

Multiple Intelligences and Motivational Orientations in Learning EFL

Danebeth Tristeza Glomo-Narzoles, Ph.D.

AMA International University-Bahrain

E-mail: dtglomo@amaiu.edu.bh

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Abstract: The main purpose of this study is to determine the dominant types of multiple intelligences and motivational orientations of students in learning English as a Foreign Language (EFL). To achieve this objective, two research tools were used namely, survey questionnaire and focused group discussion (FGD). For quantitative data, the researcher used a standardized Multiple Intelligences Inventory by Walter McKenzie (1999) and a questionnaire on Motivational Orientations in Learning EFL. For qualitative data, FGD sessions with selected AMAIUB students were conducted. The participants of the study were 165 AMA International University-Bahrain (AMAIUB) students for the Academic Year 2011-2012 and were categorized according to sex and programme enrolled. Results of the study revealed that the dominant types of intelligences of AMAIUB students are existential, bodily-kinesthetic, and intrapersonal. When grouped as to programme enrolled, the Business Informatics, International Studies, and Informatics Engineering students have existential; Mechanical Engineering students have visual-spatial; Computer Science students have intrapersonal and the Medicine students have naturalistic. When grouped as to sex, male students' dominant types of intelligences are existential, intrapersonal, and bodily-kinesthetic while female students have existential, bodily-kinesthetic, and intrapersonal. Further, results showed that AMAIUB students have the integrative or intrinsic motivational orientation in learning EFL. When grouped as to sex, both male and female students have integrative or intrinsic motivational orientation in learning EFL. As to their programme enrolled, Business Informatics, International Studies, Mechatronics Engineering, and Computer Science students have integrative or intrinsic motivational orientation in learning EFL while the Informatics Engineering students have instrumental or extrinsic. The Medicine students have both integrative and instrumental orientations. As ascertained in this study, there were no significant differences on the students' types of intelligences when grouped as to sex. However, a significant difference in the types of intelligence was found when the students are categorized as to the programme enrolled, specifically, on the Naturalist type of intelligence between the Medicine and Computer Science and International Studies students. Moreover, there were no significant differences on the students' motivational orientations in learning EFL when they were grouped as to programme enrolled and sex. In the basis of the findings, the following conclusions were drawn: Sex is not a correlate of the types of multiple intelligences. Programme enrolled is a significant determinant of the types multiple of intelligences. Sex does not affect the motivational orientations in learning EFL. Programme enrolled does not affect the motivational orientations in learning EFL.

Keywords: Multiple Intelligences, EFL, Motivational Orientations in Learning in English

1. Introduction

In 1983, Dr. Howard Gardner developed the theory of multiple intelligences. Gardner did not accept the common notion that a person's intelligence could be measured through Intelligent Quotient (IQ) test only. Gardner proposed the eight intelligences, namely, linguistic, logical-mathematical, spatial, bodily-kinesthetic, musical, interpersonal, intrapersonal, naturalist, and existentialist. Since students differ in many ways such as their physical dimension, strengths, interests, skills, keenness of the integration of their physical functions and their proficiency in performing different tasks, these qualities affect their success in their work or society

where they belong. Each of these kinds of human ability is considered as skills or talents. Moreover, these intelligences may also affect their process in learning English as a Foreign Language (EFL). A number of studies had been conducted to identify the correlates and the influence of multiple intelligences in various aspects. Abouchedid, Nasser and Singhal (2008) found out that males rated the body kinesthetic component higher than females while females estimated their verbal and intra-personal intelligence higher than males. Loori's (2005) results noted that males preferred learning activities involving logical and mathematical intelligences, whereas females preferred learning activities involving intrapersonal intelligence. Katzowitz (2003) noted in her study on the predominant learning styles and multiple intelligences of postsecondary allied health students that all groups reported interpersonal and intrapersonal intelligences as the two most dominant intelligences.

