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Identifying College Students' Multiple Intelligences to Enhance Motivation and Language Proficiency

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Abstract

While most research studies on the theory of multiple intelligences focused on the application of the multiple intelligences domains as separate components, this quasi-experimental research targeted the effect of multiple intelligences as integrated abilities for teaching and learning English at higher education. The purpose of this study was to examine the impact of students' multiple intelligences profiles on their motivation and language proficiency. The quantitative data was collected from the students of the College of Languages and Translation at Al-Imam Mohammad Ibn Saud Islamic University in Saudi Arabia. The researchers prepared a Likert scale questionnaire to identify students' multiple intelligences. The participants formed two groups from male and female students who studied English courses at level 3. The first group studied English in a traditional classroom where they relied on memorizing grammatical rules while the second group studied English after identifying their multiple intelligences profiles. Using the Statistical Package for the Social Sciences software (SPSS), data analysis results indicated that ineffective teaching strategies that depended on encouraging learners memorizing language rules hindered students from boosting their language proficiency. The analysis of the data also showed that when students became aware of their multiple intelligences profiles, they managed to enhance their motivation, which helped them improve their language skills. The recommendations of the current research provide creative ideas for using multiple intelligences at higher education, including a model for integrating multiple intelligences for teaching English. The current research is also a contribution in teaching English to college students since it is among only a few studies that have applied Gardner's theory at higher education.

Keyword: multiple intelligences, English language, motivation, language proficiency, multiple intelligences profile

1. Introduction

Since the publications of Gardner's (1983; 1999; 2004) theory of multiple intelligences, research studies (Armstrong, 2003; Aschbacher & Pine, 2006; Barrington, 2004; Batt, 2008; Campbell, 2004; Cortright, Kennedy, & Thornton, 2013; Gardner, 2000; Hanafiyeh, 2013; Saricaoglu & Arikan, 2014) have been conducted to explore the implications of the theory for learning and teaching in general, and in improving learners' language performance in particular. Language learning is not restricted to learning grammatical rules because the application of the rules requires engagement in real life. Learner's success cannot be achieved without acquiring the skills of critical thinking and social skills. Gardner's multiple intelligences theory, which includes kinesthetic intelligence, existential intelligence, interpersonal intelligence, intrapersonal intelligence, laser intelligence, linguistic intelligence, logical intelligence, mental-search intelligence, musical intelligence, naturalistic intelligence, and visual- spatial intelligence can urge learners use their full potential. When implementing multiple intelligences in the classroom, teachers can help students become aware of different levels of language learning, including phonological, lexical, syntactical, semantic, and pragmatic levels. For example, multiple intelligences activities focus on phonological awareness through integrating musical and linguistic intelligences using short stories, poetry, and journal and essay writing. The application of interpersonal and intrapersonal

intelligences through cooperative tasks in the classroom can increase students' linguistic and social competency. Using multiple intelligences, students can acquire the language skills as integrated components instead of studying grammar, reading, listening, speaking, and writing as separate units without understanding the importance of integrating them to achieve an advanced language level. College students need to use English fluently so that they can pursue their graduate studies either at their native universities or abroad. Therefore, the purpose of the current research was to examine the impact of students' multiple intelligences profiles on their motivation and language proficiency to enable teachers at the College of Languages and Translation of Imam University use the multiple intelligences for teaching English.

1.1 Problem Statement

The problem of this research targeted the difficulties that the students at the College of Languages and Translation, Al-Imam Mohammad Ibn Saud Islamic University in Saudi Arabia, faced when learning English. The researchers focused on examining the impact of identifying the students' multiple intelligences profiles on enhancing their motivation and language proficiency. Data from students' exam records, class observations, and teachers' feedback, showed that students had serious challenges in using the English language effectively, whether in reading, writing, listening, or speaking. Students complained that they had problems using English to communicate in real life. Evidence from students' learning outcomes showed that the number of students who failed the English courses increased. Students' performance was deteriorating due to lack of motivation. Analysis of the problem also showed that the students had difficulties in pursuing their higher education abroad. Previous research (Dylan, 2013; Eggen & Kauchak, 2011; Gowen, 2010; Gredler, 2005; Hanafiyeh, 2013; Lynn, 2013; Richards &. Rodgers, 2011) indicated that ineffective language teaching strategies at higher education hindered students' academic and social achievements. The traditional teaching strategies which depend on encouraging students memorizing grammatical rules have negative impacts on students' communicative and the social skills, which students need to achieve language proficiency.

1.2 Purpose Statement

The purpose of this quantitative, quasi-experimental study was to examine the impact of students' multiple intelligences profiles on their motivation and language proficiency. The current study aimed at making suggestions to help teachers use effective teaching strategies to urge students to improve their motivation; consequently, their language proficiency through using their multiple intelligences inside and outside the classrooms. The current study also aimed at providing language teachers with new instructional designs to put the theory of multiple intelligences into practice. The quantitative data of this research was collected from students of the College of Languages and Translation, at Al-Imam Mohammad Ibn Saud Islamic University in Saudi Arabia. The participants formed two groups from male and female students who studied English courses at level 3. The first group studied English in a traditional classroom where they relied on memorizing grammatical rules while the second group studied English after identifying their multiple intelligences profiles. Data was analyzed using the Statistical Package for the Social Sciences software (SPSS) to ensure the research accuracy and objectivity.

