The Relationship between Iranian EFL Instructors' Multiple Intelligence Ability and Reflective Teaching

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Abstract: *The present study was an attempt to investigate the relationship between reflective teaching and multiple intelligence ability of Iranian EFL teachers. In order to conduct the research, out of a total number of 130 EFL teachers from different English institute in Tehran, 80 of them with teaching experience between 4 to 6 years were selected by convenience sampling. The required data for this study came from two questionnaires. One reflective teaching questionnaire for assessing teachers' reflectivity level in teaching and one multiple intelligence questionnaire for assigning teachers' level of intelligence. In order to analyze the raw data of the research, descriptive statistics followed by Pearson correlations were run to answer the research questions. The findings of first question showed that there were statistically significant relationships between total multiple intelligence ability of Iranian EFL teachers and reflective teaching. The results of second question showed that out of 8 intelligence types, five of them namely natural intelligence, intrapersonal intelligence, interpersonal intelligence, logical intelligence, verbal intelligence were significantly associated with reflective teaching. The findings of the present study may be beneficial to language teachers in Iranian EFL setting, education authorities and material developers who teaching English language is their concern.*

Keywords: *reflective teaching; EFL teachers; multiple intelligence.*

How to cite: Shahriari, F. (2018). The Relationship between Iranian EFL Instructors' Multiple Intelligence Ability and Reflective Teaching. *Revista Romaneasca pentru Educatie Multidimensionala*, 10(1-Special Issue 1), 97-109. <https://doi.org/10.18662/rrem/39>

1. Introduction

Teachers play a significant role in any educational system. According to Campbell (Azizi & Azizi, 2015) teacher is one of the influential factors in the process of language teaching and learning. Teaching is a complex task and requires qualified teachers (Mousapour, & Beiranvand, 2015). "In response to the need for highly qualified teachers, reflective teaching has been introduced" (Mousapour, & Beiranvand, 2015, p.776). In teacher education, reflective practice was considered as a practice which can provide the teachers with an opportunity to put their tentative ideas concerning teaching to test for the purpose of making their teaching practice more effective. (Farrell, 1999; Zohrabi & Yousefi, 2016). As Farrell (1999) states, reflective practice has influenced the whole field of education. So, the important role of reflection in EFL/ESL context cannot be denied. Beside necessary educational course for teacher development, language teaching and learning is affected by some mental and emotional sides of human behaviors (Andres, 2002). Gardner (1983) proposed that each person has different capabilities and tendencies in different areas and that each individual has several types of intelligences that are intermingled in different ways. So, multiple intelligence (MI) as one of the important mental characteristic of teachers may influence the process of teaching. According to abovementioned statement about importance of reflective teaching and intelligence of the teachers in language teaching, current study aims to investigate the relationship between these two variable.

2. Review of Literature

Since teachers have a major role in teaching contexts, doing research on different variables related to teaching can be one of the best ways to improve their success (Ghazalbash & Afghari, 2015) and English language teachers are not exception from this issue. Among these variables, different idea for teaching and teachers' intelligence to utilize those especial ideas play an important role in the process of teaching and learning. Reflective teaching as one of way for teaching was first initiated by Dewey (1933) who asserted that, "teachers are not just passive curriculum implementers, but they can also play an active role in curriculum design and educational reforml" (p. 49). Dewey (1933) defined reflective teaching as the process of questioning one's experiences and relevant knowledge for the purpose of finding meaning in one's beliefs, directing instruction with foresight, and planning.

Ma and Ren (2011) mention that, reflective teaching can facilitate teaching, learning and understanding and play a key role in the professional

development of any teacher. According to Bartlett (Zohrabi & Yousefi, 2016), reflection points to a practice in which the individual recalls, considers, and evaluates an experience often in relation to a broader purpose. In fact, reflection is a response to the past experiences and is to do with conscious recall and examination of the experience as a foundation for evaluation and decision-making, and as a basis for planning and action.

