 2003.
- [27] K.-Y. Ng, L. Van Dyne, S. Ang, and A. Ryan, "Cultural intelligence: a review, Pauluzzo, R. (2020). Learning tools to develop cultural intelligence for SMFEs: the role of social-cognitive processes," *Sinergie Italian Journal of Management*, vol. 38, no. 2, pp. 133–150, 2012.
- [28] D. Matsumoto, J. LeRoux, C. Ratzlaff et al., "Development and validation of a measure of intercultural adjustment potential in Japanese sojourners: the Intercultural Adjustment Potential Scale (ICAPS)," *International Journal of Intercultural Relations*, vol. 25, no. 5, pp. 483–510, 2001.
- [29] R. J. Sternberg, "A framework for understanding conceptions of intelligence. What is intelligence," *Journal of Intelligence*, vol. 49, pp. 3–15, 1986.
- [30] R. J. Sternberg, *Beyond I.Q.: A Triarchic Theory of Human Intelligence*, CUP Archive, Cambridge, UK, 1985.
- [31] H. Mohammadi, S. Izadpanah, and S. Izadpanah, "A study of the relationship between Iranian learners' sociocultural identity and English as a foreign language (EFL) learning proficiency," *International Journal of Instruction*, vol. 12, no. 1, pp. 53–68, 2019.
- [32] S. Bal-Taştan, S. M. M. Davoudi, A. R. Masalimova et al., "The impacts of teachers' efficacy and motivation on student's academic achievement in science education among secondary and high school students," *Eurasia Journal of Mathematics, Science and Technology Education*, vol. 14, no. 6, pp. 2353–2366, 2018.
- [33] K. Z. Khan, X. Wang, S. Malik, and S. A. Ganiyu, "Measuring the effects of emotional intelligence, cultural intelligence and cultural adjustment on the academic performance of international students," *Open Journal of Social Sciences*, vol. 8, no. 9, pp. 16–38, 2020.
- [34] B. N. Peirce, "Social identity, investment, and language learning," *Tesol Quarterly*, vol. 29, no. 1, pp. 9–31, 1995.
- [35] S. Ang, L. Van Dyne, C. Koh et al., "Cultural intelligence: its measurement and effects on cultural judgment and decision making, cultural adaptation and task performance," *Management and Organization Review*, vol. 3, no. 3, pp. 335–371, 2007.

- [36] A. Bandura, "Social cognitive theory in cultural context," *Applied Psychology*, vol. 51, no. 2, pp. 269–290, 2002.
- [37] M. A. Melhe, B. M. Salah, and W. S. Hayajneh, "Impact of training on positive thinking for improving psychological hardness and reducing academic stresses among academically-late students," *Educational Sciences: Theory and Practice*, vol. 21, no. 1, pp. 132–146, 2021.
- [38] Á. Szabó and C. Ward, "The relationship between intercultural abilities and cultural identity styles: a longitudinal cross-lagged analysis," *International Journal of Psychology*, vol. 55, no. 3, pp. 465–471, 2020.
- [39] O. Vorobel and D. Kim, *Language Teaching at a Distance: An Overview of*, 2012.
- [40] J. E. Williams and D. L. Best, "Pancultural gender stereotypes revisited: the five-factor model," *Sex Roles*, vol. 40, no. 7, pp. 513–525, 2010.
- [41] L.-Y. Lee and B. M. Sukoco, "The effects of cultural intelligence on expatriate performance: the moderating effects of international experience," *International Journal of Human Resource Management*, vol. 21, no. 7, pp. 963–981, 2010.
- [42] E. Babaii, K. Molana, and M. Nazari, "Contributions of assessment-related critical incidents to language teacher identity development," *Innovation in Language Learning and Teaching*, vol. 9, pp. 1–16, 2020.
- [43] P. Robert and H. Bariana, "My competence, your competence, and the language we use: the moderating effect of interlocutor language constraint in bilingual accommodation," *International Journal of Bilingual Education and Bilingualism*, vol. 21, no. 1, pp. 70–77, 2016.
