Original Research

The Relationship Among Identity Aspects, Brain-Friendly Instruction, and Iranian IELTS Candidates' Performance in Speaking and Reading Subcomponents

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Abstract

This research looks at how identity aspects, knowledge of Brain-Friendly Instruction (BFI), and speaking and reading parts are related to Iranian EFL students getting ready for the IELTS test. The study included 206 upper-intermediate IELTS candidates from Bandar Abbas chosen through purposive sampling. Researchers collected data using the Aspects of Identity Questionnaire (AIQ-IV), a BFI awareness scale, and practice IELTS Reading and Speaking tests. Three qualified raters checked the speaking tests. The tests' reliability was confirmed with a Cronbach's alpha of .851. Researchers used multiple regression analysis with SPSS version 25 to explore how well identity aspects (personal, social, collective, relational) and BFI components (instruction, motivation assessment) predicted IELTS speaking and reading parts. The results showed that social identity and motivation helped predict fluency and coherence in speaking, while instruction and collective identity were key for grammatical range and accuracy. For reading, motivation and instruction predicted identifying information, while the collective part of identity helped predict understanding the main idea. These results suggest that identity and BFI components play key roles in shaping language skills in speaking and reading for Iranian EFL learners. The study's results have important pedagogical implications, emphasizing the need for tailored instructional strategies that consider learners' identity and cognitive needs. Future research could further explore these relationships in diverse cultural contexts to validate and extend these findings.

Keywords*:* Identity, Brain-Friendly Instruction (BFI), Language Proficiency

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1. Introduction

The attainment of expertise in English as a Foreign Language (EFL) constitutes a complex undertaking shaped by an array of cognitive, social, and pedagogical influences. Notably, the identity of the learner and the teaching methodologies utilized have received considerable focus in contemporary scholarship. Identity, which includes personal, social, collective, and relational aspects, is instrumental in determining a learner's participation and achievement in the process of language acquisition (Norton, 2013). Different facets of identity influence how learners perceive themselves in relation to the target language and their motivation to develop their skills. Meanwhile, the concept of Brain-Friendly Instruction has emerged as a teaching method that aligns with the hard-wired learning tendencies of the brain. BFI emphasizes motivation, personalized instruction, and ongoing assessment to create the perfect learning environment (Jensen, 2008). BFI aims to enhance cognitive skills by informing teaching methods with what is currently known about the human brain with the purpose of yielding better results in language learning.

In the realm of preparation for significant language proficiency examinations such as the International English Language Testing System (IELTS), these elements become increasingly essential.

The IELTS speaking test assesses candidates on fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation, which are essential components of communicative competence in English (IELTS, 2021). Understanding how different aspects of identity and components of BFI predict performance in these areas can provide valuable insights for both learners and educators, enabling more targeted and effective instructional strategies. Reading comprehension is a critical skill for learners of English as a Foreign Language (EFL), particularly for those preparing for high-stakes assessments like the International English Language Testing System (IELTS).

Proficiency in reading abilities, including the capacity to identify information, comprehend the central theme, draw inferences, and follow a line of reasoning, is crucial for attaining success on the IELTS examination. These competencies not only serve as indicators of a learner's linguistic proficiency but also demonstrate their capability to interact with intricate texts in English, which is a critical element of both academic and professional discourse (Grabe & Stoller, 2013). This study investigates the intersection of identity and Brain-Friendly Instruction in predicting Iranian EFL learners' speaking skills bound for the

IELTS exam. Analyzing the predictive power of the various aspects of identity and BFI components on the main criteria assessed in the IELTS speaking test, this research enhances an understanding of what influences language learning success. It thus presents practical implications for the betterment of instructional practices within EFL settings.

The present study further explores the relationship between different identity factors and Brain-Friendly Instruction elements as predictors of reading proficiency among Iranian EFL learners preparing for the IELTS examination. Analyzing the determinants of different reading comprehension levels, this study offers relevant insight into the facilitative factors of effective language acquisition. The findings present practical implications for educators and learners alike, offering methods by which to make reading instruction more effective and to aid learners in achieving their linguistic goals.