Dewey (1933) suggested that teaching needs to be a process comprising the following components: Hypothesizing, investigation, reasoning, testing and evaluation. In the process of teaching teachers need think about their selected procedure for some modification. This reflective practice may enable teachers to have a deeper understanding of their instructional practices and improve their teaching effectiveness (Osterman & Kottkamp, 2004). According to Osterman and Kottkamp (2004) reflective practice can lead to professional growth and improvement by allowing the teacher to better understand his or herself. Without reflection, teachers become “automatons following a dubious set of rules or principles” (Cranton & King, 2003, p. 32). Brookfield (1995) believes the greater the reflective practice, the more likely the teacher will make better decisions about instructional methods, techniques, and evaluations necessary for student success. Van Manen (1995) asserts that many teachers do not engage in reflective thinking when they prepare lessons, modify instructional resources, grade, and teach. Teachers who focus only on themselves as teachers minimize their potential to have a positive impact on students, peers, and society as a whole (Gore & Zeichner, 1991).

Choy (2012, p.169) Adds “teacher reflection can be thought of as taking necessary steps to analyze and articulate problems before taking action”. This makes it possible for more constructive action to taken rather than applying a fast solution (Boody, 2008). The challenge is to have the ability show in action what is taught in the classroom. Many teachers are unable to link their teaching to what they are actually practicing and vice versa (Rudd, Baker & Hoover, 2000). It seems that some individual characteristics of the teachers such as intelligence may influence reflectivity of the teachers in the classroom. In the past intelligence was considered as a fixed construct (Smith, 2001) and was operationally defined as one’s ability to answer the items of IQ tests (Khosravi & Saidi, 2014). So according to this definition people have thought for years that higher scores on IQ tests would predict one’s success in the learning process. After the development of the first intelligence test, Gardner (1983) challenged the prevailing view towards intelligence and put forth the multiple intelligences theory. Pay attention to Gardner (1983) definition, intelligence is “the ability to find and

solve problems, the ability to respond successfully to new situations and the capacity to learn from one's past experience" (p. 21).

Multiple intelligences (MI) theory suggests that there are a number of distinct forms of intelligences that each individual possesses in varying degrees, which result in many different ways of knowing, understanding, and learning about our world (Gardner, 1983; Saeidi, 2009). According to MI theory, there are eight possible intelligences in every human being: Linguistic, logical/mathematical, spatial, musical, bodily/kinesthetic, interpersonal, intrapersonal, and naturalistic (Saeidi, 2009).

In fact, MI theory was formed based on two main claims: (a) that all human beings have at least eight types of intelligence; and (b) that no two people, even identical twins, are of the same profile (Khosravi & Saidi, 2014). In this view, every human being has all the intelligences; the differences among the human beings are a matter of less or more developed in a particular intelligence. Akbari and Hosseini (2008) mention that individualism has more than ever been recognized and respected. Individual differences now occupy an important position in any debate related to teaching/learning (Saeidi, 2009). So multiple intelligence as one of individual factor can be investigated in EFL/ESL context. Many researchers have investigated the relationship between multiple intelligence and different variable in EFL/ ESL context (Khosravi & Saidi, 2014; Saeidi, 2009; Akbari & Hosseini, 2008; Haley, 2004) but to the best knowledge of the researcher no study examined its relationship with reflective teaching. So current study aims to investigate these to important variable.

3. Methodology

The initial participants of the present study were 130 EFL teachers from different English language institutes in Tehran, Iran. They were all male teachers and were chosen by convenience sampling. They ranged in age from 28 to 36 and all spoke Persian as their mother tongue. Due to importance of experience in reflective teaching, 80 EFL teachers who had between 4 to 6 years of teaching experience were selected as main sample size of the current study.

