The Academic Effects of Learning Styles on ESL Students in Intensive English Language Centers

Dr. Baderaddin Yassin

Amman Arab University/ Amman- Jordan

Email: byassin2012[at]gmail.com, byassin[at]aau.edu.jo

ABSTRACT

This study investigated the learning styles of ESL students (students who learn English as a second language). The focus in this study was on the ESL Arab Gulf (Saudi Arabia, Oman, Kuwait, and United Arab Emirates) students who study English as a second language in Intensive English Language Centers (IELCs) in the United States. The study explored the ESL Arab Gulf students' learning style preference and how they are affected by different variables such as cultural background, age, and gender. ESL Arab Gulf students were administered the VARK Learning Styles questionnaire. It measures several sensory types of learning styles such as visual, auditory, read/write, and kinesthetic. The participants in this study were from Saudi Arabia, Oman, United Arab Emirates, and Kuwait. The finding of this quantitative research study showed that ESL Arab Gulf students' learning styles were affected by their cultural backgrounds and their gender as well. The results of this study showed that matching teaching styles to ESL Arab Gulf students' learning styles impacted the ESL Arab Gulf students' academic success positively. It helped students to achieve higher TOEFL scores more than the students who had different learning styles from their teachers'.

Keywords: ESL, ELLs, Learning Styles, Teaching Styles, TOEFL

1. INTRODUCTION

To get admission to one of the American universities, ESL student must pass the TOEFL test. When ESL students do not meet the minimum requirement in TOEFL test (ETS, 2011) they will not be able to enroll at the university, and they will have to apply to one of Intensive English Language Centers (IELCs). These language centers are designed to improve future international students' academic and communicative proficiency levels of English language to prepare them to be ready to take the TOEFL test again and then obtain admission to the university. Most of these IELCs examine the ESL students to determine their appropriate English comprehension levels. When students complete the final level they are granted a "TOEFL waiver" and then a university admission.

Due to cultural and educational variation among ESL students, it is important to design a comprehensive and effective teaching method that suits all students regardless of their backgrounds. The purpose of this research is to conduct a quantitative research on the most common learning styles among Arab Gulf ESL students and the differences among these types of learning styles, and the effects of the preferred learning styles on the TOEFL scores of ESL students Arab Gulf students. To do this, the study investigates how cultural backgrounds and language level of the Arab Gulf ESL students' countries influence their learning styles by shedding light on the TOEFL scores of the target students and find out if the preferred learning styles affect the TOEFL scores of Arab Gulf students. Finally, this study investigates the

correlation between ESL instruction and the preferred Arab Gulf students learning styles to come up with a method that can enhance the quality of teaching and learning in IELCs.

1.1   Background of learning styles

Learning style was defined by several researchers such as Dunn (1979), Reid (1998), Fleming (1998), and others. The concept of "learning style" was also cited in many popular research studies and books such as Nunn and Gallaher (1998), Gregory (2005), and Sprenger (2003). It has been recognized widely in classrooms in the United States for more than two decades. Educators have been aware that individuals learn in a unique way that improves the comprehension process. Gallaher and Nunn (1998) compared a learning style to human beings 'fingerprints. They argued that a learning style is very unique and very individual, thus they compared it a human fingerprint.

According to Reid (1998), learning styles are internally-based characteristics that are used by learners to understand new information and discover how to learn best. Learners prefer to boost their confidence and consequently their performance. They do not follow the teaching styles of their teachers because they retain their learning styles even if they encounter different teaching styles and different classroom environments.

Some researchers differentiate between learning styles and learning strategies. They claimed that both concepts are unique and different from each other. For example, Reid (1998) argued that learning styles are internal skills that were acquired unconsciously, but learning strategies are external skills that can be learned consciously. Learning strategies are adopted by individuals to improve and develop their level of comprehension. On the other hand, a learning style is an internal characteristic developed in people since childhood. Children grow up with individual learning styles which are difficult to replace with new learning styles in the future.

Dunn (1984) defined learning styles as the way in which each person absorbs and retains information and skill. According to Dunn, the process of absorbing and retaining information is different for every student regardless of how that process is described; it is still different for every student. Learning style is the way in which each person begins to concentrate on, process, internalize, and retain new academic information. Because each person learns differently from every other person, the same instructional environment, methods, and resources will be more effective for some learners and less effective for others (Burke & Dunn, 2003).

Shaughnessy (1998) defined learning styles as a method that students use to focus on, process, and analyze new difficult tasks, information, skills, and so forth. According to Shaughnessy, the learning styles of individuals are controlled by age, achievement level, cultural background, individual's method of analysis, and gender.

Jahiel (2008) defined learning styles as the way in which individuals process information and analyze it. According to Jahiel, individuals do not rely on one type of learning styles but some of them have one primary learning style and others have more than one learning style. Individuals observe, process, and analyze the information by using one or more learning styles in order to have a complete comprehension process.