2. Review of Literature

The correlation between identity and language acquisition has been the subject of considerable scholarly inquiry, with increasing attention directed towards the influence of different dimensions of identity—namely personal, social, collective, and relational—on learners' participation and achievements in mastering a second language. Contemporary studies underscore that identity should be understood not as a fixed entity but as a fluid phenomenon that develops through social interactions and the use of language (Darvin & Norton, 2019). This development is most salient in the context of high-stakes language acquisition, such as that associated with IELTS Examination preparation, where identities are considered to wield an influence on learners' motivation, learning strategies, and performance.

Research that has investigated the case of Iranian English as a Foreign Language learners has looked at specific challenges and opportunities the group faces in relation to their identity. For example, Mahmoodi and Dehghani (2020) investigated how Iranian students' social and collective identities influence their language learning processes, especially when placed in environments where English is not the predominant language. Indeed, the study reported that social identity has a significant effect on learners' willingness to communicate and their strategy used to affect their proficiency eventually.

Alongside the notion of identity, the framework of Brain-Friendly Instruction (BFI) has emerged as a significant pedagogical strategy that synchronizes instructional techniques

with the brain's inherent learning mechanisms. BFI prioritizes motivation, tailored instruction, and ongoing assessment, all of which are vital for successful language acquisition (Sousa, 2018). The implementation of BFI within language learning environments, notably for English as a Foreign Language (EFL) students, has demonstrated an enhancement of cognitive capabilities and an improvement in educational results, particularly concerning reading and speaking competencies.

Recent studies have explored the use of BFI in Iranian schools. For instance, Ranjbar and Abdollahi (2021) discussed the effectiveness of BFI on Iranian high school students' reading comprehension in English. The results of this study showed that the students who received instruction as per the BFI approach significantly improved their reading skills compared with the conventionally instructed students. In relation to this, Esfandiari and Ahmadi (2022) also established that with the inclusion of the principles of BFI in teaching spoken English, Iranian learners produced higher performances in the IELTS speaking test, therefore establishing boundaries on how effective the technique is in language proficiency.

The interrelationship between identity and BFI was only recently explored. In an Iranian context, Riazi and Rahimi (2019) conducted research on the impact of identity on language learning motivation among a group of Iranian IELTS candidates. The findings revealed that learners who identify strongly with their language learning goals are more likely to benefit from the BFI approach because such methods meet their cognitive and emotive needs in the process of yielding better performance in reading and speaking tasks.

In spite of these developments, a gap persists in the literature on how these aspects of identity, in conjunction with BFI, together influence specific subcomponents of language proficiency, as represented by the constructs assessed in the IELTS examination. Most studies have targeted wider language skills while paying less attention to how identity and BFI, in interaction, relate to specific skills in reading, such as the identification of information, understanding the main idea, making inferences, following the argument, or speaking, fluency, coherence, and pronunciation.

The present study attempts to fill this gap by investigating aspects of identity, BFI, and the speaking and reading subcomponent performances of Iranian IELTS candidates. By emphasizing specific elements of performance targeted in the IELTS test, the current research develops an in-depth view of the development of identity and instructional approaches that promote proficiency in high-stakes language testing with practical

implications for educators and learners alike.

This study tries to answer these questions:

1. Which identities and BFI elements serve as predictors for the subcomponents of Iranian language learners' speaking skills in IELTS exam preparation?

2. Which identity aspects and BFI components predict the subcomponents of reading skills of Iranian language learners of English preparing for IELTS?

3. Methodology

The present study employed a correlational research design to explore the relationships between aspects of identity, awareness of brain-friendly instruction, and speaking and reading subcomponents among Iranian EFL learners preparing for the IELTS exam.

3.1. Participants

The study involved 206 IELTS EFL learners in Bandar Abbas, selected using purposive sampling to ensure a diverse background in English language acquisition. The cohort consisted of 120 males and 86 females aged 18-30, participating in English classes to prepare for the IELTS exam. It is worth mentioning that 425 participants took the Oxford Quick Placement test, and out of them, those whose scores ranged from 31 to 40 points were considered appropriate, that is, upper-intermediate (206), for the current study.