People differ in their profile of intelligences which reflect their individual strengths and weaknesses in the various areas and in the ways they use their intelligences to learn new materials, perform tasks and solve problems (Moran 2006). Multiple intelligences then may have significant implications in the teaching-learning process. Abraham (2001) and Neville (2000) recommend that teachers have to develop various strategies that would cater the various intelligences of their students and MI should be considered in the program and curriculum planning and development. Various research studies on second language (L2) and foreign language (FL) learning revealed that motivation is one of the affective factors that significantly differentiate learners. The role of motivation has been emphasized in teaching/learning any subject at all levels for it becomes crucial and significant when it comes to teaching of English as a foreign/second language (EFL/ESL) since it is directly related to the social nature of the learners (Williams, 1994). Identification of learners' motivational orientations is also important in finalizing language learning objectives and having an appropriate classroom environment: controlled or autonomous (Noels, 2001; Ryan and Deci, 2000). Much research has supported that motivation is a key factor for successful and sustained L2 or FL learning (Gardner, 2001). Gardner and Lambert and their colleagues that introduced the Socio-Educational Model of Language Learning (Gardner, 1985, Gardner & Tremblay, 1994) instigated that language motivation has two orientations, namely: 1) integrative orientation (positive attitude toward the foreign culture and a desire to participate as a member of it); and 2) instrumental orientation (goal of acquiring language in order to use it for a specific purpose, such as career advancement or entry to further studies and education). Their studies strongly suggested that "integratively" motivated learners were more successful in learning languages than those learners who are instrumentally motivated (Gardner & Lambert, 1972). Several research findings reveal that L2/FL learners may be intrinsically motivated (Gardner and MacIntyre, 1993). However, some studies also reflect that learners of foreign or second language are extrinsically motivated (Alhuqbani, 2009; Liu, 2007; Al-Khatib, 2007) or they bear both kinds of motivations to learn a language (Deci and Ryan, 2008; Al-Khatib, 2007; Obeidat, 2005; Malallah, 2000; Williams, 1994).

Theoretical Framework

This study is anchored on Gardner's theory (1988) which states that in the second language classroom, it is possible to motivate learners by activating multiple ways of meaning-making through the use of tasks relating to the different intelligences. It is therefore deemed significant for AMA International University-Bahrain (AMAIUB) teachers, especially those teaching English, to identify the types of multiple intelligences and students' motivational orientations in learning English as a Foreign Language (EFL).

Information regarding these may have contributions in addressing the communicative-linguistic needs of the AMAIUB students who are EFL learners.

1.1. Objectives of the Study

This study was conducted to find out the most dominant types of intelligences among the AMAIUB students and their motivational orientations in learning EFL, which may either be instrumental or integrative. Specifically, the study sought answers to the following questions:

1. What are the three most dominant types of intelligences among AMAIUB students as an entire group and when classified as to: a.programme; b.sex?
2. What are the students’ motivational orientations in learning EFL, which may either be instrumental or integrative, as an entire group and when classified as to: a.programme; b.sex?
3. Are there significant differences on the most dominant types of multiple intelligences when classified as to: a. programme; b.sex?
4. Are there significant differences on students’ motivational orientations in learning EFL when classified as to: a. programme; b.sex?