According to Gergory (2005), a learning style is "a lens that we as educators can use to help differentiate instruction to appeal, engage, and facilitate learning for different types of students who have different needs" (p.2). It is important that educators imagine that a learning

style is the gate that can give them a chance to discover how students visualize, hear, understand, and learn from teachers' instructions. Gregroy asserted the policy that asked teachers to do some modification to their teaching methods in order to match students' learning styles. If teachers modify their teaching methods, they can create a classroom environment suitable for all types of students' learning preference, and they will present materials that appeal to the visual, aural, read/ write and kinesthetic learning styles of students (Gregory, 2005).

To conclude, learning style is the way in which somebody approaches the acquisition of knowledge. There are different types of learning styles. Some individuals have more than one and some of them rely only on one primary learning style (Tulbure, 2011). Factors, such as age, achievement level, academic level, gender, and cultural background, affect and control individuals' learning styles (Zhang, 2011).

1.2 Research Questions

The key questions guiding this inquiry are: (1) What is the most common learning style profile of Arab Gulf ESL students, and how much do their learning styles vary?(2) Do country of origin and gender affect the preferred learning styles of ESL Arab Gulf students? (3) Do Arab Gulf students with different learning style preferences perform differently on the TOEFL? (4) Does a correlation between ESL instruction and the preferred students learning styles impact Arab Gulf ESL students' English language performance?

1.3 Hypotheses

(1) Male and female Arab Gulf students have different preferred learning styles.

(2) Cultural backgrounds of ESL Arab Gulf students affect their learning styles preference choice.

(3) Preferred learning styles of Arab Gulf students affect their TOEFL scores.

(4) Gender of Arab Gulf students affects their TOEFL scores.

(5) The English language performance of ESL Arab Gulf students' impacts their learning performance level if instruction is matched to their preferred learning styles.

1.4 Significance of the Study

This study contributes to a deeper understanding of the variables that affect ESL learning styles and make them differ among Arab Gulf ESL students in Intensive Language Centers (IELCs) at two of the North American universities: University of Arkansas, Fayetteville and University of Oklahoma, Norman. This study will also contribute to a deeper understanding of the correlation between learning styles and used teaching styles in IELCs.

The results of this study will also help teachers to have a better understanding of ESL Arab Gulf ESL students' learning styles and will guide them to choose the teaching methods that match the Arab Gulf ESL students' learning styles and help them to be more engaged in the new academic environment. The results of this study will aid ESL teachers with a necessary knowledge of ESL students' learning styles, and how ethnicity and academic levels affect those kinds of students. As a result, the length of time spent in IELCs can be reduced to a minimum, the teaching and learning process can be easier, and ESL students can get admissions to the university in a shorter time with good command of English, and with lower level of anxiety and stress.

2. LITERATURE REVIEW

Teaching is about making students effective members in classroom. Therefore, educational institutions always look for methods that can assist them make their institution more effective and more active in regards to teaching students. Since students prefer to learn by adopting specific learning styles, teachers also prefer to teach students specific methods and strategies. Dunn (1979) discussed how teachers teach students. Dunn argued that the efforts of teachers misdirect their wrong assumptions and their superficial designs. They choose to develop the students' performance level but sometimes they fail because they are misdirected by their assumptions. According to Özkan, & Ulutaş (2012), teaching is not only telling and learning. It is more than these limited concepts. Both concepts have deeper meanings than the superficial assumption of a simple word. The superficial assumption may lead to superficial teaching and learning process which create difficulties for both students and teachers.

According to Dunn (1979), the mismatch occurring among students and teachers is due to some difficulties in recognizing the positive characteristics of teachers' styles and difficulties in using the appropriate measure that scales the aspects of the teaching learning process. Another difficulty is that teachers may not be good enough to teach even if he/she is knowledgeable, and he/she may not have the knowledge of learning styles when observing students. According to Dunn (1979), the teaching style is a result of the academic background of the teachers. It is a result of how teachers learned. This leads to a difference in teaching styles among teachers and who they reflect on exercises using different teaching method that imitate the way they learned(Sarasin ,1999).

According to Sarasin (1999), if teachers prefer to perceive things in an auditory way, their teaching styles will be likely to emphasize hearing. If they tend to perceive things visually, their teaching strategies will be likely to rely on visual picture. If they tend to perceive things in tactile ways, their teaching strategies will probably appeal to the touch and movement. To solve this problem, instructors are encouraged to recognize the learning styles of students and integrate them with class activities. Relying on teaching styles only may create obstacles for students in general and ESL students in specific (Reid, 1998).