In order to reach the purposes of this correlational study two instruments were used. The first one was reflective teaching questionnaire devised by Akbari, Behzadpour and Dadvand (Zohrabi, & Yousefi, 2016) to measure reflective teaching level of the participants. This questionnaire includes 29 items on a five-point Likert scale, consisting of five options of never, rarely, sometimes, often, and always, which has been devised based

on six elements which are practical, cognitive, learner, metacognitive, critical, and moral aspects of teaching. The second instrument used in this study was multiple intelligences questionnaire devised and validate by Gardner's (Davoudi & Chavosh, 2016). This questionnaire was used to assess eight types of intelligences each individual possesses, namely; linguistic/verbal intelligence, logical/mathematical intelligence, visual/spatial intelligence, musical intelligence, bodily/kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence, and naturalistic intelligence.

3.1. Procedure

In order to find out the possible relationship between Iranian EFL instructors' multiple intelligence and reflective teaching, the following steps were applied: First, 130 EFL teachers were selected as initial sample of the study from different institute in Tehran. Next, from among them, 80 teachers with teaching experience between 4 to 6 were chosen as main sample size of the study. After that, multiple intelligence questionnaire was used to measure teachers' level of intelligence. The teachers who fill out the questionnaire received two types of score. One score as a whole and eight different kinds of scores for each component of multiple intelligence test i.e. for linguistic/verbal intelligence, logical/mathematical intelligence, visual/spatial intelligence, musical intelligence, bodily/kinesthetic intelligence, interpersonal intelligence, intrapersonal intelligence, and naturalistic intelligence. Next, in order to check the participants' reflectivity in teaching, they were asked to fill reflective teaching questionnaire. Teachers were supposed to express their attitudes with respect to their own conception of reflective teaching by choosing one of the options ranging from never to always. Finally, in order to determine the possible relationship between the above mentioned variables, a correlational statistic was employed.

3.2 Research Questions and Hypothesis

Q1: Is there any significant relationship between Iranian EFL instructors' total multiple intelligence ability and reflective teaching?

Q2: Is there any significant relationship between each one of the multiple intelligences and reflective teaching?

H0: there is no significant relationship between Iranian EFL instructors' multiple intelligence ability and reflective teaching.

4. Results

This study entitled “The Relationship between Iranian EFL instructors’ total multiple intelligence ability and reflective teaching; Is there any significant relationship between each one of the multiple intelligences and reflective teaching” is an attempt to explore any significant relationships between Iranian EFL teachers’ multiple intelligence and reflective teaching.

This research can be useful for the international study, teaching and learning process of foreign language in various countries, and its results can be extended for the whole learning process in educational institutes. Awareness of the importance of some teacher related factors such as emotional intelligence (EI), reflectivity, and burnout can help EFL teachers, especially novice and less experienced ones, to become aware of their own stress levels in order to overcome chronic stress and to prevent burnout. The collected data were analyzed by the researcher as follow:

4.1. Reliability Analyses for the Multiple Intelligence and Reflective Teaching Questionnaire

The reliability of multiple intelligence and reflective teaching questionnaire was estimated through Cronbach's Alpha. The results are presented in [Table 1].

Table 1. Reliability Statistics for the Multiple Intelligence and Reflective Teaching Questionnaire

	Cronbach's Alpha	N of the participants
Multiple Intelligence Questionnaire	0.78	80
Reflective Teaching Questionnaire	0.76	80

Moreover, in [Table 2] the value of reliability was interpreted and explained according to the reliability standards suggested by Barker, Pistrang, and Elliott (1994).

Table 2. Suggested Standards
(Adopted From Barker, Pistrang, and Elliott, 1994)

Interpretation of the findings	Reliability indices
Good	0 .80
Acceptable	0.70
Marginal	0 .60
Poor	0 .50

The values of Cronbach's Alpha for the multiple intelligence test was ($\alpha=.78$) and for reflective teaching questionnaire was ($\alpha=.76$), indicating that both test could be considered as the reliable tools for the study.