- [44] M. Byram, B. Gribkova, and H. Starkey, *Developing the Intercultural Dimension in Language Teaching: A Practical Introduction for Teachers*, Council of Europe, Strasbourg, UK, 2002.
- [45] H. Horibe, "Perspectives: the place of culture in teaching English as an international language (EIL)," *JALT Journal*, vol. 30, no. 2, pp. 241–254, 2008.
- [46] A. J. Liddicoat, "Static and dynamic views of culture and intercultural language acquisition," *Babel*, vol. 36, no. 3, pp. 4–11, 2002.
- [47] A. Nejabat, "The impact of cultural factors in learning and Education on Iranian EFL learners," *Journal of Language Teaching and Research*, vol. 7, no. 2, pp. 358–363, 2016.
- [48] J. Shaules, "The debate about cultural difference: deep culture, cultural identity, and cultures influence on behavior," *Journal of Intercultural Communication*, vol. 10, pp. 115–132, 2007.
- [49] M. Vajak, S. Izadpanah, and J. Naserian, "The assessment of intercultural competence in Iranian EFL and non-EFL learners: knowledge, skill, awareness, and attitude," *Cogent Education*, vol. 8, no. 1, Article ID 1936885, 2021.
- [50] B. Genc and E. Bada, "Culture in language learning and teaching," *The Reading Matrix*, vol. 5, pp. 73–84, 2005.
- [51] C. Weedon, *Identity and Culture: Narratives of Difference and Belonging: Narratives of Difference and Belonging*, McGraw-Hill Education (U.K.), London, UK, 2004.
- [52] Van Dyne, "Development and validation of the CQS: the cultural intelligence scale," in *Handbook of Cultural Intelligence*, pp. 34–56, Routledge, London, UK, 2015a.
- [53] N. Davarpanah, S. Izadpanah, and P. Fasih, "The relationship between critical thinking, frequency, informal fallacy and evidence in argumentative writing," *Jordan Journal of Modern Languages and Literatures*, vol. 13, no. 2, pp. 303–319, 2021.
- [54] E. Khodadady and S. Ghahari, "Validation of the Persian cultural intelligence scale and exploring its relationship with gender, education, traveling abroad and place of living," *Global Journal of Human-Social Science*, vol. 11, pp. 64–75, 2011.
- [55] M. Esmaeil Nejad, S. Izadpanah, E. Namaziandost, and B. Rahbar, "The mediating role of critical thinking abilities in the relationship between English as a foreign language learners' writing performance and their language learning strategies," *Frontiers in Psychology*, vol. 13, p. 746445, 2022.
- [56] A. Shahsavadi, E. Khodadady, and B. H. Yazdi, "Cultural intelligence of English language learners within a mono-cultural context," *International Journal of Psychology and Behavioral Sciences*, vol. 4, no. 5, pp. 165–172, 2010.
- [57] L. Van Dyne, S. Ang, and T. Nielsen, "Cultural intelligence," in *International Encyclopedia of Organization Studies*, S. Clegg and J. Bailey, Eds., Sage Publications, Thousand Oaks, CA, USA, 2007.
- [58] S. Hopkyns, "The effect of global English on culture and identity in the UAE: a double-edged sword," *Learning and Teaching in Higher Education: Gulf Perspectives*, vol. 11, no. 2, pp. 20–35, 2014.
- [59] J. Zuengler and E. R. Miller, "Cognitive and sociocultural perspectives: two parallel SLA worlds?" *Tesol Quarterly*, vol. 40, no. 1, pp. 35–58, 2006.
- [60] Y. Zhao, N. Wang, Y. Li, R. Zhou, and S. Li, "Do cultural differences affect users'e-learning adoption? A meta-analysis," *British Journal of Educational Technology*, vol. 13, pp. 280–309, 2020.