When teachers think of how and what they teach, they will discover that their teaching style consists of two parts. One is their learning styles and the second is their past successful learning experiences. Therefore, teachers teach the way they learn and they tend to choose the lessons according to their learning styles. Educators and researchers cannot deny the fact of what works for teachers might not work for students. This may lead to academic gap among teachers and students (Sarasin, 1999). When this gap occurs in class, neither teachers nor students will feel comfortable. As a result, the low comprehension level may expand and students may become bored; teachers will not feel that students are willing to comprehend the lesson. The motivation will be in the lowest level for both teachers and students. (Kruzich, Friesen, & Van, 1986).

According to Campbell (1991), teachers need to be aware of their own learning styles. They need to work on their teaching styles to motivate students to be high achievers. Teaching ESL students is not easy compared to regular classes. It is sometime difficult to teach ESL student according to their learning styles but it is sometimes worthy and necessary to be applied in these types of classrooms. So teachers who teach to gain a stipend at the end of each month

will not be able to motivate students to develop and be higher achievers. Teaching these kinds of students needs more than a salary to teach them effectively. The ESL teachers need to be passionate for teaching ESL students; they should care for their students regardless of their origins and be willing to teach them effectively (Yamauchi, 2008).

Most of the ESL students do not have sufficient background in English, so they enroll in language centers to improve their level of English to get admission to the university. ESL teachers need to understand that the role that they play in ESL students' life is serious and important. Most of these students left their countries, their families, and their jobs to come and pass the TOEFL test and get an admission to the University. So the ESL teachers need to be willing to change students' academic life for the better and motivate them to improve both the academic and communicative skills (Razawi, Muslim, Razali, Husin, & Samad, 2011).

ESL teachers also need to be able to reflect on students' academic career and understand that being an ESL teacher is not stress-free job. ESL teachers need to work collaboratively with students, parents, and other peers, to improve ESL students' performance. Teachers expect students to follow their way of teaching but this does not work all the time. Since teachers expect students to change their methods of learning, they also need to change their ways of teaching to match students' (Willingham, & Daniel, 2012).

It is known that teachers like to teach students the way they were taught and some teachers believe that it is the best way to teach. Teachers also tend to choose the subjects they teach based on their learning preferences, but they have to change and collaborate with students who play the main role in classroom (Jaenke, 2012). When teachers recognize how students learn, they will be able to customize these learning styles to teaching styles that are most responsive to that style. Some teachers will be comfortable using several different teaching methods since they are used to using only one or two but they can try and wait for the results to see if the students' level of performance is developed or goes lower.

Yamauchi (2008) conducted her dissertation on how adult ESL students learn effectively according to their learning preferences and their cultural backgrounds as well. The researcher used descriptive statistics to understand the respondents' background in relation to the results of the Productivity Environmental Preference Survey (PEPS).

ESL teachers should integrate a range of learning style preferences that match students' academic level to create a learning environment and the stimulus of learning styles should be gradually transformed from sociological elements to physiological ones. The results indicated that the instructional role of ESL educators was influential (Goodson, T. (1993).

The comparison between productivity and learning styles preference of ESL teachers and students showed that similarities and differences among ESL students and teachers were significant for understanding learning style preference of diverse respondents. Similarities from the result of standard score over 60 showed that the majority of ESL students and teachers preferred to learn in the afternoon and they produced better outcomes in a structured and peer-oriented learning environment. The higher preference for the afternoon is because the difference of time between ESL students' home country and United States in which it affects the time learning preference. This encourages teachers to adjust the time for new ESL students to provide an effective learning opportunity for ESL students (Yamauchi, 2008).

The more the students reflect upon themselves in learning process, the more they would be able to develop self-awareness in developing their learning styles. The result of this study showed that ESL learners' level of academics and country of origin control the motivation of these students, so teachers need to examine the learning environment and the type of programs as well. In doing this, teachers will be able to extend ESL students' performance and pay more attention when they choose the educational setting for their students (Franzoni, & Assar, 2009).

3. METHODOLOGY

The research study investigated the effect of ESL Arab Gulf students' learning styles on their performance level in two IELCs: (a) the University of Arkansas in Fayetteville and (b) University of Oklahoma in Norman. The study also investigated the preference of ESL students' learning styles and if they differ by cultural background and gender. The participants attended two IELCs in both universities. There were 71 students from Spring International language Center (SILC) at the University of Arkansas and 88 ESL students from Center of English as a Second Language (CESL) at University of Oklahoma.

This research study used the "VARK" learning styles instrument. The questionnaire that is used by VARK supported for the validity of the VARK scores in several research studies (Leite, Svinicki, &Shi, 2009; Hawk& Thomas, 2007).

3.1. Data Analysis

ANOVA test was used to find out if the TOEFL scores were affected by gender and learning styles of ESL Arab Gulf students; and if the learning styles of ESL Arab Gulf students are affected by their cultural backgrounds. The mean and standard deviation of mean scores were also reported in the tables to determine if the means of learning styles were statistically different.

