

## COMPARING AND CONTRASTING THE INTERACTIONAL PERFORMANCE OF TEACHERS AND STUDENTS IN TRADITIONAL AND VIRTUAL CLASSROOMS OF ADVANCED WRITING COURSE IN DISTANCE EDUCATION UNIVERSITY

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### ABSTRACT

Since interaction provides the opportunity for students to share their ideas, thoughts, comments and feelings with their peers and teacher, it can be claimed that it is an integral component of learning. The present study applied the Sinclair and Coulthard's interaction (IRF) (1975) model on the English learners of two traditional and virtual classes in order to investigate the differences between their writing scores in these two classes on the one hand, and the extent to which the IRF structure occurs in these two classes on the other hand. For this purpose, 79 and 20 intermediate level EFL learners were selected from the virtual and traditional classes of Payame Noor University (PNU). They were given the pre-test at the beginning and post-test after eight sessions of the same treatment in both classes by the same instructor. Their pre- and post-test scores were compared. The results indicated that there was a significant difference between the participants' post-test scores in two classes in terms of three components of the intended six components of the five-paragraph essay. This study concluded that the participants in the virtual class performed better than their peers in the traditional one. Moreover, the number of interactions between the participants and teacher was more in the virtual class. Since the effect of interaction between the students and teacher on better performance and learning was shown in this study, other teachers can take into consideration the importance of interaction as well as technology for better teaching-learning process.

**Keywords:** Discourse analysis, interaction, IRF, traditional class, virtual class.

## INTRODUCTION

Since interaction is defined as a mutual action or influence, it can play a significant role in increasing the quality of learning because better learning entails a collaborative activity between the teacher and students (Curtis & Lawson, 2001). By interaction it is meant the way in which language is used by teachers and students in the classrooms (Sinclair & Brazil, 1982). A complex relationship is observed between language, interaction, and learning. Since language carries out the meaning, interaction is crucial to learning (Lee, 2011). Interaction provides the opportunity for students to share their ideas, thoughts, comments and feelings with their peers and teacher (Yanfen & Yuqin, 2010). It can be claimed that the integral component of learning is interaction. An effective learning is the result of interaction between teachers and students. A typical pattern for classroom discourse in the classroom is developed by Sinclair and Coulthard (1975) which consists of three moves: teacher initiation (I), student response (R), and teacher feedback (F). Language in the classroom is analyzed by this structured sequence: the teacher asks a question, the student responds, and the teacher gives feedback to the student (White, 2003). Therefore, this kind of teacher-student interaction helps the process of learning and classroom discourse, because interaction between the teacher and students facilitates learning for the students and makes the materials easier for them to understand (Lee, 2011). This pattern allows a teacher to elicit information from students and to decide about turn-taking as well as to encourage them to get involved in the classroom (Bandzeladze, 2014). The teacher can have more successful teaching using this typical structure of classroom discourse (Walsh, 2011). The teachers' question makes the students pay attention to the class, think, and answer. Therefore, this exchange of thoughts has a positive effect on students' learning (Graesser, Gernsbacher, & Goldman, 2003).

One of the major responsibilities of a teacher is to become familiar with the interactional processes in order to make clear the goal of learning for students and prevent misunderstanding (Bandzeladze, 2014). Given the fundamental role of a teacher in providing a social environment to encourage students to interact with each other, they will find learning as a social process rather than an individual one. "The most efficient way of learning is for a student to be really involved in a lesson" (Scrivener, 2014, p.59).

On the other hand, the technology has incredibly developed in the last ten years. Today, the development of technology has changed the environment of teaching and learning and created the new types of learning and teaching. Internet has transformed the shape of various aspects of life such as online-education (Warschauer, 2000). Learner-learner and learner-teacher interactions will be greatly increased using the Internet (Salaberry, 2001). According to Grgurovic (2010), technology is widely used in all areas of life including educational setting. Virtual classroom can be considered as one of the products of technology. Li and Irby (2008) believe that students tend to participate in online class more than traditional one due to some factors such as distance universities and difficulties of travel and cost. Online interactions keep students more engaged and enhance their ability to understand the materials easier and faster (Gotsiridze, 2014). Since more interaction takes place in online class, students will be more engaged in online class than traditional one and they have a better performance and learning in online class than traditional one (Riffel & Sibley, 2005). Mercer (as cited in Cengiz & Cakir, 2016) states that learning progress is due to the high interactive activity in online classes.