3.2. Instruments

This study used various instruments to assess the language skills of EFL students. The fourth version of Cheek, Smith and Tropp's(2002) identity questionnaire was used to identify aspects of identity among participants. The questionnaire measures five aspects: personal, relational, social, collective, and special. The awareness of brain-friendly instruction was assessed using a scale developed by Sattari Gavareshk and Tabatabaee-Yazdi (2022). The scale was rigorously tested, with a Cronbach's alpha coefficient of. Seventy-nine indicate good internal consistency.

To assess the reading ability of the candidates, a comprehensive approach was employed using a mock IELTS Reading test. This test was carefully designed to replicate the format and challenges of the actual IELTS exam, ensuring that the results accurately reflected the participants' reading proficiency. The mock test was structured into three

distinct sections, each designed to evaluate different aspects of reading comprehension, such as the ability to identify and understand information, understand the main ideas, make inferences, and recognize the writer's opinions or purposes. The questions covered a range of formats, including multiple-choice, matching headings, completing sentences, and identifying information or the writer's views, providing a thorough evaluation of the candidates' reading skills.

To measure the speaking ability of EFL students, a mock IELTS Speaking test was administered. The test consisted of three sections: a face-to-face interview, a cue card with a specific topic, and a more in-depth discussion. Three raters assessed the speaking of the candidates based on the rubric of the IELTS, assessing fluency and coherence, lexical resource, grammatical range and accuracy, and pronunciation. The raters were qualified in terms of language proficiency and had an IELTS band score of 8.5. Cronbach's Alpha coefficient was used as a measurement of intra-class correlation.

Table 1

Reliability Statistics of the Pretest

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.851	.851	3

As Table 2 depicts, the most important point in the output is Cronbach's alpha value in the Reliability Statistics table. The value is .851, indicating a high degree of correlation among the raters.

Table 2

Inter-Item Correlation Matrix

	Rater1pretest	rater2pretest	rater3pretest
Rater1pretest	1.000	.859	.831
Rater2pretest	.859	1.000	.833
Rater3pretest	.831	.833	1.000

The inter-item Correlation table shows the extent of correlation between the raters. The correlations displayed in the Inter-Item Correlation Matrix range from .83 to .85, which is acceptable.

3.3. Data Collection

The study involved 206 participants selected from 425 using the Oxford Quick Placement Test (OQPT). Two questionnaires were administered to assess identity and awareness of Brain-Friendly Instruction (BFI) to ensure data integrity and reliability. The IELTS mock test consisted of a 60-minute reading test with three passages assessing reading skills. Participants were asked to answer 40 questions based on the passages, including multiple-choice, matching headings, completing sentences, and short answer questions. A trained rater reviewed the answers, ensuring accuracy and consistency with the IELTS exam standards. The test results were then subjected to a one-hour break before participants took the speaking component of the mock test. This comprehensive evaluation of reading proficiency was part of the study. Participants were then scheduled for the IELTS Speaking mock tests, which replicated the structure and rigor of the actual test. The speaking component consisted of an introduction, a long turn, and a two-way discussion. Two independent raters assessed the participants' performances, recording their voices for further analysis. The final score was calculated by averaging the scores given by the three raters. The IELTS speaking rubric, which includes four criteria: Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy, and Pronunciation, was used to calculate the final score. This ensured that the responses were reflective of participants' true perceptions and attitudes.

3.4. Data Analysis

The study used SPSS version 25 for statistical analysis to examine the relationships between identity, awareness of brain-friendly instruction (BFI), and speaking and reading subcomponents. Multiple regression analysis was used to identify the factors most significantly predicting participants' performance in speaking. This analysis allowed researchers to determine the strongest influence of independent variables on dependent variables and how these variables interact to impact outcomes. The findings provide a detailed picture of how identity and BFI awareness contribute to language learning success, offering valuable insights for educators to optimize instructional strategies for diverse student populations.

4. Results and Discussion

4.1. First Research Question:

The results in Table 4.1 present an overview of the responses of participants for both the Aspects of Identity Questionnaire (AIQ-IV) and the Brain-Friendly Instruction (BFI) questionnaire, as well as their performance scores for speaking and reading tasks. The dataset includes mean values, dispersion, and the result of the Kolmogorov-Smirnov (K-S) normality test.