1.3 Definitions of Terms

According to Gardner, (1983, 1999, 2004) m*ultiple intelligences*: are multiple mental abilities in human beings. These multiple abilities are a combination of biological and cultural domains. Multiple intelligences are innate and acquired. Based on these concepts, the following definitions are used in this research:

Bodily-kinesthetic Intelligence: the ability to use one's bodily motions and the capacity to handle objects skillfully; i.e., the proficiency of using the entire body to express ideas and feelings (Gardner, 198).

Existential Intelligence: the ability to contemplate phenomena or questions beyond sensory data, such as the infinite; the appreciation of spirituality and understanding questions about life and the universe (Gardner, 1999).

Interpersonal Intelligence: Human ability to communicate effectively in diverse social and cultural settings; i.e. the ability of perceiving the moods, motivations, and emotions (Gardner, 1983).

Intrapersonal Intelligence: refers to self-reflective capacities, having a deep understanding of the self, its strengths and weaknesses, and to be able to predict one's own reactions and emotions; i.e. having a positive self-concept and life direction which exists intrinsically to help people having competency in knowing themselves and acting to modify their errors based on self-knowledge (Gardner, 1983).

Laser intelligence: the human ability for creating and generating inventions (Gardner, 2004).

Logical-mathematical Intelligence: the ability to deal with logic, abstractions, reasoning and numbers, i.e. the

ability of manipulating and understanding and reasoning effectively (Gardner, 1983).

Mental-search intelligence: refers to people's ability for searching and scanning information (Gardner, 2004).

Musical-rhythmic Intelligence: the ability and sensitivity to deal with sounds, rhythms, tones, and music, and the ability to appreciate, distinguish, compose, and perform various musical forms (Gardner, 1983).

Naturalistic Intelligence: the ability to understand nature and to interact with natural surroundings such as classifying creature species, and identifying natural phenomena; and using such knowledge in developing skills in real life (Gardner, 1999).

Verbal-linguistic Intelligence: the ability to create using spoken or written language. People with high verbal-linguistic intelligence are efficient at reading, writing, and telling stories (Gardner, 1983).

Visual-spatial Intelligence: human ability to do activities which require spatial judgment. People with a high level of *Visual-spatial Intelligence* are able to visualize with the mind's eye. Thus, *visual-spatial intelligence* is characterized by being able to see an image or a situation and assess the areas that can be modified to transform their appearance (Gardner, 1983).

1.4 Significance of the Study

The current research is a contribution in teaching English to college students since it is among only a few studies that have applied Gardner's theory at higher education. The researchers also provided a validated and reliable instrument that can be used to identify students' multiple intelligences in various educational settings. While the multiple intelligences questionnaire which was designed for this study was not a psychological clinical tool, but it would be useful to identify learner's multiple intelligences at higher education since it was based on Gardner's concept of intelligence. The current research multiple intelligence questionnaire was employed to mark the English language activities that students were interested in to help teachers design differentiated instructional plans to increase students' motivation for language learning. Moreover, this research provides some evidence of the effectiveness of the multiple intelligences approach in teaching English at higher institutions since multiple intelligences are relevant to learning the skills of a new language through developing not only linguistic abilities but also higher order thinking, including social and cultural skills. The effectiveness of teaching methodologies of language skills accentuates the role of research-based theories such as multiple intelligences for improving students' performance and achievements. The multiple intelligences are concerned with employing multiple abilities for learning English when students can shift their focus from using traditional ways of memorizing grammatical rules into adopting cognitive and metacognitive strategies for enhancing motivation and language proficiency. Hence, the multiple intelligences instructional model that presented in this research adds to the significance of the study.

1.5 Theoretical Framework

The multiple intelligences theory (Gardner, 1983, 1999, 2004) constituted the conceptual structure of this study to explain the relevance of multiple intelligences as integrated domains to language learning. Through the application of the theory of multiple intelligences, students become aware that language learning does not involve only linguistic abilities, but other capabilities such as musical, kinesthetic, visual, interpersonal, and intrapersonal intelligences. Gardner argued that learners not only have multiple intelligences, but they can also develop such intelligences through education. Research (L. Campbell, B. Campbell, & Dickinson, 2004; Chen, 2004; Cortright, Kennedy, & Thornton, 2013; Cortright et al., 2015; Eggen & Kauchak, 2011; Epelbaum, 2007; Madkour, 2011) indicated that teachers used the theory of multiple intelligences to discover students' diversibilities. Cortright, Kennedy, and Thornton (2013) asserted that there was a relationship between intrinsic motivation and multiple intelligences. Empirical research (Dornyei, 2001; Dylan, 2013; Ferris & Hedgcock, 2005; Harmer, 2007; Roell, 2010; Saricaoglu & Arikan, 2009; Yeh, 2014) confirmed the effectiveness of implementing the theory of multiple intelligences to improve students' attitudes and performance. Hence, using the multiple intelligences theory as the theoretical base allowed examining the link between multiple intelligences, motivation, and language proficiency.