When the questionnaire was analyzed, a report was written to provide discussion on the most commonly used learning styles, the least commonly used learning style, significant differences in learning styles according to the demographic variables, and finally a discussion of the six research study hypotheses.

3.2. Profile of the Arab Gulf ESL Students

The following table represents the profile of the ESL Arab Gulf students. Table 1 illustrates the number of students according to their country of origin, gender, and language center. The majority of responses were from students who are from Saudi Arabia. The smallest response rate was from the United Arab Emirates.

Table 1
Questionnaire Return Rate

Gender	Country of Origin				Language Center	
	Saudi Arabia	Kuwait	Oman	United Arab Emirates	SILC	CESL
Male	92	18	4	1	48	67
Female	38	5	1	0	23	21
Total	130	23	5	1	71	88

The TOEFL test score was divided into three parts. The first part consists of students who scored from 300 to 399 points as shown in table 2.1; the second part consists of students who scored from 400 to 499 points as shown in table 2.2; and the third part consists of students who scored from 500 to 600 points in TOEFL test as shown in table 2.3.

Table 2. 1

Students' Paper-Based TOEFL Test Scores From 300 -399

Score	Number	%
320	1	.6
330	3	1.9
340	1	.6
345	1	.6
350	1	.6
380	2	1.3
385	1	.6
390	4	2.5
395	1	.6
397	2	1.3
398	1	.6
Total	18	11.2%

Table 2. 2

Students' Paper-Based TOEFL Test Scores From 400 - 499

Score	Number	%
400	4	2.5
410	4	2.5
415	1	.6
419	1	.6
427	1	.6
433	1	.6
437	7	4.4
450	1	.6
470	1	.6
480	3	1.9
490	2	1.3
493	1	.6
498	2	1.3
Total	29	18.1%

Table 2. 3

Students' Paper-Based TOEFL Test Scores From 500 - 600

Score	Number	%
500	5	3.1
510	22	13.8
513	2	1.3
520	5	3.1
522	1	.6
525	1	.6
530	3	1.9
535	1	.6
537	1	.6
540	4	2.5
545	2	1.3
547	12	7.5
548	5	3.1
550	4	2.5
560	1	.6
587	1	.6
590	1	.6
Total	59	41.2%

4. RESULTS

4.1. Questions

Question One

The analysis below was presented to answer question number one: What is the most common learning style profile of ESL Arab Gulf students, and how much do these learning styles vary?

Table 3.1 shows the learning styles that were preferred by ESL Arab Gulf students who study in two language centers, SILC and CESL. The results of the learning styles analysis showed that the majority of ESL Arab Gulf students were aural learners. Table 3.1 indicates that there were 19 (11.9%) students who were visual learners.

Table 3. 1
The Number and Percentage of Students' Preferred Learning Styles in IELCs

Teaching Style	Number	%
Visual	19	11.9
Aural	66	41.5
Read/write	24	15.1
Kinesthetic	50	31.4
Total	159	100%

Question Two

The data in Tables 3.2, 3.3, and 3.4 were presented for the purpose of answering question number two: Do country of origin and gender affect the preferred learning styles of ESL Arab Gulf students?

Table number 3.2 shows the learning styles preferences of ESL Arab Gulf students' responses according to their country of origin. The majority of the Saudi students preferred aural learning styles. The majority of Kuwaiti students also preferred aural learning styles. Most students from Oman reported kinesthetic learning styles and most students from Emirates reported read/write learning styles. The results of this table show differences among these countries in the learning style preference.

Table 3. 2
The Learning Style Preferences of Individual Responses by Country of Origin

Country of Origin	Learning Style			
	Visual	Aural	Read/Write	Kinesthetic
Saudi Arabia	11	56	20	43
United Arab Emirates	0	0	1	0
Kuwait	8	9	3	3
Oman	0	1	0	4
Total	19	66	24	50

Table number 3.3 illustrates the learning styles preferences of ESL Arab Gulf students' responses according to their gender. According to results of this table, the majority (43.47%) of male students reported aural learning styles, but the majority (50%) of female students reported kinesthetic learning style. As a result, there was a learning style preference difference among Arab Gulf ESL male and female students, as shown in the following table.

Table 3. 3
The Learning Style Preferences of Individual Responses by Gender

Gender	Learning Style			
	Visual	Aural	Read/Write	Kinesthetic
Male	18	50	19	28
Female	1	16	5	22
Total	19	66	24	50

Question Three

The data in tables 4.1, 4.2, and 4.3 was presented for the purpose of answering question number three: Do Arab Gulf students with different learning style preferences perform differently on the TOEFL test? The TOEFL test score was divided into three parts. The first part consists of students who scored from 300 to 399 points; the second part consists of students who scored from 400 to 499 points; and the third part consists of students who scored from 500 to 600 points.