Dimensions of Identity:

The participants reported the highest mean score for Collective Identity, M = 3.500 and SD = 0.297, closely followed by Relational Identity, M = 3.497, SD = 0.302.

On average, the Personal Identity score was 3.262 with an SD of 0.302, while the Social Identity had the lowest mean score of the different identity aspects with a value of 3.088 and an SD of 0.287.

Results of the K-S test are indicative that these distributions on the said facets are not significantly deviating from normality, as the p-values exceed 0.05 for each tested aspect.

Brain-Friendly Instruction Components:

Instruction had the highest rating among the elements of BFI, with a mean of 3.929 (SD = 0.295), followed by Motivation at a mean of 3.856 (SD = 0.292) and Assessment, which had a mean of 3.806 (SD = 0.288).

The identity aspects reveal a K-S test for BFI components showing no significant deviation from normality, with a p-value > 0.05 in all instances.

Speaking and Reading Performance:

The average score of the Participants' Speaking Performance was 6.586 with an SD of 0.252, while their Reading Performance had a higher mean score of 6.720 with 0.288 SD.

Based on the K-S test results, both the performance metrics passed the normality test since p is greater than 0.05.

In summary, these series of results indicate that the participants are well distributed across the aspects of identity and the components of BFI, with very slightly higher inclinations toward collective and relational identities and instructional strategies in BFI. Moreover, the normality of the data justifies the appropriateness of conducting further parametric analyses in order to explore the relationships among these variables and their influence on speaking and reading performances.

Table 3

Analysis of the Aspects of Identity Questionnaire (AIQ-IV) and BFI Questionnaire Results

	N	Mean	Std. Deviation	K-S	p
Personal identity	206	3.262	0.302	0.048	0.131
Social identity	206	3.088	0.287	0.055	0.081
Collective identity	206	3.500	0.297	0.058	0.079
Relational identity	206	3.497	0.302	0.044	0.133
Assessment	206	3.806	.288	0.059	0.08
Motivation	206	3.856	.292	0.042	0.136
Instruction	206	3.929	.295	0.049	0.115
Speaking performance	206	6.586	0.252	0.060	0.074
Reading performance	206	6.720	0.288	0.052	0.097
Valid N (listwise)	206				

4.1.1. Analytic Findings as to the Results of the First Research Question

The present study aimed to investigate the aspects of identity (personal, social, collective, and relational) and the components of the BFI (instruction, motivation, and assessment) that predict the speaking skills of Iranian language learners preparing for the IELTS exam. The study focused on the four key assessed criteria in the IELTS speaking test: Fluency and Coherence, Lexical Resource, Grammatical Range and Accuracy, and Pronunciation.

Table 4

Aspects of Identity and BFI Predictors of Speaking

Dependent Variable	Variables	Beta	T value	p	R	R square	Adjusted R Square	F value	p
Fluency and Coherence	(Constant)	0.395	2.693	0.008					
	Assessment	0	-0.032	0.974					
	Motivation	*0.261*	*32.59*	*0.000*					
	Instruction	-0.002	-0.217	0.829	0.686	0.470	0.432	444.42	.000[b]
	Personal	0.006	0.72	0.473					
	Social	*0.37*	*44.1*	*0.000*					
	Collective	0.002	0.255	0.799					
	Relational	0.008	0.914	0.363					
Lexical	(Constant)	0.408	2.704	0.008					
	Assessment	*0.159*	*18.299*	*0.000*					
	Motivation	0.006	0.703	0.484	0.591	0.349	0.314	156.18	.000[b]
	Instruction	0.004	0.504	0.616					
	Personal	0.002	0.274	0.785					