Virtual classroom as a new way of educating students has recently absorbed the attention of researchers. This type of class which has been employed in Iranian universities, especially Distance University of Payame Noor (PNU), has rarely been investigated and compared with that of traditional classrooms. As far as the researcher is concerned, no study has investigated the IRF model in these two types of classes in EFL context for general and distance universities for specific. With respect to the mentioned purposes of the present study the following research questions were formulated:

1. Is there any significant difference between the participants' scores in terms of six components of essays (e.g. *introduction, topic sentence, thesis statement, Blueprints, Body Paragraphs, and Conclusion*) on Advanced Writing Course in traditional and online classes?
2. Is there any statistically significant difference between the interaction performance (IRF) of the instructor and the participants in traditional and online classes?

## LITERATURE REVIEW

Sinclair and Coulthard's model (1975) has been investigated by many researchers. For example, Atkins (2001) studied the effectiveness of this model in one-to-one classroom and concluded that using the model can be an effective activity for teachers who want to understand their students better in the classes they teach in. Similarly, White (2003) applies the Sinclair and Coulthard's model to explain teacher-student talk and states that teachers who are going to understand better the classroom discourse can improve their explicit teaching by increasing their own awareness of teacher feedback.

Since, some studies (e.g. Cazden, 2001; Ellis, 1994; Kasper, 2006) have shown that IRF sequence is not an enough flexible interaction and also it does not provide enough opportunities for learning and participation, Marzban, Yaqubi, and Qalandari (2010) tried to present a modified version of IRF sequences which is called ISRF (initiation, struggle, response, and feedback) sequences. In fact, they indicate that there is negative relationship between ISRF sequence and learning opportunities. The results indicate that the students do not have even response turn, both the initiation and response moves are assigned to the teacher. Therefore, it can be said that ISRF sequences deprive students of learning/participation opportunities. In a similar study, Laferrier and Lamon (2010) investigated types of questions asked by their students and showed that their observed discourse was in contrast with the IRF structure and the discourse pattern of their observation was IRFI (initiation, response, feedback/further inquiry).

Also, Brown (2010) compared an inexperienced teacher with an experienced one in order to see the difference between two classrooms with regards to the presence of exchange structure. His results demonstrate that discourse of modern classroom cannot be explained only by the exchange structure developed by Sinclair and Coulthard in 1975. Similarly, Cockayne, (2010) stated that applying the original IRF model of Sinclair and Coulthard (1975) is very problematic but the model is very flexible and adaptable in EFL classes. Likewise, Xin, Luzheng, and Biru (2011) suggest that teachers of the EFL classrooms should replace IRF structure with more complex structures to improve their students' negotiation skills. Similarly, Haradasht and Aidinlou (2016) found that complex structures of IRF such as IR1F1R2F2 were used in their classes and observed that teacher talk exceeds students talk.

Moreover, Nicholson (2014) investigates the application of the model in detail at three levels; i.e., exchange, move, and act and finds out that this kind of analysis is useful because it provides the teacher with a deep understanding of the choices he/she makes as well as the manner in which these choices affect communication in the class. In the most recent study, Ginting (2017) analyzed the types of opening moves used by the teacher based on Sinclair and Coulthard's model (1975). The result of the study shows that the teacher used all of the types of opening moves but elicit move appeared dominantly in the classroom interaction.

As mentioned above, there are a lot of researchers who have investigated the Sinclair and Coulthard' IRF model in some contexts. According to the above explanations which refer to the conducted studies on the IRF model, it can be said that this model has not been investigated in virtual space (LMS) so far. This study attempted to investigate the effect of the presence of IRF in virtual classroom on the students' writing progress in Advanced Writing Course as well as to investigate the difference between IRF in traditional and online classes.