Tables 4.3, 4.4, and 4.5 represent the learning styles preferences of ESL Arab Gulf students according to the results of their TOEFL test in the first part (300-399). The mean and the standard deviations for the four levels of learning styles of this part are reported in Table 4.1. As shown in Table 4.3, the majority of participants who achieved a score of 300 to 399 reported aural learning styles.

Table 4. 1
The Effect of Learning Styles on TOEFL Scores

Learning Style	M	SD
Visual	521.40	63.25
Aural	482.28	57.79
Read/write	492.91	73.42
Kinesthetic	463.21	65.59
Total	483.09	65.88

Table 4. 2
The Effect of Learning Styles on TOEFL Scores

Gender	M	SD
Male	483.78	7.26
Female	481.45	11.18

Table 4. 3
Learning Style Preference by Students' Paper-Based TOEFL Test

Score	Learning Style			
	Visual	Aural	Read/Write	Kinesthetic
320	0	0	0	1
330	0	0	2	1
340	0	0	1	0
345	0	1	0	0
350	0	0	0	1
380	0	1	0	1
385	0	1	0	0
390	1	2	0	1
395	0	0	0	1
397	1	1	0	0
398	0	1	0	0
Total	2	7	3	6

As shown in Table 4.4, there were 14 students who reported kinesthetic learning styles, 12 who reported aural learning styles, two who reported read/write learning styles, and two who reported visual learning styles. The majority of students in this part (400-499) reported aural learning styles. Table number 4.5represents the learning styles preferences of ESL Arab Gulf students according to their TOEF scores of (500-600).

Table 4. 4
Learning Style Preference by Students' Paper-Based TOEFL Test

Score	Learning Style			
	Visual	Aural	Read/Write	Kinesthetic
400	0	1	0	3
410	0	1	1	2
415	0	0	0	1
419	0	0	0	1
427	0	0	0	1
433	0	0	0	1
437	1	3	1	2
450	0	1	0	0
470	0	1	0	0
480	0	3	0	0
490	0	1	0	1
493	0	0	0	1
498	0	1	0	1
Total	2	12	2	14

Table 4. 5
Learning Style Preference by Students' Paper-Based TOEFL Test

Score	Learning Style			
	Visual	Aural	Read/Write	Kinesthetic
500	1	3	0	1
510	0	8	6	8
513	0	1	0	1
520	1	1	1	2
522	0	1	0	0
525	0	0	0	1
530	0	0	2	1
535	0	1	0	0
537	0	1	0	0
540	0	0	3	1
545	1	0	0	1
547	0	7	3	1
548	1	1	2	1
550	4	0	0	0
560	1	0	0	0
587	1	0	0	0
590	1	0	0	0
Total	11	24	17	18

Question Four

The data in 6.1 were presented for the purpose of answering question number four: Does a correlation between ESL instruction and the students' preferred learning styles impact Arab Gulf ESL students' English language performance?

Table 6.1 illustrates the most dominant teaching styles that are used in both IELCs. According to ESL Arab Gulf students' responses, the majority of ESL teachers in the selected IELCs used the read/write teaching methods to teach students in IELCs. The results of Table 6.1 show that 74 students reported that teachers in both IELCs preferred using the read/write teaching method, and 12 students reported that teachers preferred using kinesthetic teaching methods. The difficulty is that most of the participants preferred learning through using aural learning styles, so there was disharmony among teachers and students in these IELCs which may impact Arab Gulf ESL students' English language performance, as shown in table 6.1

Table 6. 1
The most dominant teaching style in IELCs

Teaching Style	Number	%
Visual	26	16.4
Aural	47	29.6
Read/write	74	46.5
Kinesthetic	12	7.5
Total	159	100

4.2. Hypotheses

The analysis below investigated the following research hypothesis using chi-square and the one-way ANOVA test.

Hypothesis 1: Male and female Arab Gulf students have different preferred learning styles.

The data in Table 7.1 show that female students were different than male students in their learning style preference. The majority of male students reported aural learning styles, but the majority of female students reported kinesthetic learning styles. As a result, there was a difference in the learning style preference among ESL Arab Gulf male and female students. In order to be confident of this result, the data were analyzed by using the Chi-Square test as shown in the following tables.

Table 7. 1
*Learning Style * Sex Cross Tabulation*

		Male		Female	
		n	%	n	%
LS	Visual	18	15.7	1	2.3
	Aural	50	43.5	16	36.3
	Read/ write	19	16.5	5	11.4
	Kinesthetic	28	24.3	22	50.0

Table 7. 2
Chi-Square Tests

	Value	Df	P
Pearson Chi-Square	12.376[a]	3	.006
Likelihood Ratio	13.467	3	.004
Linear-by-Linear Association	10.259	1	.001
N of Valid Cases	159		

A chi-square test of goodness-of-fit was performed on 159 ESL Arab Gulf students to determine whether ESL Arab Gulf students differ in their learning style preferences. In the total of 115 males, about 15.65% preferred visual learning style, 43.47% preferred aural learning style, 16.52% preferred read/write, and 24.34% males reported kinesthetic. In the total of 44 females, about 2.27% preferred visual learning style, 36.36% preferred aural, 11.36% preferred read/write, and 50% preferred kinesthetic. These frequencies are significantly different, χ^2 (3, N=159) =12.37, p<.05.