2. Literature Review

The literature review herein highlights the theory of multiple intelligences as a potential for solving the problems of acquiring language skills to motivate students to improve their language proficiency. Evidence from previous research studies (Branton, 2004; Chan, 2006; Cortright et al., 2015; Leimbach & Maringka, 2010; Posner, 2004; Saricaoglu & Arikan, 2014; Shore, 2004) indicated that the theory of multiple intelligences was effectively used as a new strategy for teaching English. Gardner (1983) expanded the concept of intelligence to include such areas as musical, visual-spatial relations, intrapersonal, and interpersonal knowledge.

2.1 Theory of Multiple Intelligences

Gardner's (1983, 1999, 2004) theory is linked to cognitive areas such as linguistics, psychology, anthropology, neuroscience, and technology, incorporating various approaches to human potential. Gardner defined intelligence as a bio-psychological ability to process information that can be activated in a cultural setting to solve problems or create valuable products. The multiple intelligences are bodily-kinesthetic intelligence, existential intelligence, interpersonal intelligence, intrapersonal intelligence, laser intelligence, linguistic intelligence, logical-mathematical intelligence, mental-search intelligence, musical intelligence, naturalistic intelligence, and visual- spatial intelligence. According to Gardner, when students identify their multiple intelligences, they can understand their individual strengths and weaknesses. Encouraging students to develop their own multiple intelligences profiles can help them become motivated to acquire the necessary skills for learning English. Teachers can use the students' multiple intelligences profiles to prepare customized activities to maximize the learning opportunities inside and outside the classroom. Previous research (Batt, 2008; Branton, 2004; Campbell & Egawa, 2005; Chan, 2006; Christodoulou, 2009; Chen, 2004; Christion, 2004; Christion & Kennedy, 2004; Dylan, 2013; Savas, 2012) showed that Gardner's theory had important implications for teaching language skills because it helped to use cognitive and metacognitive strategies to urge students to improve comprehension, attitude, and motivation, consequently language proficiency.

2.2 Multiple Intelligences and Motivation

Research studies (Cortright et al., 2015; Dornyei, 2001; Gardner, 1999; Ginsberg, 2011; Gowen, 2010; Gredler, 2005) provided statistical evidence that motivation was an important predictor of language success. Yeh (2014) asserted that many language learners were unmotivated because of limited learning resources, and that when teachers used multiple intelligences activities, including audio and video materials, journal writing, and concept maps, students' performance improved. Razmjoo (2008) also confirmed the relationship between multiple intelligences and language proficiency. Lynn (2013) provided evidence that when college students used multiple intelligences, their existential, intrapersonal, interpersonal, linguistic, visual-spatial abilities were revealed, which helped them to increase their performance. Rutger and Henk (2012) concluded that academic success was higher when students used multiple intelligences. Suriat and Tajularipin, (2010) showed evidence that enhancing language learning was achieved by responding to students' individual differences, applying multiple intelligences. Moreover, research (Dylan, 2013; Harmer, 2007) indicated that when teachers adopted a multiple intelligences approach, they helped students to increase motivation. Touré-Tillery and Fishbach (2014) confirmed that while aspects that influence success in language learning vary to include aptitude, motivation learning styles, and teaching strategies, motivation was the most influential factor in language learning and that students raised their motivation when they became aware of their multiple abilities. Roell (2010) affirmed that students who used musical intelligence in learning English as a foreign language (EFL) or English as a second language (ESL) were more motivated to develop linguistic and cultural competences than students who were learning in traditional classrooms. In this respect, Gowen (2010) asserted that there was a relationship between Attention, Relevance, Confidence, and Satisfaction (ARCS) model of motivational design and the theory of multiple intelligences.

2.3 Multiple Intelligences and Teaching Strategies

When Gardner (1983) proposed the theory of multiple intelligences, new teaching approaches were implemented to improve students' performance, especially in the area of language learning. For example, research studies (Acat, 2005; Christion & Kennedy, 2004; Gredler, 2005; Richards & Rodgers, 2011; Saricaoglu & Arikan, 2009) confirmed that mental processes such as perception, memory, attention, and language acquisition were improved. Research (Chan, 2006; McGrath & Noble, 2005; Savas, 2012) also indicated that teachers, who applied the multiple intelligences strategies helped students acquire advanced language skills in reading, writing, speaking, and listening. Yeh (2014) provided a model for teaching through integrating multiple intelligences into film-based strategy to help L2 acquire linguistic and cultural competencies. Madkour (2009) provided a model to integrate linguistic theories into the theory of multiple intelligences. Noble (2004) concluded that incorporating Bloom's taxonomy with multiple intelligences motivated students to improve their performance. Gowen (2010) introduced an instructional model of integrating multiple intelligences into the technology of webquest. Dylan (2013) used multiple intelligences to connect learning to students' everyday lives, thus, fostering effective open learning environments. According to McFarlane (2011), multiple intelligences theory is effective as a methodology to strengthen the diversity of classrooms, including the utilization of technology to increase learning opportunities. Research (Griggs et al., 2009; Haley, 2004; Kezar, 2001; Suriat & Tajularipin, 2010; Vaughn, Bos, & Schumm, 2011; York-Barr et al., 2006) indicated that because of students' individual differences, learning varied and required differentiated strategies such as multiple intelligences. In this regard, McCoog

(2007) asserted that using technology required students to develop their *intrapersonal* and *existentialist intelligences.*