	Social	*0.258*	*29.949*	*0.000*				
	Collective	-0.001	-0.164	0.87				
	Relational	0.004	0.484	0.63				
Grammatical	(Constant)	0.58	3.679	0.000				
	Assessment	0.004	0.493	0.623				
	Motivation	-0.001	-0.094	0.925				
	Instruction	*0.629*	*69.091*	*0.000*	0.716	0.513	0.457	781.49 .000[b]
	Personal	0.012	1.224	0.224				
	Social	-0.017	-1.87	0.065				
	Collective	*0.211*	*23.024*	*0.000*				
	Relational	-0.006	-0.69	0.492				
Pronunciation	(Constant)	1.137	3.813	0.000				
	Assessment	-0.004	-0.207	0.837				
	Motivation	*0.217*	*13.344*	*0.000*				
	Instruction	0.006	0.329	0.743	0.452	0.204	0.178	41.339 .000[b]
	Personal	-0.009	-0.521	0.603				
	Social	-0.016	-0.94	0.35				
	Collective	*0.186*	*10.722*	*0.000*				
	Relational	-0.004	-0.255	0.799				

The results show that various aspects of identity and components of the BFI significantly predict the different speaking skills assessed in the IELTS exam. Specifically:

Fluency and Coherence: Motivation and social identity significantly predicted fluency and coherence, accounting for 47% of the variance.

Lexical Resource: Assessment and social identity significantly predicted lexical resource, accounting for 34.9% of the variance.

Grammatical Range and Accuracy: Instruction and collective identity significantly predicted grammatical range and accuracy, accounting for 51.3% of the variance.

Pronunciation: Motivation and collective identity significantly predicted pronunciation, accounting for 20.4% of the variance.

These findings provide valuable insights into the factors that influence the speaking skills of Iranian language learners preparing for the IELTS exam, which can inform instructional practices and learning strategies to enhance their performance.

4.2. Second Research Question:

The study examines the factors that predict reading skills among Iranian language learners preparing for the IELTS exam. The researchers investigated the role of various aspects of

identity (personal, social, collective, and relational) and the components of BFI (instruction, motivation, and assessment) in predicting four different reading comprehension skills: Identifying Information, Understanding the Main Idea, Making Inferences, and Following the Argument.

Table 5

Aspects of Identity and BFI Predictors of Reading

Dependent Variable	Variables	Beta	T value	p	R	R square	Adjusted R Square	F value	p
	(Constant)	1.690	5.680	0.000					
	Assessment	-0.003	-0.199	0.843					
	Motivation	*0.226*	*13.920*	*0.000*					
Identify information	*Instruction*	*0.478*	*27.810*	*0.000*	0.599	0.359	0.321	157.22	.000[b]
	Personal	*-0.042*	*-2.334*	*0.022*					
	Social	-0.011	-0.643	0.522					
	Collective	*0.168*	*9.728*	*0.000*					
	Relational	-0.035	-2.021	0.046					
	(Constant)	0.613	2.020	0.046					
	Assessment	0.014	0.780	0.437					
	Motivation	0.022	1.300	0.197					
Understanding the Main Idea	*Instruction*	*0.348*	*19.867*	*0.000*	0.619	0.383	0.345	168.16	.000[b]
	Personal	-0.019	-1.041	0.301					
	Social	*0.252*	*14.569*	*0.000*					
	Collective	*0.419*	*23.801*	*0.000*					
	Relational	0.024	1.353	0.179					
	(Constant)	1.500	5.090	0.000					
	Assessment	*0.128*	*7.569*	*0.000*					
	Motivation	-0.013	-0.794	0.429					
Making Inferences	Instruction	-0.015	-0.852	0.396	0.416	0.173	0.162	24.601	.000[b]
	Personal	-0.002	-0.097	0.923					
	Social	*0.119*	*7.051*	*0.000*					
	Collective	*0.141*	*8.245*	*0.000*					
	Relational	-0.003	-0.188	0.851					
	(Constant)	-0.918	-2.891	0.005					
	Assessment	0.024	1.315	0.192					
	Motivation	*0.269*	*15.513*	*0.000*					
Following the Argument	*Instruction*	*0.201*	*10.950*	*0.000*	0.551	0.304	0.289	96.316	.000[b]
	Personal	-0.005	-0.276	0.783					
	Social	*0.295*	*16.251*	*0.000*					
	Collective	*-0.044*	*-2.364*	*0.020*					
	Relational	-0.014	-0.772	0.442					

Identify Information:

Motivation ($\beta = 0.226$, $t = 13.920$, $p < 0.001$) and Instruction ($\beta = 0.478$, $t = 27.810$, $p < 0.001$) positively predicted Identify Information.