Since the calculated value χ^2 =12.37 is greater than the tabulated value (χ^2=7.815), we will reject the null hypothesis. The percentage of students who have different learning styles differ by gender, χ^2 (3, N=159) =9.707, p<.05.

Hypothesis 2: Cultural backgrounds of ESL Arab Gulf students affect ESL students' learning styles preference choice.

ANOVA was conducted to evaluate the effect of the cultural backgrounds of ESL Arab Gulf students on their learning style preference choice. The independent variable, cultural background, included four levels: Saudi Arabia, Kuwait, Oman, and United Arab Emirates. The ANOVA was significant, F (3,155) = 4.50, p = .005. The relationship between the cultural backgrounds and the learning styles of ESL Arab Gulf students, as assessed by η^2, was strong. The cultural backgrounds of these students accounts for 80% of the variance of the dependent variable. There was significant effect of the cultural background on ESL Arab Gulf students' learning style preference. Follow-up tests were conducted to evaluate pairwise differences among the means. There was a significant difference in the means between Saudi and Kuwaiti group and between Kuwaiti and Omani group as shown in table 7.3.

Table 7.3

Culture Effects on LS

Source	Type III Sum of Square	df	Mean Square	F	Sig.	Partial Eta Squared
Corrected Model1	3.927a	3	4.642	4.505	.005	.080
Intercept	103.402	1	103.402	100.338	.000	.393
Country	13.927	3	4.642	4.505	.005	.080
Error	159.733	155	1.031			

Hypothesis 3: Preferred learning styles of Arab Gulf students affect their TOEFL scores.

ANOVA was conducted to evaluate the academic effect of the preferred learning styles of ESL Arab Gulf students on their TOEFL test scores. The independent variable, the preferred learning styles, included four levels: visual, aural, read/write, and kinesthetic learning styles. The ANOVA was significant, $F (3,114) = 3.17$, $p = .027$. The relationship between the preferred learning styles and the TOEFL scores of ESL Arab Gulf students, as assessed by η^2, was strong. The preferred learning styles of these students accounts for 77% of the variance of the dependent variable. There was significant effect of the learning styles on the TOEFL score.

Hypothesis 4: Gender of Arab Gulf students affects their TOEFL scores.

A one way analysis of variance was conducted to evaluate the academic effect of the gender of ESL Arab Gulf participants on their TOEFL test scores. The independent variable, the cultural background, included two levels: male and female. The ANOVA was not significant, $F (1,116) = .030$, $p = .86$. The effect size was small, therefore the relationship between the gender and the TOEFL scores of ESL Arab Gulf students, as assessed by η^2, was not strong. The gender of ESL Arab Gulf students does not account for the variance of the dependent variable. There was not any significant effect of the ESL Arab Gulf students' gender on their TOEFL score test.

Hypothesis 5: The English language performance of ESL Arab Gulf students' impacts their learning performance level if instruction is matched to their preferred learning styles.

Table 8.1 illustrates the ESL Arab Gulf students' TOEFL test scores. The students in this table reported learning styles that matched the teaching styles of their teachers. The following analysis will ascertain the results found in the literature review.

Table 8.1 shows that there were 43 (91.5%) students who achieved a high score of 500 to 599 in the TOEFL test; whereas, students who did not report learning styles that matched the used teaching styles achieved lower TOEFL scores. There were 18 (25.35%) students who achieved 300 to 399, 25 (35.21%) students achieved 400 to 499, and 28 (39.43%) who achieved 500 to 599. To conclude, ESL Gulf students who had teachers that used teaching styles that matched their learning styles achieved higher TOEFL scores, whereas students who did not achieved lower scores, as shown in Table 8.1.

Table 8. 1

Learning styles and teaching styles

Paper-Based TOEFL	Matched Learning styles		Not Matched Learning styles	
	N	%	N	%
300-399	0	0%	18	25.3%
400-499	4	8.5 %	25	35.2%
500-599	43	91.5%	28	39.5%
Total	47	100%	71	100%

The aim of the fifth hypothesis was to determine whether there is a significant difference in the academic achievement of ESL Arab Gulf students who study in IELCs when teaching styles are matched to their learning styles. According to the previous results shown in Table 8.1, there was a difference in the TOEFL scores of Gulf students. The conclusion reached is that

matching teaching styles to learning styles impacts the academic success of ESL Arab Gulf students. Most of the students who achieved a high score in the TOEFL test reported learning styles that matched to the used teaching styles in class as shown in table 8.1. This conclusion proved that the idea of matching teaching styles to the students' learning styles can improve the level of performance of students.