1.2. Research Paradigm

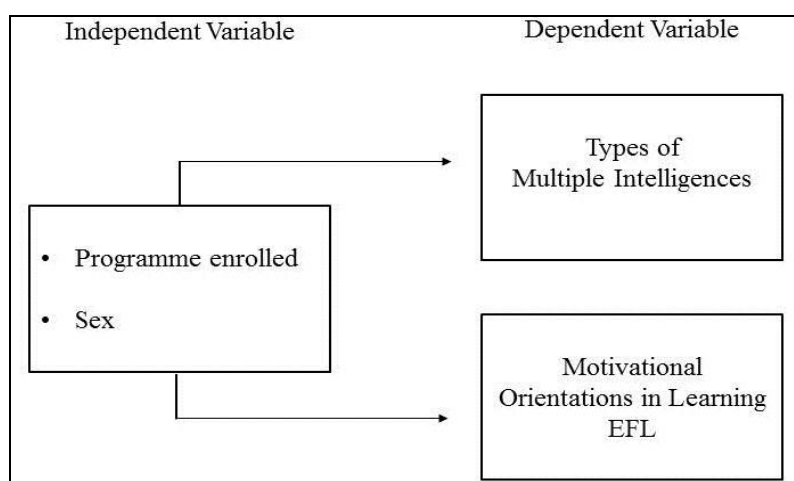


Figure 1. Research Paradigm

Figure 1 exemplifies the paradigm of the study. The independent variables in this study were the programme enrolled and sex of the students. The dependent variables were the types of multiple intelligences and students’ motivational orientations in learning EFL.

2. Research Methodology

The main purpose of this study is to determine the types of multiple intelligences and motivational orientations of students in learning EFL. To achieve this objective, two research tools were used namely, survey questionnaire and focused group discussion (FGD). For quantitative data, the researcher used a standardized Multiple Intelligences Inventory by Walter McKenzie (1999) and a questionnaire on Motivational Orientations in Learning EFL. For the qualitative data regarding motivational orientations in

learning EFL, the researcher conducted FGD sessions with selected AMAIUB students. The descriptive statistics employed were mean and standard deviation. For inferential statistics, t-test and ANOVA were utilized. The results of inferential analysis were interpreted using .05 level of significance. The participants of the study were 165 AMAIUB students for the Academic Year 2011-2012. The students were chosen through stratified random sampling and were classified as to programme enrolled namely: Bachelor of Science in Business Informatics (BSBI), Bachelor of Science in International Studies (BSIS), Bachelor of Science in Computer Science (BSCS), Bachelor of Science in Informatics Engineering (BSIE), Bachelor of Science in Mechatronics Engineering (BSME), and Doctor of Medicine (MD); and sex, male or female.

3. Results and Discussion

Table 1. Students' Dominant Types Intelligences as an Entire Group

Intelligence	M	Rank
1. Naturalist	4.55	9
2. Musical	4.90	7
3. Logical-Mathematical	4.82	8
4. Existential	5.96	1
5. Interpersonal	5.22	5
6. Bodily-Kinesthetic	5.89	2
7. Verbal	5.12	6
8. Intrapersonal	5.75	3
9. Visual-Spatial	5.45	4

Students' dominant types of intelligences have strong implications for teaching and learning. AMAIUB students, as an entire group, have the following three dominant types of intelligences: 1) existential, 2) bodily-kinesthetic, and 3) intrapersonal.

Table 2. Students' Dominant Types of Intelligences According to Programme Enrolled

Intelligence	BSBI	Rank	BSIS	Rank	BSIE	Rank	BSME	Rank	BSCS	Rank	MD	Rank
1. Naturalist	4.74	9	3.93	9	4.25	8.5	5.13	9	3.79	7	6.31	1
2. Musical	4.86	8	5.00	6	4.83	4.5	5.30	6	4.38	9	4.77	9
3. Logical-Mathematical	4.93	7	4.63	8	4.67	6	5.17	7.5	4.42	8	5.15	8
4. Existential	6.58	1	6.00	1	5.67	1	5.93	2.5	5.25	5	5.38	6
5. Interpersonal	5.16	6	5.07	5	5.50	2	5.50	4	4.92	6	5.54	3.5
6. Bodily-Kinesthetic	6.30	3	5.74	2	5.17	3	5.93	2.5	5.58	2	6.08	2
7. Verbal	5.23	5	4.88	7	4.25	8.5	5.17	7.7	5.54	4	5.23	7
8. Intrapersonal	6.44	2	5.42	3	4.83	4.5	5.47	5	6.04	1	5.46	5
9. Visual-Spatial	5.37	4	5.23	4	4.50	7	5.97	1	5.71	3	5.54	3.5