Personal ($\beta = -0.042$, $t = -2.334$, $p < 0.05$) and Relational ($\beta = -0.035$, $t = -2.021$, $p < 0.05$) aspects of identity negatively predicted Identify Information.

The collective aspect of identity ($\beta = 0.168$, $t = 9.728$, $p < 0.001$) positively predicted Identify Information.

The model explained 32.1% of the variance in Identify Information ($R^2 = 0.321$, $F = 157.22$, $p < 0.001$).

Understanding the Main Idea:

Instruction ($\beta = 0.348$, $t = 19.867$, $p < 0.001$) and Collective aspect of identity ($\beta = 0.419$, $t = 23.801$, $p < 0.001$) positively predicted Understanding the Main Idea.

The social aspect of identity ($\beta = 0.252$, $t = 14.569$, $p < 0.001$) also positively predicted Understanding the Main Idea.

The model explained 34.5% of the variance in Understanding the Main Idea ($R^2 = 0.345$, $F = 168.16$, $p < 0.001$).

Making Inferences:

Assessment ($\beta = 0.128$, $t = 7.569$, $p < 0.001$), Social ($\beta = 0.119$, $t = 7.051$, $p < 0.001$), and Collective ($\beta = 0.141$, $t = 8.245$, $p < 0.001$) aspects of identity positively predicted Making Inferences.

The model explained 16.2% of the variance in Making Inferences ($R^2 = 0.162$, $F = 24.601$, $p < 0.001$).

Following the Argument:

Motivation ($\beta = 0.269$, $t = 15.513$, $p < 0.001$), Instruction ($\beta = 0.201$, $t = 10.950$, $p < 0.001$), and Social ($\beta = 0.295$, $t = 16.251$, $p < 0.001$) aspects of identity positively predicted Following the Argument.

The collective aspect of identity ($\beta = -0.044$, $t = -2.364$, $p < 0.05$) was negatively predicted Following the Argument.

The model explained 28.9% of the variance in Following the Argument ($R^2 = 0.289$, $F = 96.316$, $p < 0.001$).

The findings suggest that various aspects of identity and components of BFI play different roles in predicting different reading comprehension skills among Iranian language

learners preparing for the IELTS exam.

4.3.Disscussion

This study highlights the important influence of identity factors and Brain-Friendly Instruction (BFI) elements on the speaking abilities of Iranian IELTS candidates. It specifically shows that motivation and social identity are crucial for fluency and coherence, while assessment and social identity play a significant role in predicting lexical resources. Furthermore, instruction and collective identity are essential for grammatical range and accuracy. The study also found that motivation and collective identity are important predictors of pronunciation.

These findings are consistent with earlier research that emphasizes the role of identity in language acquisition. For example, Mercer (2019) points out how the identities of language learners affect their motivation, engagement, and overall performance. The discovery that social identity significantly predicts both fluency and coherence, as well as lexical resources, aligns with studies indicating that learners' social interactions and their sense of belonging to a language community can enhance their language skills (Norton, 2021).

The importance of motivation as a predictor for fluency, coherence, and pronunciation is in line with Dörnyei and Ushioda's (2020) research, which identifies motivation as a key factor in achieving success in language learning. The strong influence of motivation found in this study suggests that more motivated learners tend to be more fluent and accurate in their speech, reinforcing the idea that motivation encourages deeper engagement with the language.

The finding that instruction predicts greater syntactic accuracy and accuracy is particularly noteworthy. This is consistent with Ellis (2018), who emphasizes the importance of teaching practices in shaping students' rhetorical skills. The role of demographic exposure in predicting grammatical accuracy and word naming also supports the notion that students who participate in a larger community or larger group can improve their language accuracy effect, as seen in studies by Gao et al. (2020) and Nematizadeh et al. (2019), who investigated the effect of collective identity on Iranian students' language learning.