5. DISCUSSION

The results indicated that the most common learning style among ESL Arab Gulf students was the aural learning style. There were 66 (41.5%) students who reported aural learning styles, 19 (11.9%) who reported visual learning styles, 23 (15.1%) who reported read/write learning styles, and 50 (31.4%) who reported kinesthetic learning styles. These results prove that ESL Arab Gulf students in this study are more aural than visual learners. These students can learn better through speaking and listening activities than through any other types of activities.

The data indicated that the majority of students from the country of Oman reported kinesthetic learning styles and the students from the country of the United Arab Emirates preferred read/write learning style. The majority of students from the country of Saudi Arabia and Kuwait preferred aural learning style. The results showed that there was a difference among these countries in the learning style preference, which seems to suggest that the idea that the cultural backgrounds affect the preference of learning styles among students. The gender of the participants showed significant difference in the preferred learning style but it did not show a significant difference on the TOEFL scores of ESL Arab Gulf students. The majority of female students reported kinesthetic learning styles but the majority of male students reported aural learning styles. The age and language level of students did not show any statistically significant difference in the preferred learning style.

Hypothesis one was tested by the chi-square statistical test. The majority of male participants reported aural learning styles but the majority of female participants reported kinesthetic learning styles. The results of the statistical chi-square determined that ESL Arab Gulf students differ in their learning styles preference. The alternative hypothesis was accepted since the calculated value was greater than the tabulated value. This leads the researcher to conclude that ESL Arab Gulf male students preferred to learn through listening and speaking activities but the ESL Arab Gulf female students preferred to learn through hands-on activities more than any other types of activities. .

Hypothesis two was tested by using the statistical ANOVA test which was performed to determine whether the cultural background of ESL Arab Gulf students affects their preferred learning styles. There were 130 ESL students from Saudi Arabia, 23 students from Kuwait, five students from Oman, and one student from the United Arab Emirates. The results of the statistical test were statistically significant; therefore, there was a difference in regards to the preferred learning styles among these four countries. The target students were different in their preferred learning style choice. This leads the researcher to the idea that the cultural background plays an important role in the ESL Arab Gulf students' preferred learning style in IELCs.

Hypothesis three was also tested by using the statistical ANOVA test, which was conducted to evaluate the academic effect of the preferred learning styles of ESL Arab Gulf students on their TOEFL achievements. According to the data in chapter four, the majority of

ESL Arab Gulf students reported aural learning styles. The percentage of students who reported aural learning styles was (45.4%) and the percentage of students who reported visual learning styles was (12.17%). The results of the statistical ANOVA test indicated statistically significant results; therefore, the researcher concluded that the preferred learning styles of ESL Arab Gulf students affect their language performance. There was a mean difference, as shown in Table 8.1 This mean difference is related to the teaching methods used in the IELCs. According to Table 8.1, students who reported read/write learning styles have a higher mean than the rest of the students who reported other learning styles.

Hypothesis four was tested by the statistical one-way ANOVA test to reveal the effects of gender on the target students' TOEFL scores. The results indicated that there was not any significant effect of gender on the target students' TOEFL scores. Being a male or a female is not a factor that can improve or decline the level of language performance.

The last hypothesis in this research study was anticipated to reveal the academic effect on the ESL Arab Gulf students' language performance if instruction is matched to the target students' preferred learning styles; therefore, the aim of this hypothesis was to determine whether there is a significant difference in the academic achievement of ESL Arab Gulf students who study in IELCs when teaching styles are matched to their learning styles.

The results that were revealed in this study ascertain that there was a significant difference. Matching teaching styles to ESL Arab Gulf students' learning styles impacted the ESL Arab Gulf students' academic success and elevated their TOEFL test scores more than the ESL Arab Gulf students who had different learning styles from their teachers' teaching method.

6. CONCLUSION

According to the results shown in this study, the majority of ESL Arab Gulf students who achieved a high score in the TOEFL test reported learning styles that matched the teaching styles used in class. These results proved the idea that matching teaching styles to the students' learning styles can improve the level of language performance of ESL Arab Gulf students in IELCs. For that reason, matching ESL teachers' teaching methods to ESL Arab Gulf students' learning styles is essential to the English language learning process in IELCs. It should be considered a positive and encouraging process for the teaching process of ESL Arab Gulf students in IELCs.

The study also concluded that the target students were different in their preferred learning style choices. This led the researcher to the idea that cultural background plays an important role in the ESL Arab Gulf students' preferred learning style in IELCs. The results of the ANOVA statistical test determined that the preferred learning styles of ESL Arab Gulf students affect their language performance; but gender did not play any significant role in the academic lives of ESL Arab Gulf students. Furthermore, the results in this study indicated that there was not any significant effect of gender on the target students' TOEFL scores. Therefore, being male or female was not a factor that could improve or decline the level of language performance of ESL Arab Gulf students in IELCs.