4.2 Testing Normality Assumption

The data collected in this study were analyzed using Pearson correlation analysis whose core assumption is normality of the data. In [Table 3] the results of descriptive statistics are mentioned.

Table 3. Descriptive Statistics; Testing Normality Assumption

Intelligences and Listening self-efficacy scores	N Statistic	Mean Statistic	Skewness Statistic	Std. Error	Kurtosis Statistic	Std. Error
Natural Intelligence	80	38.050	-0.178	0.252	-0.236	0.467
Musical Intelligence	80	32.770	-1.751	0.252	1.232	0.467
Intrapersonal Intelligence	80	39.150	-.401	0.252	0.055	0.467
Interpersonal Intelligence	80	39.230	-0.129	0.252	-0.641	0.467
Kinesthetic Intelligence	80	33.001	0.087	0.252	-0.653	0.467
Visual-spatial Intelligence	80	38.790	-.361	.252	-.078	0.467
Logical Intelligence	80	39.330	-0.711	0.252	0.891	0.467
Verbal Intelligence	80	38.430	-0.136	0.252	-0.141	0.467
Total Multiple Intelligence	80	298.751	0.256	0.252	0.429	0.467
Reflective Teaching	80	81.340	-0.583	0.252	0.156	0.467

As displayed in [Table 4] the ratios of skewness and kurtosis over their respective standard errors were lower than ± 1.96 ; hence normality of the data.

4.3. Answer to the First Research Question

Following the descriptive statistics, to provide answer to the first research question "Is there any significant relationship between Iranian EFL

instructors' total multiple intelligence ability and reflective teaching" and to examine the possible relationship between EFL teachers' multiple intelligence and their reflective teaching, Pearson correlation test was run. The results of this procedure are presented in [Table 5] below:

Table 4. Pearson Correlation Test

Correlations			
EFL teachers' total multiple intelligence			EFL teachers' reflective teaching
EFL teachers' total multiple intelligence	Correlation Coefficient	1.000	0.566**
	Sig. (2-tailed)	0.000	0.000
	N	80	80

[Table 5] depicted the correlation between teachers' total multiple intelligences and their reflective teaching level. The following guideline was applied to interpret the (r) value found in the present study.

Table 5. Cohen's Guidelines for Interpreting the Results of the Correlation Coefficient

Interpretation	Correlation value
Small correlation	0.10 to 0.29
Medium correlation	0.30 to 0.49
Large correlation	0.50 to 1.0

There was a "*large*" correlation between teacher total multiple intelligence ability and their reflective teaching level ($r(80) = .566, p=.000$). The sig value was lower than (.01) resulting that the correlation was statically significant ($P \leq .01$). So, the research null-hypothesis **was rejected** and indicting that there were statistically significant relationships between total multiple intelligence ability of Iranian EFL teachers and their reflective teaching level.

4.4. Answer to the Second Research Question

In the previous section significant correlation was found for teachers' total multiple intelligence and reflective teaching but the relationship between different components of multiple intelligence with reflective teaching was not analyzed. So, Pearson correlations were run to

probe any significant relationships between teachers' eight types of intelligences and their reflective teaching level. The results of Pearson correlations were reported in [Tables 6 & 7].

Table 6. Pearson Correlations; Reflective teaching with Multiple Intelligence

		Reflective Teaching
Natural intelligence	Pearson Correlation	.442**
	Sig. (2-tailed)	.000
	N	80
Musical Intelligence	Pearson Correlation	.244**
	Sig. (2-tailed)	.063
	N	80
Intrapersonal Intelligence	Pearson Correlation	.781**
	Sig. (2-tailed)	.000
	N	80
Interpersonal Intelligence	Pearson Correlation	.891**
	Sig. (2-tailed)	.000
	N	80
**. Correlation is significant at the 0.01 level (2-tailed).		