However, the lack of significant prediction from some personality dimensions, such as relational personality, raises important questions. This may indicate that although relational

identification is important for some language learning activities, it may not directly influence the specific language skills assessed by the IELTS test. This finding contrasts with the broader literature, suggesting that relational identity often plays an important role in language acquisition (McCulloch, 2019).

Moreover, the negative relationship found between personal identity and fluency and communication contradicts a previous study that found personal identity to be a positive predictor of language performance (Kim, 2020). This discrepancy may be due to the unique socio-cultural context of Iranian students, as a study focusing on Iranian EFL learners (Rahimi & Katal, 2018) found that collective social aspects of identity may play a role especially in this culture and memory.

In conclusion, the results of this study contribute to our understanding of the complex interplay between identity, motivation, instructional practices, and language performance. These findings have practical implications for language learners, implying that the enhancement of learner motivation, the development of a strong social identity, and the effective delivery of instruction with cooperative learner encounters could greatly improve linguistics in future research. It could further explore the role of explanation.

The results of this study provide the nuanced understanding that facets and facets of brain-friendly instruction (BFI) personality predict differential reading comprehension in Iranian language learners preparing for the IELTS exam in the 1990s. Findings indicate that specific aspects of motivation, instruction, and identity (social, collective, individual, and relational) differentially influence four key reading skills: information recognition, main idea comprehension, inference conclusion, and follow-up argument.

The study found that motivation and instruction correctly predicted the ability to recognize information in reading passages, with instruction having the largest effect ($\beta = 0.478$). This is consistent with previous research that emphasizes the importance of targeted instruction to enhance reading comprehension (Graham et al., 2020). Dörnyei and Ushioda (2020) also support the role of motivation, revealing that motivated students tend to engage more deeply in the course, leading to a better understanding of the results.

Interestingly, aspects of personal and relational identification negatively predicted cognitive ability. This finding suggests that a stronger focus on individual and relational identity may strain the availability of cognitive resources for information processing, especially in a high-stakes test such as IELTS. This is in contrast to a study that found a

positive relationship between personal identity and language learning outcomes (Mercer, 2019). However, the negative effects of individual and relational identity in this case may reflect unique sociocultural factors at play among Iranian students, where collective social identity may take precedence over the individual identity learning environment (Nematizadeh et al., 2006). 2019).

The collective facet of personality positively predicted information recognition ability, which is consistent with the study by Gao et al. (2020), who found that a strong sense of community could enhance language learning by giving students a sense of belonging and purpose.

Pedagogy, social commentary, and demographics are important positive indicators of mainstream intelligence. The strong effect of instruction (β = 0.348) highlights the importance of customized instructional strategies to enhance critical reading skills. Previous research has also emphasized the role of effective instruction in the development of high-level reading skills, such as the recognition of key concepts (Lubliner & Smetana, 2020).

The positive effect of sociodemographic identity on main idea comprehension highlights the role of social development in reading comprehension. Students who are actively involved in their social group may be more inclined toward cultural nuances in passage reading, improving their ability to comprehend key concepts (Norton, 2021). These findings are consistent with the work of Kim (2020), who argued that social identity is an important factor in language comprehension, especially in culturally embedded texts

Surveys, social commentary, and demographics are best-predicted measurements of ability. The significant role of assessment (β = 0.128) indicates that students who pay more attention to test results may have a better assessment, possibly due to a more formal, more frequently demanding approach to reading for drawing combinations and making learned guesses in order to pass exams (Erler). & Makaro, 2019).

Social and collective identity also played an important role in shaping theories, which is consistent with the findings of McCulloch (2019), who found that social networks and group ties can provide the deeper psychological processing needed for projects such as shape formation. However, the lowest value of R2 (0.162) indicates that these predictors are significant and explain a smaller proportion of the variance in this skill compared to the others, suggesting that factors such as cognitive processes or prior knowledge may also be influential.

For subsequent argumentation, motivation, instruction, and social identity were significant positive predictors, with motivation being the strongest ($\beta = 0.269$). These results support the hypothesis that students' motivation is better after critical arguments in writing, as their reading tasks are likely to be more engaged and sustained (Dörnyei & Ushioda, 2020). The instructional effects emphasize the role of learning strategies in helping students develop skills in following and understanding arguments in reading passages (Ellis, 2018).