3. Research Method

This quasi-experimental research targeted the effect of multiple intelligences as integrated abilities for teaching and learning English at higher education. Data was collected from two groups from male and female students who studied English at the College of Languages and Translation, Al-Imam Mohammad Ibn Saud Islamic University in Saudi Arabia. The first group studied in a traditional classroom where they relied on memorizing language rules while the second group depended on using multiple intelligences in learning. The researchers prepared a Likert scale questionnaire to identify students' multiple intelligences through marking the English language activities that they were interested in and benefited from. In addition, students' grade records, assignments, attendance, and class observation were analyzed. The construct validity for the questionnaire items was based on Gardner's concepts of multiple intelligences. Content validity was established by field through testing the questionnaire items in the participants' classrooms. A pilot study was conducted to achieve reliability. The researchers also identified reliable materials from the literature review related to multiple intelligences inventories to determine the instruments used in similar studies, including surveys, inventories, assessments, or checklists that were compatible with Gardner's theory. Data was analyzed using SPSS software to present accurate statistical evidence..

3.1 Research Questions

1). What is the relationship between multiple intelligences domains and students' language proficiency?

2). What are the impacts of Gardner's (1983) multiple intelligences on students' motivation?

3). What is the impact of the theory of multiple intelligences on solving students' problems in learning English?

3.2 Research Hypothesis

There is a statistically significant relationship between the multiple intelligences domains and students' motivation and language proficiency. The *null* hypothesis is that there is no significant relationship between the multiple intelligences domains and students' motivation and language proficiency.

4. Results

The total participants were 108 students (58 males and 50 females). Thus, the percentage of the male students who participated in this study was 54% while the percentage of the female students was 46%. The percentage of the participants who were between 18-21 years old reached 55% while the percentage of the participants who were between 22-25 years old was 53%. Regarding the participants' language level based on their GPA, Figure 1 displays the results.

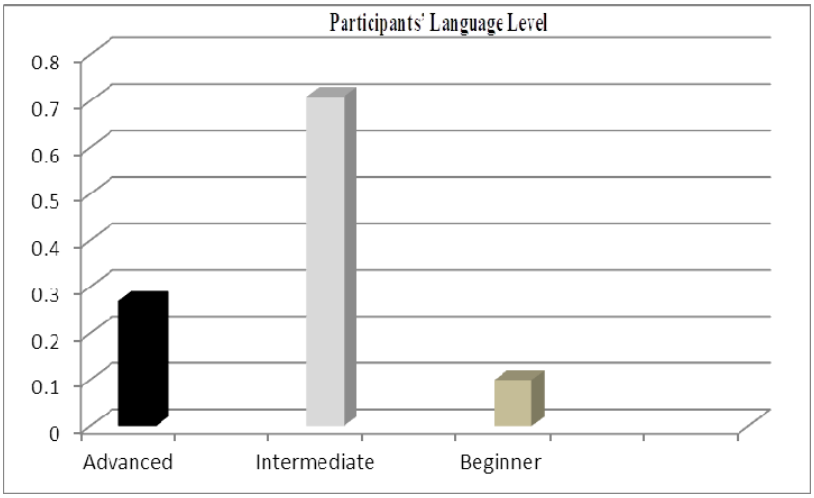

Figure1. Participants' language level

As displayed in Figure 1, data analysis showed that the language advanced level of the participants was 27%, the intermediate language level reached 71%, and the beginner language level was 10%. Such results reflected the

need to identify students' problems in language learning to increase their language proficiency. Based on the participants' grades in English, Figure 2 shows their motivation.

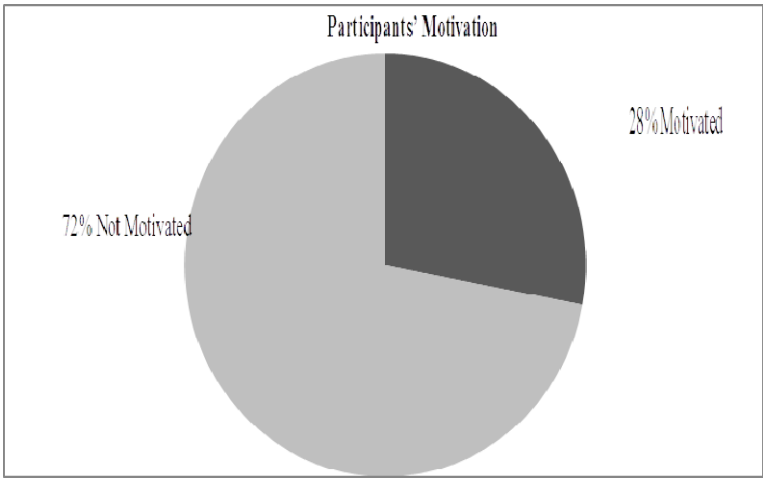

Figure 2. Participants' motivation

As shown in Figure 2, only 28% of participants were motivated to learn English. Such results were compared to teaching strategies as displayed in Figure 3.