## METHODOLOGY

### Design of the Study

This study was a quasi-experimental study which aimed at investigating any probable impact of IRF on advanced EFL learners' writing ability. In so doing, qualitative and quantitative methods of data collection and analysis were employed. The independent variable was teaching and dependent variable was their interaction in the class.

## Participants

There were two kinds of participants in this study, those who participated in the class and those who were enrolled as virtual ones. Traditional classes were consisted of about 40 EFL learners from Mobarakeh PNU and the virtual ones were 104 EFL learners from Ghotbe Gilan University (LMS). The participants were both female and male EFL learners. In order to determine the participants' homogeneity, they were given Oxford Placement Test. In fact, totally 20 participants from the traditional class and 79 participants from the virtual class were selected after administration of the homogenizing test. The criterion for selection of the samples was the mean and the standard deviation of the scores. The scores between one standard deviation above and below the mean score were selected.

## Instruments

The data collection procedure of this study was done by making use of the following instruments:

### Pre-Test and Post-Test Essay Writing

In order to determine the participants' writing skill and to measure their possible improvement before and after receiving the treatment sessions, the members of the two groups were given a writing test at the beginning and at the end of the course. The topic of the writing test was chosen under the supervision of the experts in the field, and the scoring procedure was done by two experts. Two different professors checked the students' writings in order to observe the reliability of the study. "Difference between traditional and virtual classes" was the topic of the pre-test, and "the difference between technology based classes and non-technology ones" was the topic of the post-test.

### Oxford Placement Test

In order to make the students homogenized, Oxford Placement Test was taken as the homogenizing test. This test comprised of 60 questions in two parts; part one included 40 questions and part two included 20 questions.

## Procedure

The present study was conducted at two branches of PNU, one traditional distance university and the other virtual one. As mentioned before, about 20 EFL learners from traditional classes were considered as the participants of this study. On the other hand, 79 EFL learners from the virtual university were considered as the participants too. Next, in order to investigate the participants' writing ability, all of the participants were given a writing test as a pre-test. In the next phase of the study, the participants of both traditional and virtual classes attended eight sessions over 4-weeks period. It should be mentioned that the treatment was the same in both traditional and virtual classes by the same instructor. The method of teaching was in the traditional way using PowerPoint in both two groups; so that, the instructor taught the structure of essay writing according to the book "The Practical Writer with Readings by Bailey and Powell (seventh edition)". Moreover, four types of essays, namely Cause and Effect, Comparison and Contrast, Classification, and Procedure were taught to the students. After explaining the materials to the students, they were asked to do their assignments for the following session.

In order to analyze the participants' writings, they were asked to write about the difference between traditional and virtual classes as the topic for the pre-test and to write about the difference between technology based classes and non-technology ones for the post-test. The structure of five-paragraphs essay (Introduction, Topic sentence, Thesis statement, Blueprints, Body paragraphs, and Conclusion) were investigated and analyzed in their writings by two separate professors; so that, the participants' writings were given to both separate professors to be corrected because of reliability. In fact, observing reliability was the reason for analyzing the students' writings by two separate professors. It is noteworthy that the only thing which is considered and analyzed in their writings was the structure of the essay; while, grammar and spelling were not checked at

all. For the traditional classroom, an audio-recorder was used, but the virtual classroom was video-recorded because the interactions of the participants and the instructor occurred through writing to each other on a Forum. Finally, after the treatment sessions, another writing test as a post-test was administered among the participants of both traditional and virtual classes to evaluate their probable improvement due to the use of IRF structure; i.e., the instructor initiated a question, then the participants responded to the question, and finally feedback was given to the students' response, was compared between these two groups in order to find out whether IRF has any effect on the participants' writing progress in Advanced Writing Course due to the same and equal treatment between both two groups or not.

## Data Analysis

To answer the research question, the recorded data was transcribed, content-analyzed and frequency-analyzed based on the IRF model to see whether there is any difference between traditional and virtual classrooms with regard to the structure of the essay.

## RESULTS

### Testing Normality of Data

The normality of data was established via employment of Skewness and Kurtosis formula. Since the absolute values of the ratios of skewness and kurtosis over their standard errors were greater than 1.96, it was claimed that the assumption of normality was not retained.