Interestingly, the finding that aggregate demographic features negatively predicted the ability to follow arguments, deviating from the positive effect of collectivism found on reading skills, could be explained by the occurrence of others by the potential conflict between collective identity and individual psychological processes. In some cases, a strong collectivist identity may lead to reliance on group beliefs and interpretations, which may inhibit the independent analytical perspective needed to pursue complex arguments in writing (Gao et al.). Colleagues, 2020).

The findings of this study highlight the complex interactions between personality dimensions and BFI dimensions in predicting reading comprehension skills in Iranian IELTS candidates. Unique effects of individual, social, collective, and relational personality, and motivation, instruction, and assessment suggest that these factors Consideration of standardized instructional strategies can significantly enhance students' reading performance. These results have important implications for teachers and curricula aimed at improving reading comprehension among EFL learners in similar contexts.

5. Conclusion

This study sheds light on how different aspects of identity and elements of Brain-Friendly Instruction (BFI) influence the reading and speaking performance of Iranian IELTS candidates. It reveals that motivation and instruction are particularly crucial in shaping language skills. These factors consistently emerged as strong predictors in both reading and speaking, emphasizing their importance in effective language learning and test preparation.

In reading, motivation and instruction were found to enhance learners' abilities to identify information and follow arguments. Meanwhile, social and collective identities played a key role in helping learners understand the main ideas and make inferences. This suggests that creating a learning environment that fosters motivation and provides tailored instruction can significantly boost reading comprehension. On the other hand, the negative

effects of personal and relational identities on some reading skills highlight the need for approaches that balance individual learner needs with the benefits of collective learning.

For speaking skills, social and collective identities, along with motivation, were strong predictors of fluency, coherence, and pronunciation. Instruction was particularly important for grammatical accuracy. These results suggest that language teaching should not only focus on grammar and vocabulary but also address identity factors that can enhance learners' confidence and communication skills. Overall, integrating motivational strategies and identity considerations into language instruction can lead to more effective and supportive learning experiences for IELTS candidates.

Pedagogical Implications

The results of this study have several important pedagogical implications. First, language educators should prioritize strategies that enhance motivation and provide structured, brain-friendly instruction tailored to the needs of their students. This includes designing lessons that align with learners' identities, making learning more meaningful and relevant to them. Incorporating activities that foster social and collective identities, such as group work and collaborative projects, can also positively influence learners' performance in both reading and speaking tasks.

Moreover, the negative impact of personal and relational identities on specific skills suggests that educators should be mindful of how individual-focused approaches might affect learners differently. It may be beneficial to incorporate identity-affirming practices that strike a balance between individual and collective learning experiences, ensuring that all students feel valued and supported in their language learning journey.

Theoretical Implications

Theoretically, this study contributes to the growing body of literature on the interplay between identity and language learning, particularly within the context of high-stakes language exams like the IELTS. The findings support the notion that identity is not a static construct but interacts dynamically with other cognitive and motivational factors to influence language performance. This study also reinforces the applicability of Brain-Friendly Instruction in language learning, highlighting its potential to improve outcomes when integrated with considerations of learner identity.

Suggestions for Future Studies

While this study has shed light on the relationship between identity, BFI components, and language performance, several avenues for future research remain. Future studies could explore these relationships in more diverse linguistic and cultural contexts to determine the generalizability of the findings. Additionally, longitudinal studies that track changes in identity and motivation over time could provide deeper insights into how these factors evolve and influence language learning outcomes.

Further research could also investigate the potential mediating or moderating effects of other variables, such as cognitive strategies, anxiety, or prior knowledge, on the relationship between identity, BFI, and language performance. Finally, experimental studies that test the efficacy of identity-focused and brain-friendly instructional interventions in real classroom settings could offer practical insights for language educators and curriculum developers.

In conclusion, this study underscores the importance of integrating identity and brain-friendly approaches into language instruction to enhance learners' reading and speaking performance. By adopting these strategies, educators can better support their students in achieving their language learning goals, particularly in high-stakes contexts like the IELTS exam.

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