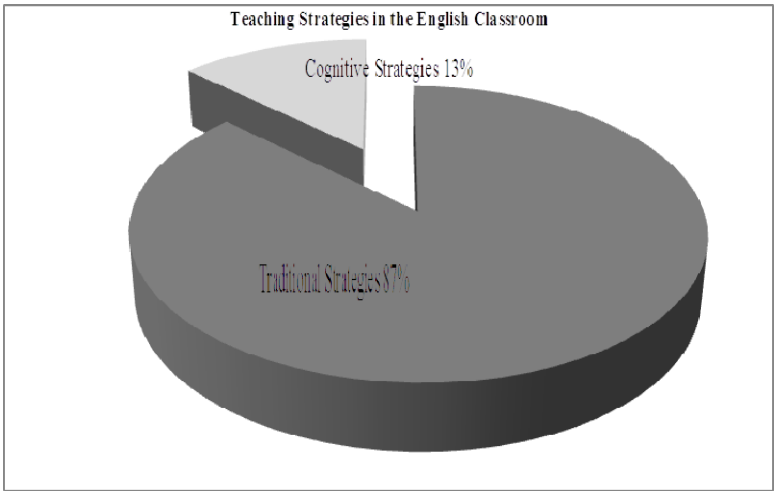

Figure 3. The teaching strategies used in teaching English

Figure 3 shows that the percentage of the traditional teaching strategies reached 87% while cognitive strategies was 13%, indicating that multiple intelligences activities were not included. This sheds light on the research questions regarding the impact of the multiple intelligences on solving students' problems in learning English. Moreover, the internal consistency of the questionnaire was calculated by analyzing how each item of the questionnaire was consistent with its scale. The results indicated the consistency of each item in relation to its scale. The statements in the multiple intelligences were statistically significant at the level of 0.01 reflecting consistency among the items of the scale. Hence, the correlation was significant at the 0.01 level. Table 1 displays the results.

Table 1. Correlations among 8 scales of the questionnaire

	Linguistic Intelligence	Logical-Mathematical Intelligence	Spatial Intelligence	Musical Intelligence	Interpersonal Intelligence	Intrapersonal Intelligence	Naturalist Intelligence
Linguistic Intelligence	.365(**)						
Logical-Intelligence	.365(**)	-					
Spatial Intelligence	0.083	.429(**)	-				
Musical Intelligence	0.126	.297(**)	.419(**)	-			
Interpersonal Intelligence	.227(*)	.263(**)	.308(**)	.419(**)	-		
Intrapersonal Intelligence	.277(**)	.461(**)	.405(**)	.505(**)	.377(**)	-	
Naturalist Intelligence	0.1	.324(**)	.315(**)	.531(**)	.454(**)	.431(**)	-
Kinesthetic Intelligence	0.127	.229(*)	.243(*)	.410(**)	.518(**)	.390(**)	.481(**)
Linguistic Intelligence	.365(**)						
Logical-Intelligence	.365(**)	-					
Spatial Intelligence	.083	.429(**)	-				
Musical Intelligence	.126	.297(**)	.419(**)	-			
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Intrapersonal Intelligence	.277(**)	.461(**)	.405(**)	.505(**)	.377(**)	-	
Naturalist Intelligence	.100	.324(**)	.315(**)	.531(**)	.454(**)	.431(**)	-
Kinesthetic Intelligence	.127	.229(*)	.243(*)	.410(**)	.518(**)	.390(**)	.481(**)

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

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

As shown in Table 1, the correlations among the 8 scales of the questionnaire were calculated and found to be significant at the level of 0.01. Table 2 shows the reliability of the questionnaire.

Table 2. Reliability of the multiple Intelligences questionnaire

Type of Intelligence	Reliability Coefficient	
	Cronbach's alpha	Split- half (Spearman Brown)
Linguistic Intelligence	.5307	.4888
Logical-Mathematical Intelligence	.4994	.4143
Spatial intelligence	.5751	.5374
Musical Intelligence	.7038	.6151
Interpersonal Intelligence	.5890	.6292
Intrapersonal Intelligence	.7281	.7150
Naturalist Intelligence	.5883	.4721
Bodily-kinesthetic Intelligence	.6224	.6304
All the test	.8587	.7535

As displayed in Table 2, Cronbach's alpha and Split-half Spearman Brown confirmed the questionnaire reliability. Moreover, to validate the research hypothesis, the researcher used the independent sample t-test to investigate if there is any statistical significance between the 2 groups. Table 3 shows the results.

Table 3. Differences of multiple intelligences between male and female groups

Type of Intelligence	Gender	N	Mean	Std. Deviation	T	p-value
Linguistic Intelligence	Male	58	9.6897	2.451	-0.145	0.885
	Female	50	9.76	2.5759		
Logical Intelligence	Male	58	12.8103	3.3164	0.208	0.835
	Female	50	12.68	3.1522		
Spatial intelligence	Male	58	11.1552	3.1723	1.955	0.053
	Female	50	9.96	3.162		
Musical Intelligence	Male	58	7.1724	2.4361	-0.184	0.855
	Female	50	7.28	3.6143		
Interpersonal Intelligence	Male	58	6.4483	2.5073	-1.519	0.132
	Female	50	7.16	2.3331		
Intrapersonal Intelligence	Male	58	9.1379	2.8925	2.116	0.037
	Female	50	8	2.6573		
Naturalist Intelligence	Male	58	7	2.2005	-0.932	0.353
	Female	50	7.44	2.7042		
Kinesthetic Intelligence	Male	58	8.6897	4.1473	-1.123	0.264
	Female	50	9.56	3.8606		

As displayed in Table 3, the difference between the male and the female students in the linguistic intelligence, the logical-mathematical intelligence, musical intelligence, interpersonal intelligence, naturalist intelligence and bodily-kinesthetic intelligence is statistically insignificant because the *t* values are (0.14), (0.20), (0.18), (01.51), (0.93) and (1.12) respectively reflecting no significance in any of the six dimensions. However, as shown in Table 3, there is statistical significance between the mean scores of the males and females at the level of 0.5 in favor of the males in the spatial intelligence and intrapersonal intelligence where the *t* values are (01.95) and (2.11), respectively. Regarding the results of the impact of age on multiple intelligences, Table 4 shows the results.