The dominant types of intelligences of AMAIUB students were identified when they were grouped according to programme enrolled. The BSBI students have these three dominant types of intelligence namely: 1) Existential, 2) Intrapersonal, 3) Bodily-Kinesthetic; while BSIS students have 1) Existential, 2) Bodily-Kinesthetic, and 3) Intrapersonal. The BSIE students have these three dominant types of intelligence namely: 1) Existential, 2) Interpersonal, and 3) Bodily-Kinesthetic; and BSME students have 1) Visual-spatial,

2) Existential, and Bodily-Kinesthetic. The BSCS students have these dominant intelligences namely: 1) Intrapersonal, 2) Bodily-Kinesthetic, and 3) Visual-Spatial. Moreover, the students from the Doctor of Medicine have these intelligences, namely: 1) Naturalistic, 2) Bodily-Kinesthetic, and 3) Visual Spatial and Interpersonal.

Table 3. Students' Dominant Types Intelligences According to Sex

Intelligence	Male <u>M</u>	Rank	Female <u>M</u>	Rank
1. Naturalist	4.59	9	4.51	8
2. Musical	4.89	7	4.90	6.5
3. Logical-Mathematical	4.73	8	4.90	6.5
4. Existential	5.82	1	6.10	1
5. Interpersonal	5.18	6	5.26	5
6. Bodily-Kinesthetic	5.72	3	6.05	2
7. Verbal	5.23	5	4.98	6
8. Intrapersonal	5.75	2	5.74	3
9. Visual-Spatial	5.46	4	5.43	4

The dominant types of intelligences of AMAIUB students were identified when they were grouped according to sex. Male students have the following dominant types of intelligence: 1) existential, 2) intrapersonal, and 3) bodily-kinesthetic. For female students, they have the three dominant types of intelligences namely: 1) existential, 2) bodily-kinesthetic, and 3) intrapersonal.

Table 4. Students' Motivational Orientations in Learning EFL as an Entire Group

Motivational Orientation	<u>M</u>	Rank
Integrative	4.15	1
Instrumental	4.10	2

Students' motivational orientation in learning EFL had been identified in this study. An integrative orientation simply means the learner is pursuing a second language or a foreign language for social and/or cultural purposes while an instrumental orientation means that learners are studying a language in order to further a career or academic goal. As an entire group, results showed that AMAIUB students have the integrative or intrinsic (M=4.15) motivation in learning EFL. These findings have been corroborated by the views of the students when asked about their prime motive in learning EFL (Appendix C). During the FGD sessions conducted, majority of the students have included integrative motivational orientations such as *“English is widely spoken around the world so I need to be good in it in order to make new friends”*, *“So I will be able to talk to foreigners and share insights with them”*, *“It is the second most important language, next to the Arabic language, and I use it to deal with expats/foreigners here in Bahrain”*, *“This helps me communicate with non-Arabic people everyday”*, *“I love English movies so I have to be good in English”*, *“I will be more confident if I know how to speak in English”*, *Speaking and understanding English will help me understand cultures of other people”*, *Knowing and understanding English will help me gain more knowledge and information from books, internet and other sources”*, *“English is the language of the economy so if one wants to develop himself, he has to be proficient in this language”*, *“Being good in English means*

having a social life”, “I am interested in the music industry---beautiful songs are in English and these songs can only be understood if one is proficient in English”, “It is the global language”, “It is used everywhere--- in schools, universities, stores, restaurants, workplace, among others”, “It strengthens my relationship with others”, “It has been a part of my daily life”, and “Learning English is one good way to develop myself”. On the other hand, students who have stipulated their instrumental motivational orientation in learning EFL have these comments such as, “ I need to be proficient in English because I have plans to enroll my master’s degree either in the U.S. or the U.K.”, “I need it in my work as a call center representative”, “English proficiency is one of the important skills that a job applicant should have”, “I want to understand my lessons very well since all courses in the University are discussed in English”, and “This will help me find a good job someday”. Results of this study are supported by other research findings which reveal that L2/FL learners may be intrinsically motivated (Gardner and MacIntyre, 1993). Moreover, results differ from studies which reflect that learners of foreign or second language are extrinsically motivated (Alhuqbani, 2009; Liu, 2007; Al-Khatib, 2007) or they bear both kinds of motivations to learn a language (Deci and Ryan, 2008; Al-Khatib, 2007; Keblawi, 2006; Obeidat, 2005; Malallah, 2000; Williams, 1994). Further, based on the results, it can be implied that AMAIUB students will likely succeed in their quest to learn EFL.