### Inter-Rater Reliability; Pretest and Posttest of Writing

The participants' performance on the pretest and posttest of writing the components of essays were rated by two raters. Pearson correlations were run to probe their inter-rater reliability. Based on the results it was concluded that there were significant agreements between the two raters on pretest ( $r(118) = .871$  representing a large effect size,  $p < .05$ ) and posttest ( $r(118) = .837$  representing a large effect size,  $p < .05$ ) of writing the components of an essay. During rating the writings, the raters put focus on the structure of five-paragraphs essay (Introduction, Topic sentence, Thesis statement, Blueprints, Body paragraphs, and Conclusion) leaving out other parts of the writing. As a result, they only rated the six components of an essay based on whether they were used correctly and appropriately or not.

In this study, sign test was applied in order to separately compare pre- and post-tests of each group; i.e., pre- and post-tests of traditional class and virtual one. Then, Mann-Whitney Test was used to compare pre- and post-tests between two groups using SPSS version 20. Then, the frequency and percentage of the IRF structure was calculated in 8 sessions of each class, i.e., traditional and virtual.

In order to examine the differences between the pre- and post-test scores of the traditional participants' essay writing, six components of essays namely; *Introduction*, *Topic Sentence*, *Thesis Statement*, *Blueprints*, *Body Paragraphs*, and *Conclusion* were investigated.

**Table 1.** Frequencies

		N
Post statement – pre statement	Negative Differences	0 <sup>a</sup>
	Positive Differences	10 <sup>b</sup>
	Ties	10 <sup>c</sup>
	Total	20
Post blueprint – pre blueprints	Negative Differences	0 <sup>d</sup>
	Positive Differences	9 <sup>e</sup>
	Ties	11 <sup>f</sup>
Post body paragraphs – pre body paragraphs	Total	20
	Negative Differences	0 <sup>g</sup>
	Positive Differences	1 <sup>h</sup>
Post conclusion – pre conclusion	Ties	19 <sup>i</sup>
	Total	20
	Negative Differences	0 <sup>j</sup>
Post introduction – pre introduction	Positive Differences	4 <sup>k</sup>
	Ties	16 <sup>l</sup>
	Total	20
Post topic – per topic	Negative Differences	0 <sup>m</sup>
	Positive Differences	1 <sup>n</sup>
	Ties	19 <sup>o</sup>
	Total	20
	Negative Differences	0 <sup>p</sup>
	Positive Differences	10 <sup>q</sup>
	Ties	10 <sup>r</sup>
	Total	20

  

a. post statement < pre statement	j. post conclusion < pre conclusion
b. post statement > pre statement	k. post conclusion > pre conclusion
c. post statement = pre statement	l. post conclusion = pre conclusion
d. post blueprint < pre blueprints	m. post introduction < pre introduction
e. post blueprint > pre blueprints	n. post introduction > pre introduction
f. post blueprint = pre blueprints	o. post introduction = pre introduction
g. post body paragraphs < pre body paragraphs	p. post topic < per topic
h. post body paragraphs > pre body paragraphs	q. post topic > per topic
i. post body paragraphs = pre body paragraphs	r. post topic = per topic

**Table 2.** Comparing Pre- and Post-tests of the Traditional Class

Test Statistics <sup>a</sup>						
	Post statement – pre statement	Post blueprint – pre blueprints	Post body paragraphs – pre body paragraphs	Post conclusion – pre conclusion	post introduction – pre introduction	Post topic – per topic
Sig. (2-tailed)	.002	.003	.317	.046	.317	.002

According to Table 1, there is a significant difference between the pre- and post-test scores of the participants' writing in terms of four components of essay such as *thesis statement*, *blueprints*, *topic sentence* and *conclusion*. Because the significance level is less than .05. But as Table 1 shows, there is no significant difference between the pre- and post-test scores of the traditional participants' components of essay writing such as *body Paragraphs and introduction*, because the significance level (0.317) is greater than 0.05%