Table 4. Differences of mean and standard deviation between male and female groups

Type of Intelligence	Age	N	Mean	Std. Deviation	T	p-value
Linguistic Intelligence	18-21	55	9.8182	2.5969	0.405	0.686
	22-25	53	9.6226	2.4117		
Logical Intelligence	18-21	55	12.9091	3.3181	0.52	0.604
	22-25	53	12.5849	3.1527		
Spatial intelligence	18-21	55	11.2	3.5767	2.001	0.048
	22-25	53	9.9811	2.671		
Musical Intelligence	18-21	55	7.8	3.3632	2.053	0.043
	22-25	53	6.6226	2.5209		
Interpersonal Intelligence	18-21	55	6.9455	2.6972	0.725	0.47
	22-25	53	6.6038	2.1603		
Intrapersonal Intelligence	18-21	55	8.8545	2.9591	0.91	0.365
	22-25	53	8.3585	2.6968		
Naturalist Intelligence	18-21	55	7.4	2.7595	0.849	0.398
	22-25	53	7	2.0755		
Kinesthetic Intelligence	18-21	55	9.2727	3.7191	0.472	0.638
	22-25	53	8.9057	4.3424		

As shown in Table 4, the differences between the 2 groups in the linguistic intelligence, logical-mathematical intelligence, interpersonal intelligence, intrapersonal intelligence, naturalist intelligence and bodily-kinesthetic intelligence are not statistically significant because the *t*- values are (0.40), (0.52), (0.72), (0.91), (0.84) and (0.47) respectively reflecting insignificance in any of the six dimensions. Table 4 also shows that there is statistical significance between the mean scores of the groups at the level of 0.5 in favor of the 18-21 group in the spatial intelligence and the musical intelligence where *t*- values are (02.00) and (2.05) respectively. In addition, the researcher used the one-way ANOVA test to explore if there was any statistical significance among the two groups regarding their language levels. The results showed that the *F* values in the linguistic intelligence, logical-mathematical intelligence, the spatial intelligence, the musical intelligence, interpersonal intelligence, intrapersonal intelligence, naturalist intelligence and bodily-kinesthetic intelligence were statistically insignificant, (0.95), (0.88), (0.97), (0.29), (0.56), (0.56), (0.34) and (0.06) respectively reflecting insignificance in any of the 8 multiple intelligences dimensions. Regarding the impact of multiple intelligences teaching methodologies on students' motivation, Figure 4 displays the results. Such results pointed to the importance of applying the multiple intelligences theory in teaching English at higher education. Potential solutions for helping students to raise their language proficiency focus on urging students to identify their multiple abilities rather than encouraging them to memorize language rules. These results shed light on the research questions of the study and clarified the link between multiple intelligences and student's motivation, which is a major factor in language learning.

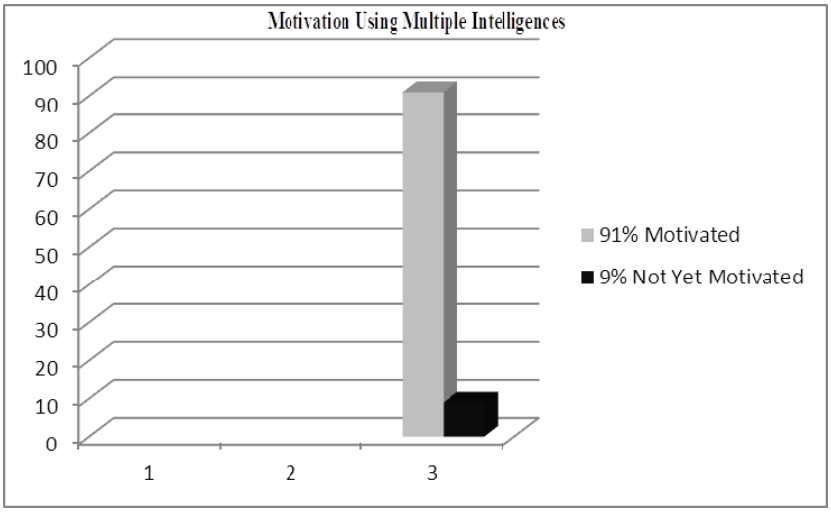

Figure 4. Multiple intelligences teaching strategies and motivation

As displayed in Figure 4, students' motivation reached 91% after integrating the theory of multiple intelligences in teaching English, based on analysis of students' grades and attendance percentage, and class observation, indicating an increase of 63%. Figure 5 shows the results of language level after implementing the theory of multiple intelligences in teaching English.