The gender of ESL Arab Gulf students does not play an important role in the ESL Arab Gulf students' TOEFL scores, but it plays an important role in the preferred learning style choice. The language level of ESL Arab Gulf students does not play an important role in their learning style preference. The cultural backgrounds and the preferred learning styles of ESL

Arab Gulf students play an important role in ESL Arab Gulf students' TOEFL scores, but their gender does not have any effect on their TOEFL scores.

7. LIMITATION OF THE STUDY

The conclusions of this study are based on the data obtained from two IELCs at the University of Arkansas and the University of Oklahoma. The results of this study are limited to the Arab Gulf students. The majority of Arab Gulf students were from Saudi Arabia, while the rest of students were from different Arab Gulf countries.

8. IMPLICATION FOR TEACHING

The findings of this study revealed that matching teaching styles to students' learning styles can improve the language performance level of students and improve academic communication among teachers and students, which may create more efficient and successful learning environments. The results of this research study can help ESL teachers to recognize the students' various learning styles in their classes. The teachers are encouraged to considered learning styles when teaching ESL Arab Gulf students.

REFERENCES

Burke, K., & Dunn, R. (2003). Learning style-based teaching to raise minority student test scores. *Social Studies*, *94*(4), 167-170.

Campbell, B. J. (1991). Planning for a student learning style. *Journal of Education for Business*, *66*(6), 356-359.

Dunn, R. (1984). Learning style: State of the science. *Theory into Practice*, *23*(1), 10-19.

Dunn, R., Dunn, K. (1979). *Teaching students through their individual learning styles: A practical approach.* Reston, Virginia: Reston Publishing Company, Inc.

Dunn, R., & Dunn, K. (1979). Learning styles/teaching styles: Should they...can they...be matched? *Educational Leadership*, *36*(4), 238.

ETS. (2011). Retrieved from

   http://www.toeflgoanywhere.org/content/all-about-toefl-test-what-you-need-know.

Fleming. (2011) A guide to learning styles. Retrieved from

   http://www.vark-learn.com/english/index.asp

Franzoni, A., & Assar, S. (2009). Student learning styles adaptation method based on

   teaching strategies and electronic media. *Journal of Educational Technology & Society*,

   12(4), 15-29.

Gllaher,J., &Nunn, R,. (1997). *Inspiring tranquility: Stress management and learning styles in*

   the inclusive classroom. Annapolis Junction, MD: NEA Professional Library.

Goodson, T. (1993). *Learning style preferences of East Asian ESL students*. Retrieved November 12, 2011, from Dissertations & Theses: Full Text. (Publication No. AAT 9404579).

Gregory, G. H. (2005). *Differentiating instruction with style.* Thousand Oaks, California: Crown Press.

Jaenke, R. (2012). Just ask them: Increasing learner engagement. *T+D*, *66*(7), 30-31.

Jahiel, J. (2008). What's your learning styles? *Practical Horseman*, *36*(3), 32-37.

Kruzich, J. M., Friesen, B.J., & Van, S. (1986). Assessment of Student and Faculty Learning Styles: Research and Application. *Journal of Social Work Education*, *22*(3), 22-30.

Özkan, N., & Ulutaş, B. (2012). Evaluating the effect of teaching strategies and learning styles to students' success. *E-Journal of New World Sciences Academy (NWSA)*, *7*(2), 613-620.

Razawi, N., Muslim, M., Razali, S., Husin, N., & Samad, N. (2011). Students' diverse learning styles in learning English as a second language. *International Journal of Business & Social Science*, *2*(19), 179-186

Reid, J. M. (1998). *Understanding learning styles in the second language classroom*. Upper Saddle River, NJ: Prentice Hall Regents.

Sarasin, C. L. (1999). *Learning style perspectives: Impact in the classroom.* Madison, WI: Atwood Publishing.

Shaughnessy, M. F. (1998). An interview with Rita Dunn about learning styles. *Clearing House*, *71*(3), 141.

Sprenger, M. (2003). *Differentiation through leaning styles and memory.* Thousand Oaks, California: Corwin Presss, Inc.

Tulbure,C. (2011). Do different learning styles require differentiated teaching strategies? *Procedia- Social and Behavioral Sciences,11*,155-159.

Willingham, D., & Daniel, D. (2012). Teaching to what students have in common. *Educational Leadership*, *69*(5), 16-21.

Yamauchi, K. (2008). Assessment Of Adult ESl learners' preferable learning styles : Implications for an effective language learning environment. Retrieved from ProQuest database.

Zhang, X. (2011). Cultural influence in intercultural adaptation: A case study of my son's "cultural clash" in the United States. *Studies in Literature & Language*, *3*(3), 29-34.