## Comparing Pre- and Post-tests of the Virtual Cass

**Table 3.** Frequencies

		N
Post statement – pre statement	Negative Differences	0 <sup>a</sup>
	Positive Differences	60 <sup>b</sup>
	Ties	19 <sup>c</sup>
	Total	79
Post blueprint – pre blueprints	Negative Differences	0 <sup>d</sup>
	Positive Differences	56 <sup>e</sup>
	Ties	23 <sup>f</sup>
	Total	79
Post body paragraphs – pre body paragraphs	Negative Differences	0 <sup>g</sup>
	Positive Differences	0 <sup>h</sup>
	Ties	79 <sup>i</sup>
	Total	79
Post conclusion – pre conclusion	Negative Differences	0 <sup>j</sup>
	Positive Differences	8 <sup>k</sup>
	Ties	71 <sup>l</sup>
	Total	79
Post introduction – pre introduction	Negative Differences	0 <sup>m</sup>
	Positive Differences	7 <sup>n</sup>
	Ties	72 <sup>o</sup>
	Total	79
Post topic – per topic	Negative Differences	4 <sup>p</sup>
	Positive Differences	74 <sup>q</sup>
	Ties	1 <sup>r</sup>
	Total	79

- |   |   |
|---|---|
| a. post statement < pre statement             | j. post conclusion < pre conclusion     |
| b. post statement > pre statement             | k. post conclusion > pre conclusion     |
| c. post statement = pre statement             | l. post conclusion = pre conclusion     |
| d. post blueprint < pre blueprints            | m. post introduction < pre introduction |
| e. post blueprint > pre blueprints            | n. post introduction > pre introduction |
| f. post blueprint = pre blueprints            | o. post introduction = pre introduction |
| g. post body paragraphs < pre body paragraphs | p. post topic < per topic               |
| h. post body paragraphs > pre body paragraphs | q. post topic > per topic               |
| i. post body paragraphs = pre body paragraphs | r. post topic = per topic               |

**Table 4.** Comparing Pre- and Post-tests of the Traditional Class

Test Statistics <sup>a</sup>						
	Post statement – pre statement	Post blueprint – pre blueprints	Post body paragraphs – pre body paragraphs	Post conclusion – pre conclusion	post introduction – pre introduction	Post topic – per topic
Sig. (2-tailed)	.000	.000	1.000	.008	.016	.000

According to Table 4, there is a significant difference between the pre- and post-test scores of the components of an essay in terms of *thesis statement*, *blueprints*, *conclusion*, *Introduction*, and *topic sentence* in the virtual class as the significance levels are less than 0.05. Regarding the pre- and post-test scores of writing *body paragraphs*, the significance level (1.000) is greater than 0.05%, so there is no significant difference between the pre and posttests.

### Comparing Pre-tests of the Traditional Class and the Virtual One

In order to examine the differences between the pre-test scores of six components of the structure of the essay writing, namely *introduction*, *topic sentence*, *thesis statement*, *blueprints*, *body paragraphs*, and *conclusion* in traditional class and the virtual one, Mann-Whitney Test was used.

**Table 5.** Differences between the Two Groups

	g	N	Mean Rank	Sum of Differences
Pre statement	1.00	20	50.00	1000.00
	2.00	79	50.00	3950.00
	Total	99		
Pre blueprints	1.00	20	50.00	1000.00
	2.00	79	50.00	3950.00
	Total	99		
Pre body paragraphs	1.00	20	48.05	961.00
	2.00	79	50.49	3989.00
	Total	99		
Pre conclusion	1.00	20	53.23	1064.50
	2.00	79	49.18	3885.50
	Total	99		
Pre introduction	1.00	20	47.58	951.50
	2.00	79	50.61	3998.50
	Total	99		
Per topic	1.00	20	49.98	999.50
	2.00	79	50.01	3950.50
	Total	99		

**Table 6.** Mann-Whitney Test

	Test Statistics <sup>a</sup>					
	Pre statement	Pre blueprints	Pre body paragraphs	Pre conclusion	Pre introduction	Per topic
Mann-Whitney U	790.000	790.000	751.000	725.500	741.500	789.500
Wilcoxon W	3950.000	3950.000	961.000	3885.500	951.500	999.500
Z	.000	.000	-.822	-.649	-.810	-.011
Asymp. Sig. (2-tailed)	1.000	1.000	.411	.516	.418	.991

a. Grouping Variable: g

According to the Table 5 and 6, since the significance level is greater than 0.05% for all components, it can be said that there is no significant difference between the pre-test scores of *introduction*, *topic sentence*, *thesis statement*, *blueprints*, *body paragraphs*, and *conclusion* in the traditional class and the virtual one.