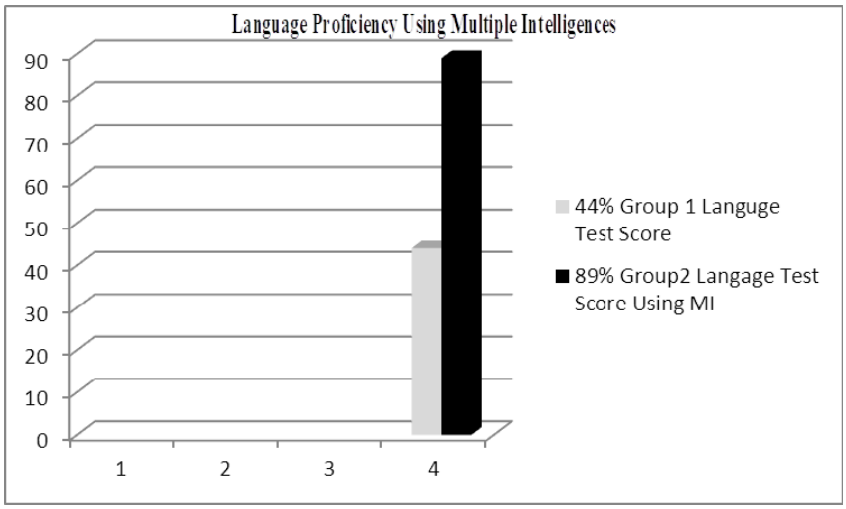

Figure 5. Students' language proficiency implementing multiple intelligences

As displayed in Figure 5, the test score of group 1 of the participants who studied English using the traditional method of memorizing rules was 44% while the test score of group 2 who learned English using multiple intelligences was 89%, showing a difference of 45%. The results also indicated that the language advanced level of the participants reached 71%, and the intermediate language level reached 25% and the beginner language level was 4%. Thus, the students' advanced level in using the English increased by 44%. Such results reflected the effectiveness of identifying students' multiple intelligences to increase their language proficiency.

5. Discussions and Recommendations

The current study' findings refer to some important issues related to language learning using multiple intelligences, including: (a) the effectiveness of the multiple intelligences theory for helping students use their multiple abilities to improve language proficiency; (b) the positive impact of multiple intelligences instructional plans on achieving students' individual needs; (c) the efficiency of the theory of multiple intelligences to increase students' motivation to acquire advanced language skills; (d) the successful implementation of the multiple

intelligences in the classroom helped students become aware of different levels of language learning, including the phonological, lexical, syntactical, and semantic levels through using such activities as journal writing, writing poetry, short stories, and creating films; and (e) the effect of employing multiple intelligences tasks, specifically interpersonal and intrapersonal intelligences activities such as cooperative projects, on increasing the students' social and cultural competencies, which are integral in language learning. Based on these findings, the first recommendation of the current study is to reinforce language skills through helping students identify their multiple intelligences. Gardner (1999) emphasized that using multiple learning strategies helped learners to create new learning experiences. Instead of using traditional strategies of teaching English, which primarily depend on drilling, and memorization of language rules, teachers can use the suggested model, shown in Figure 6.