Based on the results displayed in [Table 6] it can be concluded that;

- Natural intelligence had significant relationship with reflective teaching ($r(80) = 0.442$, $p = .000$, representing a medium correlation).
- The Musical Intelligence had not significant relationship with reflective teaching ($r(80) = 0.244$, $p = 0.063$, representing a small correlation).

The Intrapersonal Intelligence had significant relationship with reflective teaching ($r(80) = 0.781$, $p = 0.000$, representing a large correlation).

- The Interpersonal Intelligence had significant relationship with reflective teaching ($r(80) = 0.891$, $p = 0.000$, representing a large correlation).

Table 7. Pearson Correlations; Reflective Teaching with multiple Intelligence

		Reflective Teaching
Kinesthetic Intelligence	Pearson Correlation	0.271**
	Sig. (2-tailed)	0.061

	N	80
Visual-spatial Intelligence	Pearson Correlation	0.268**
	Sig. (2-tailed)	0.051
	N	80
Logical Intelligence	Pearson Correlation	0.735**
	Sig. (2-tailed)	0.000
	N	80
Verbal Intelligence	Pearson Correlation	0.901**
	Sig. (2-tailed)	0.000
	N	80
**. Correlation is significant at the 0.01 level (2-tailed).		

Based on the results displayed in [Table 7] it can be concluded that;

- Kinesthetic Intelligence had not significant relationship with reflective teaching ($r(80) = 0.271$, $p = .061$, representing a large correlation).
- Visual-spatial Intelligence had not significant relationship with reflective teaching ($r(80) = 0.268$, $p = 0.051$, representing a small correlation).
- Logical Intelligence had significant relationship with reflective teaching ($r(80) = 0.735$, $p = 0.000$, representing a large correlation).
- Verbal Intelligence had significant relationship with reflective teaching ($r(80) = 0.901$, $p = 0.000$, representing a large correlation).

In the abovementioned findings, all of the intelligence types except musical intelligence, kinesthetic intelligence and visual-spatial intelligence were significantly related to reflective teaching. In other words, out of 8 intelligence types, five of them were significantly associated with reflective teaching.

5. Discussion and Conclusion

As the findings of this study indicated for the first research question, there were statistically significant relationships between total multiple intelligence ability of Iranian EFL teachers and their reflective teaching level. With regard to the second question, it was found that except musical intelligence, kinesthetic intelligence as well as visual-spatial intelligence all other five types of intelligences namely natural intelligence, intrapersonal intelligence, interpersonal intelligence, logical intelligence, verbal intelligence

were significantly associated with reflective teaching. These findings are consistent with the findings of previous studies (Ghamrawi, 2014; Mousapour & Khorram, 2015; Serin, Serin, Yavuz & Muhammedzade, 2009; Shatalebi, Sharifi, & Javadi, 2011) who concluded that there is a significant relationship between multiple intelligence and language teaching style and classroom practice.

In conclusion, reflective teaching and multiple intelligence are two important concepts which are considerably related to language teaching. So, teachers should use their intelligence to attain good status in their reflectivity in teaching. Reflective teaching can affect students' learning negatively or positively depending on the strength of teachers' reflectivity in teaching. Therefore, reflective teaching is essential for teachers and will influence on their performance.

The findings of this study may be useful for EFL institutes managers, education authorities, and teachers around the world. It was found that teachers' multiple intelligence ability has a relationship with reflective teaching which helps EFL teachers to use the most appropriate teaching styles in their classroom. This study encourages education authorities and EFL institutes managers to consider the multiple intelligence as an effective element for teachers' success. In other words, this research highlights the points to way of teaching and learning foreign language in various countries to be useful as an international procedure.

In this study, the relationship between reflective teaching and multiple intelligence was taken as the main feature for analysis. Further research could include the relationship between reflective teaching and other personal characteristics of teachers. This study was conducted on 80 Iranian EFL teachers who were selected by convenience sampling. The researcher suggests that this study can be replicated using a larger number of participants with random sampling.

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