## Comparing Post-tests of the Traditional Cass and the Virtual One

**Table 7.** Differences between the Two Groups

	g	N	Mean Rank	Sum of Differences
Post statement	1.00	20	39.75	795.00
	2.00	79	52.59	4155.00
	Total	99		
Post blueprint	1.00	20	39.78	795.50
	2.00	79	52.59	4154.50
	Total	99		
Post body paragraphs	1.00	20	50.03	1000.50
	2.00	79	49.99	3949.50
	Total	99		
Post conclusion	1.00	20	57.13	1142.50
	2.00	79	48.20	3807.50
	Total	99		
Post introduction	1.00	20	46.05	921.00
	2.00	79	51.00	4029.00
	Total	99		
Post topic	1.00	20	34.73	694.50
	2.00	79	53.87	4255.50
	Total	99		

**Table 8.** Mann-Whitney Test,

Test Statistics <sup>a</sup>						
	Post statement	Post blueprint	Post body paragraphs	Post conclusion	Post introduction	Post topic
Mann-Whitney U	585.000	585.500	789.500	647.500	711.000	484.500
Wilcoxon W	795.000	795.500	3949.500	3807.500	921.000	694.500
Z	-2.266	-2.167	-.011	-1.467	-2.825	-4.411
Asymp. Sig. (2-tailed)	.023	.030	.991	.142	.115	.000

a. Grouping Variable: g

According to the Table 7 and 8, it can be said that there is a significant difference between the post-test scores of three components, i.e., *thesis statement*, *blueprints*, and *topic sentence*, in the traditional class and the virtual one. Because the significance level is 0.023, 0.030, and 0.000 for *thesis statement*, *blueprints*, and *topic sentence*, respectively and less than 0.05. Regarding the other three components, there is no significant difference between the post-test scores of *body paragraphs*, *conclusion*, and *introduction* in the traditional class and the virtual one, because the significance level is 0.991, 0.142, and 0.115 for *body paragraphs*, *conclusion*, and *introduction*, respectively and greater than 0.05%

Comparing the Frequency and Percentage of the IRF Structure in the Traditional Class and the Virtual One

**Table 9.** The Frequency and Percentage of the IRF Structure in Different Sessions of the Traditional Class

Discourse element	1 <sup>st</sup> session		2 <sup>nd</sup> session		3 <sup>rd</sup> session		4 <sup>th</sup> session		5 <sup>th</sup> session		6 <sup>th</sup> session		7 <sup>th</sup> session		8 <sup>th</sup> session	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
I	17	0/22	21	0/23	33	0/24	20	0/23	23	0/22	14	0/20	14	0/14	30	0/23
R	45	0/56	52	0/55	75	0/54	39	0/46	51	0/50	41	0/59	71	0/72	70	0/54
F	17	0/22	20	0/22	30	0/22	26	0/31	28	0/28	15	0/21	14	0/14	30	0/23
IRF	79		93		138		85		102		70		99		130	

Table 9 shows the frequency and percentage of each element of discourse, i.e., Initiation (I), Response (R), and Follow-up (F) in each session of the traditional class. The frequency of IRF in the traditional class indicates that the interaction between the professor and participants in the traditional class is less than the virtual one.