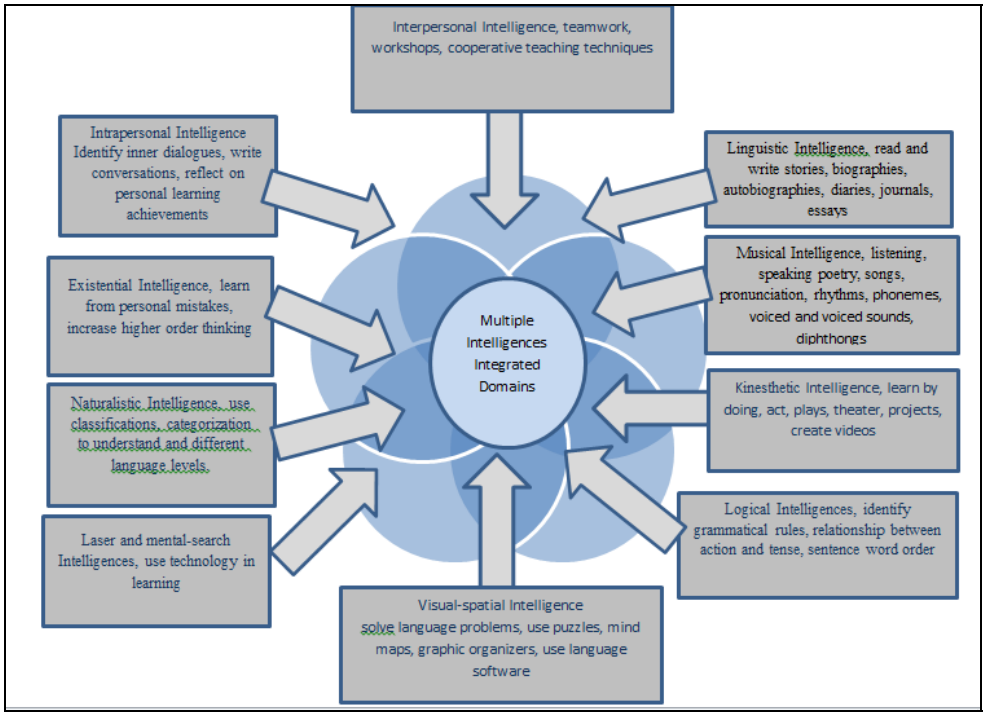

Figure 6. A model for integrating multiple intelligences for teaching English

Figure 6 shows that by identifying students' multiple intelligences, teachers can use this model to engage students in multifaceted language tasks. For instance, integrating linguistic into musical intelligences through reading and writing stories, poetry and journals so that students can link sounds to writing forms. Students can, thus, recognize voiced and voiceless sounds, diphthongs, and morphemes. By integrating kinesthetic into visual –spatial intelligences, teachers can add activities to foster learning by doing through creating posters, films, web quests, and other media presentations. Interpersonal and intrapersonal intelligences can be enhanced through teamwork, workshops, and project-based activities. The second recommendation is to establish a training center for professional development for the staff at the College of Languages and Translation at Al-Imam University using multiple intelligences to train teachers designing various instructional plans using the theory of multiple intelligences. Although the concept of multiple intelligences has been used effectively worldwide, it has not yet been applied in the Middle East, specifically at higher education. Thus, establishing such a center will be a contribution to the whole community. Such a center can (a) provide professional development programs for all the staff members in various areas of education; (b) help novice teachers to acquire teaching skills and research experiences based on using multiple intelligences; and (c) exchange services and experiences among local and international centers and institutions. Finally, the third recommendation is to diffuse the theory of multiple intelligences among various colleges to integrate curriculum, and conduct assessments within the framework of the theory of multiple intelligences.

6. Conclusion

The purpose of this research was to help teachers at higher education use effective teaching strategies such as multiple intelligences to urge students to identify their multiple intelligences to improve motivation and language proficiency. The specific problem that this study targeted focused on the difficulties that the students of the College of Languages and Translation at Al-Imam University faced in using the English language effectively. Students' low performance had two major impacts on their academic lives. First, students were unable to pursue higher education. Secondly, students could not conduct academic research without acquiring the necessary skills for reading and writing. These two obstacles hindered the achievements of the College of Languages and Translation, and impeded Imam University from accomplishing its educational objectives, including the preparation of students to study abroad. The current research findings showed a statistical relationship between multiple intelligences and students' motivation and language proficiency. The analysis of the data also showed that when students became aware of their multiple intelligences profiles, they managed to enhance their motivation, consequently their language skills. The recommendations of the current research provide a model for integrating multiple intelligences for teaching English. The recommendations also include creating a professional development center based on Gardner's theory to train teachers to implement multiple intelligences activities in the classrooms. The current research also provided a validated multiple intelligence questionnaire that could be used to identify students' multiple intelligences in various educational settings. As such, this research is a contribution in the application of multiple intelligences at higher education since it is among a few research studies in applying multiple intelligences at a university level.

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Appendix

Multiple Intelligences Questionnaire

Demographic and Academic Data					Please check (√) in the appropriate box.
Gender:	Male.....		Female		.....□
Age:	18-21 ……□		22-25 ……□		Other…….. …□
Social Status	Single……..… □		Married ……..□		Other…… … □
Language Level Based on GPA:	Advanced ……□…		Intermediate □		Beginner …… □
Motivation:	Interested in learning English □		Not interested in Learning English □		
Course of Study	Grammar □		Reading □	Listening/ Speaking □	Writing □
Favorite learning style is:	Memorization □		Discussions □		Analysis □
The Teaching Method in Classroom is :	Traditional □		Modern (with computers, videos, and CDs) □		

II. Multiple Intelligences Questionnaire					
Questions	1 Always	2 Frequently	3 Sometimes	4 Rarely	5 Never
Linguistic Intelligence (Q 1-4)					
1. I enjoy reading books and magazines.					
2. I like to tell stories.					
3. I enjoy learning new words.					
4. I like to write letters or essays.					
Logical-Mathematical Intelligence (Q 5-9)					
5. I easily add numbers in my head.					
6. I enjoy using calculators and computers.					
7. I ask a lot of questions about how things work.					
8. I enjoy playing chess and logic puzzles.					
9. I enjoy analyzing what I learn.					
Spatial intelligence (Q 10-13)					
10. I prefer to draw pictures rather than tell stories.					
11. I read maps, charts, or diagrams more easily than texts.					
12. I am interested in building three-dimensional constructions.					
13. I enjoy visual learning such as watching movies or using pictures.					

Musical Intelligence (Q14-16)					
14. I enjoy learning using audio materials.					
15. I enjoy different sounds in nature.					
16. I like the music of poetry.					
Interpersonal Intelligence (Q 17-19)					
17. I enjoy working with teams than working by myself.					
18. I like to help people solving their problems.					
19. I enjoy social gatherings.					
Intrapersonal Intelligence (Q 20-23)					
20. I prefer a quiet place in which to work or just be alone.					
21. I Like to reflect on my own learning.					
22. I am an independent learner.					
23. I like to assess myself and my own work.					
Naturalist Intelligence (Q 24-26)					
24. I enjoy learning outside the classroom.					
25. I like to watch natural phenomena and learn from them.					
26. I keep detailed records of my observations of nature and my work.					
Bodily-kinesthetic Intelligence (Q 27-30)					
27. I prefer learning by doing.					
28. Physical activities help to increase my mental abilities.					
29. I enjoy learning activities that involve me to move in the classroom such as acting.					
30. Physical activities help to become an active learner.					