Table 5. Students’ Motivational Orientations in Learning EFL when Grouped as to Programme Enrolled

Motivational Orientation	BSBI Mean Rank	BSIS Mean Rank	BSIE Mean Rank	BSME Mean Rank	BSCS Mean Rank	MD Mean Rank
Integrative	4.22 1	4.15 1	3.90 2	4.03 1	4.15 1	4.42 1.5
Instrumental	4.17 2	4.07 2	3.98 1	3.987 2	4.08 2	4.42 1.5

When grouped as to the programme enrolled, results showed that BSBI (4.22), BSIS (4.15), BSME (4.03), and BSCS (4.15) students have integrative while the BSIE students have instrumental motivational orientation in learning EFL. The College of Medicine students have both the integrative and instrumental orientations.

Table 6. Students’ Motivational Orientations in Learning EFL when Grouped as to Sex

Motivational Orientation	Male <u>M</u>	Rank	Female	Rank
Integrative	4.09	1	4.21	1
Instrumental	4.04	2	4.16	2

When grouped as to sex, both male (M=4.09) and female (M=4.21) students have integrative or intrinsic motivational orientation in learning EFL.

Table 7. Differences in the Types of Multiple Intelligences among Students Categorized According to Programme Enrolled

Intelligence	Sum of Squares	df	Mean Square	F	Sig.
1. Naturalist	653.421	159	4.110	4.058	.002*
2. Musical	713.062	159	4.485	.543	.743
3. Logical-Mathematical	547.196	159	3.441	.660	.665
4. Existential	594.575	159	3.739	1.825	.111
5. Interpersonal	594.215	159	3.737	.424	.831
6. Bodily-Kinesthetic	653.546	159	4.110	.840	.523
7. Verbal	741.248	159	4.558	.723	.607
8. Intrapersonal	758.392	159	4.770	1.716	.134
9. Visual-Spatial	841.877	159	5.295	.862	.508

*p<.05

Results revealed that there was a significant difference in the types of intelligence when the students are categorized as to the programme enrolled, specifically, on the Naturalist type of intelligence. The Scheffe test determined that this significant difference is specifically found between the MD and BSCS students and again, between the MD and BSIS students.

Table 8. Differences in the Types of Multiple Intelligences among AMAIUB Students Categorized According to Sex

Intelligence	t	df	F	Sig.
1. Naturalist	.236	158.897	2.978	.813
2. Musical	-.033	161.948	.173	.974
3. Logical-Mathematical	-.581	161.635	.045	.562
4. Existential	-.913	162.348	.045	.363
5. Interpersonal	-.252	162.657	.941	.801
6. Bodily-Kinesthetic	-1.036	160.976	.466	.302
7. Verbal	.764	162.449	.294	.446
8. Intrapersonal	.009	162.449	.466	.993
9. Visual-Spatial	.086	162.706	.640	.931

There are no significant differences in the types of multiple intelligences when students are grouped as to sex.

Table 9. Differences in the Students' Motivational Orientations in Learning EFL when Grouped According to Programme Enrolled

Motivational Orientation	Sum of Squares	df	Mean Square	F	Sig.
1. Integrative	87.296	159	.549	.829	.531
2. Instrumental	68.194	159	.429	.977	.433

There were no significant differences on the students' motivational orientations in learning EFL when they were grouped as programme enrolled.

Table 10. Differences in the Students' Motivational Orientations in Learning EFL when Grouped According to Sex

Motivational Orientation	t	df	F	Sig.
1. Integrative	-1.048	162.320	.004	.296
2. Instrumental	-1.203	162.840	.246	.231

There were no significant differences on the students' motivational orientations in learning EFL when they were grouped as to sex.

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