**Table 10.** The Frequency and Percentage of the IRF Structure in Different Sessions of the Virtual Class

Discourse element	1 <sup>st</sup> session		2 <sup>nd</sup> session		3 <sup>rd</sup> session		4 <sup>th</sup> session		5 <sup>th</sup> session		6 <sup>th</sup> session		7 <sup>th</sup> session		8 <sup>th</sup> session	
	f	%	f	%	f	%	f	%	f	%	f	%	f	%	f	%
I	19	0/22	22	0/22	33	0/21	23	0/25	26	0/23	16	0/21	16	0/14	35	0/24
R	49	0/56	55	0/56	79	0/58	42	0/46	57	0/50	46	0/58	78	0/70	75	0/52
F	19	0/22	22	0/22	33	0/21	27	0/29	30	0/27	16	0/21	18	0/16	35	0/24
IRF	87		99		154		92		113		78		112		145	

The frequency and percentage of each discourse element (IRF) in the virtual class is presented in Table 10. According to the table above, total number of IRF occurred in this class reveals that this pattern is more frequent in the virtual class.

## DISCUSSION

### Analysis of the Pre- and Post-tests

Regarding the first research question of the present study which sought to investigate the difference between the participants' scores on Advanced Writing Course in the traditional and online classes, six components of the five-paragraph essay (Introduction, Topic Sentence, Thesis Statement, Blueprints, Body Paragraphs, and Conclusion) were separately investigated in both the traditional and online classes, and the pre- and post-test scores of each component was obtained which the results are illustrated as follows.

The participants of both groups, i.e., the traditional and the virtual classes were not able to write *thesis statement* and *blueprints* in terms of the pre-test. Therefore, both groups didn't know how to write these two components of the five-paragraph essay and were the same regarding the pre-test. Besides, they were in the same level of knowing how to write other four components of the five-paragraph essay, i.e., *introduction*, *topic sentence*, *body paragraphs*, and *conclusion* in terms of the pre-test.

Since the mean of the post-test scores of *thesis statement*, *blueprints*, and *topic sentence* in the virtual class is higher than the traditional one, it can be concluded that the participants of the virtual class have improved

in writing three components of the six intended components of the five-paragraph essay. But there is no significant difference between the two groups in terms of the other three components, i.e., *introduction, body paragraphs, and conclusion*.

The comparison of the students' post-test scores in two groups showed the outperformance of the students in the virtual class in terms of three components, namely *thesis statement, blueprints, and topic sentence*. They performed better on writing three components of the five-paragraph essay than their peers in the traditional class. Because they were almost actively present in the virtual class, but the students usually were not present and participated in the traditional class. As a result, the participants in the virtual class were taught and learned how to write a five-paragraph essay as well as corrected their mistakes on their assignments on each session for the sake of being present in the class. On the contrary, the participants' writings in the traditional class were not improved because of their less participation and presence in the class. According to the participants' progress in terms of three components in the virtual class, it can be claimed that online interaction led to improvement of the quality of learning in such a class. The participants' more opportunity to participate and interact with the teacher and their peers was the main reason for this improvement.

As mentioned before, a large number of studies have been conducted to investigate the effectiveness of this structure in various contexts. Regarding the role of feedback by the teacher to the students in better learning, our finding is somehow in line with the finding of White (2003) who applied the Sinclair and Coulthard' model (1975) to explain teacher-student talk, and found that the role of feedback is effective in learning and the teachers can better understand classroom discourse by increasing their awareness of teacher feedback.

The finding of the current study opposed the result of Cazden (2001); Ellis (1994); Kasper (2006) who claimed that IRF sequence is not enough flexible interaction in addition to providing limited learning/participation opportunities. In other words, our findings are completely different from the findings of their study.

The obtained result is inconsistent with the finding of Marzban et al. (2010) who focused on the modified version of IRF sequences which is called ISRF (initiation, struggle, response, and feedback) sequences. He concluded that ISRF sequences deprive students of learning/participation opportunities because both the initiation and response moves are assigned to the teacher and the students do not have even response turn.

The findings of Laferrier and Lamon (2010) do not confirm the findings of this study which considers IRF appropriate in all situations. Because they believed that there is difference between knowledge building discourse and typical classroom discourse, and concluded that the kind of student discourse is in contrast with the IRF structure.

Our finding is in line with the finding of Nicholson (2014) who investigated the application of Sinclair and Coulthard' model (1975) and found that this kind of analysis is useful because it provides the teacher with a deep understanding of the choices he/she makes as well as the manner in which these choices affect communication in the class.

Our results do not support the result of Brown (2010) who concluded that discourse of modern classroom cannot be explained only by the exchange structure developed by Sinclair and Coulthard (1975); while, our finding demonstrate that their model is currently appropriate for the classes.

## **Analysis of IRF**

According to the second research question of this study which investigated whether there is any statistically significant difference between IRF in the traditional and online classes on Advanced Writing Course, analyzing the frequency and percentage of total number of IRF occurred in the traditional and the virtual classes revealed that IRF was more frequent in the virtual class and occurred in this class more than the traditional one. There were more tendencies to participate in such kind of class because there was no limitation for them to participate in the virtual class. It was possible for them to easily connect to LMS everywhere. It can be claimed that due to the more participation in this class, there was more tendency to interact and learn better in such classes than the traditional one. The results indicated that the participants were more willing to interact with their teacher and other participants. This kind of teaching-learning space provided more opportunity for interaction between the professor and participants. It can be concluded that the attractive nature of this space allowed them to bravely and enthusiastically negotiate with the professor

and even give feedback to the answers of their peers due to not being face to face interaction; while, this energy and interaction was less observed in the traditional class. On the contrary, the space of the traditional class was not very comfortable for the participants in order to not to be ashamed of producing incorrect answers. They usually did not dare to make the wrong answer without any fear in the traditional class, but they easily answered the questions in the virtual class, whether correct or not.

In the traditional class, it was the professor who asked a question and initiated the interaction not the participants (135 vs. 55). They usually answered the questions posed by the professor and there were very few situations in which the participants initiated (55 cases of 190 situations in 8 sessions). However, this small number of initiation by the participants in the virtual class (55 cases) was more than the traditional one (24 cases). Our finding is in line with the finding of Ginting (2017) who found that the elicit move appeared dominantly in the classroom interaction.

## CONCLUSION

The present study attempted to compare the participants' writing scores in terms of six components of the five-paragraph essay as well as to compare the extent to which IRF structure occurs in two traditional and virtual classes.

According to the above-mentioned findings of this study, LMS (the virtual class) had a positive effect on the improvement of three components of the five-paragraph essay. Due to the significant difference between the participants in the virtual class and their peers who were taught in the traditional one, it can be claimed that LMS is currently considered as an effective method of teaching by providing the required opportunities to interaction and challenge for better learning. As the findings demonstrate, teaching through new technologies such as LMS leads to better performance and improvement of EFL learners. It cannot be denied that currently, there are more tendencies among the participants to distance learning than the traditional learning.

As the benefits of online education, it can be stated that it is possible for everyone to access LMS everywhere (at home or even at work) without wasting time, money, or energy for going to the university. The only thing which is required for online learning is a computer and internet. Moreover, a large number of studies have proved that the quality of learning is more in such environment. The results referred to this point that learning the content just through listening to the teacher is not enough without any actively participation. In fact, the participants need to have an appropriate atmosphere with enough opportunities to ask and answer as well as receive the necessary feedback from the teacher in order to learn effectively. According to the higher number of IRF and the online participants' higher score on three components of the five-paragraph essay, it can be concluded that the participants who were taught through LMS could make a greater progress than their peers in the other group, i.e., the traditional class.

## LIMITATIONS AND SUGGESTIONS

Like other studies, this study had also some limitations. The most important limitation that suffered the students during participating in online class was that some students couldn't connect to the LMS system on time, the problem was sometimes related to the internet that was disconnect or was related to the low speed of the internet. In addition to the inevitable problems with the internet, sometimes the students had some LMS-related problems which should be resolved by the university. These similar problems related to the lack of timely access to the online classes were only resolved by recording the classes on the LMS system in order to make the students be able to listen to the classes at any time possible for them.

As another limitation of this study, it was not easily possible for the professor to check the students' presence or absence, because the number of students became low or high at any moment without any supervision by anyone. Unlike the traditional class which the students are in front of the professor and under the supervision of her/him, the professor doesn't have enough control on the students in online class and this leads to a kind of chaos in such classes. In order to prevent this kind of arbitrary behavior of the students in online class, a relatively easy question was asked in different times of each session of the class and a part of mid-term score was assigned to it just to make the students to participate in the class regularly.

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