

## **Comparing Learners' Interactions in Conventional and Virtual Classes of Distance Education University: Examining Two Approaches of Teaching Grammar \***

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### **Abstract**

Collaborative technologies provide opportunities for English foreign language learners (EFL) to have interactive learning and access to online interactive environments. Interactions which takes place between teachers and their students in a classroom context affect learners' language learning. As such, this research compared interactions between the instructor and her students and between students themselves that took place in conventional and Learning Management Systems (LMS) classes. Second, two different approaches of teaching grammar (implicit and explicit) in conventional and LMS classes were examined. The participants of this study were selected from 94 students of EFL freshmen at two groups of different teaching classes namely, virtual and conventional classes. Having administered a test of homogeneity, the researcher selected 60 learners. They were assigned into four groups, two experimental and two comparative groups. After the treatment, the results of the pre-and post-tests confirmed the positive effect of teaching grammar both explicitly and implicitly in LMS classes. In addition, examination of interaction patterns revealed that teaching through LMS was student-centered and dynamic in contradiction with the comparative groups. The study can help instructors understand the prospective benefits of teaching on LMS and also improve social interactions among uncommunicative students.

**Key words:** *Classroom discourse, E-learning, Explicit instruction, Implicit instruction, IRF, Learning Management System (LMS).*

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## 1. Introduction

Today, the recent developments of technology have caused changes in the quality of education in general and English foreign language (EFL) learning in particular. The generation of learners who have born and lived with digital technology have brought significantly new types of learning contexts and novel approaches to learning. Khodabandeh (2020) declared that technology is being widely used in all aspects of life including educational aspect and have led to changes in learning forms from traditional classroom learning contexts (T-learning) to new forms of learning contexts such as E-learning, virtual and on-line classrooms. According to Barboux (2006) in order to meet the expectations and needs of new generation of learners, teachers in all fields of study including second language learning should transfer the teaching methods and techniques of T-learning contexts to the new E-learning contexts. E-learning is a general term which is used to refer to computer-based learning and aims to exploit web-based technology to improve learning for students (Jones, 2003). With its features of convenience and easy accessibility, E-learning can simply be viewed as “online access to learning resources, anywhere and anytime” (Holmes & Gardner, 2006).

What makes E-learning such a powerful tool in education is a question which has been under investigations by many researchers (Asadi et al., 2019). Warschauer (2000) argued that interaction in online settings motivates students because they do not have concerns about their errors which occur in conventional classes. The collaborative working of learners in online courses is more than face-to-face classes (Arabloo et al., 2020; Heidari et al., 2018). In E-learning courses, students are satisfied from their course as their interactions in the class increase (Naseri & Khodabandeh, 2019). Some studies suggest that online interaction among students and their teacher encourage participants to join discussions (Smith & Hardaker, 2000, Alian et al, 2017). On the contrary, Vonderwell (2003) mentions in his research that one of the demerits of E-learning is lack of interaction between the instructor and the participants. Likewise, Woods (2002) found out that

students feel isolated from their classmates and their teacher in E-learning courses. In a similar vein, Levin, Kim, and Riel's (1990) study revealed the paucity of the instances of the IRF pattern in online classes.

Considering the fact that language carries out meaning, interaction is a crucial factor for language teaching and learning (Lee, 2011) and admittedly, its importance is acknowledged in T-learning classes (e.g., Ellis, 1994; Hellermann, 2003). For example, Behtash and Azarnia (2015) reveal that most interactions in English classes are dominated by teachers and follow a tripartite pattern (Gharbavi & Irvani, 2014) which is known as IRF; teacher initiation (I), student response (R) and teacher feedback/comment (F) (Sinclair & Coulthard, 1975). In most EFL classes, collaborative /cooperative learning (CL) (Vygotsky, 1978), active participation and dynamic interaction (Lee, 2011) are emphasized. E-learning classes like T-learning ones have achieved a dominant role for education and entertainment as they facilitate discussion and interaction (Khodabandeh, 2018), so special attention should be given to interactions among students with their teacher and peers in such environments (Kumari, 2001). As such, Learning Management System (LMS) classes as one type of E-learning context which are used by Payame Noor University (PNU) were chosen in the current study to compare EFL students' interactions within conventional and LMS groups based on the classroom interaction pattern of IRF, and examine the efficiency of explicit and implicit methods of grammar teaching within the intended two instructional environments. In order to complete the previous studies, the following research questions were studied in this research:

1. Are there any significant differences between the participants' interactions enrolled in the LMS classes compared to the participants enrolled in the T-learning ones?
2. Are there any significant differences between the effects of implicit grammar and explicit grammar instructions on the participants' achievement of grammar in the LMS classes compared to the participants enrolled in the T-learning ones?

## 2. Literature Review

Social interaction plays a key role in building knowledge and improving skills of EFL students in T-learning context (Walsh, 2011), in other words, communication and interaction are determining factors of successful language learning (Domalewska, 2015). There has been a growing interest in investigating classroom interactions from various perspectives in T-learning contexts, such as the feature of codeswitching (e.g. Hobbs et al, 2010), the mechanism of repair (e.g. Hellermann, 2009; Hosoda, 2006), probing questions (e.g. Oberli, 2003; Suter, 2001), turn taking (e.g. Fasel Lauzon & Berger, 2015), and the interaction pattern of IRF (e.g. Masjedi & Tabatabaei, 2018; Rashidi, & Rafieerad, 2010; Rustandi, 2017). According to Candela (1999), the IRF structure enables teachers to control their classroom discourse. Teacher's role within the IRE structure is to control and sanction the amount and type of the classroom interactions (Hall & Walsh, 2002). Farahian and Rezaee (2012) revealed that about 70 percent of classroom interactions between teachers and their students are allotted to teachers, in other words, most interactions in the EFL classes are dominated by teachers (Rodríguez & Arellano, 2018). On the contrary, Rustandi and Mubarak (2017) showed that EFL learners' responses dominantly occurred in EFL speaking classes. Likewise, Hitotuzi (2005) confirmed that learners' participation plays a crucial role in their learning process and controls most of the discussions. Moreover, Banafshi, et al. (2020) and Asadiet al. (2019) confirmed that online participants have more participation and interaction than their peers in T-learning group. Similarly, Masjedi and Tabatabaei (2018) and Sari (2019) state that most classes are not dominated by teachers and most students actively participate in classroom interactions.

Despite such strong claims for E-learning courses, there have been few studies which have concentrated on exploring interactions between students and teachers in virtual or online classrooms (Banafshi et al., 2020). So, this study aims to explore on the IRF pattern within LMS in comparison to conventional face to face classes.

## 2.2. Grammar Instruction

Two well-known methods that teachers apply in order to teach grammar in their classrooms are implicit and explicit ones. Explicit instruction involves drawing students' attention to linguistic components by explaining grammar rules, on the other hand implicit instruction is teaching language to learners without rules. There is still, however, controversy over the effectiveness of these two methods on grammar learning of EFL learners among language teaching professionals (Shirzad, 2016). For instance, Andrews (2007) and Radwan (2005) reported that most students prefer the explicit instruction especially in difficult structures. In addition, Macaro and Masterman (2006) and Baleghizadeh and Derakhshesh (2017) found out the superiority of explicit grammar teaching compared to implicit teaching in some aspects of grammar structures. Similarly, Gabriel (2009) stated that teachers keep positive beliefs on effects of explicit grammar teaching. Rajabi and Dezhkam (2014) also confirm the superiority of the explicit instruction as opposed to implicitness. Nezakat-Alhossaini, et al. (2014) and Akakura (2012) confirmed the durable effects of explicit instruction over the implicit one. On the contrary, Tode's (2007) study concluded that explicit instruction was also more effective but not in the long-term.

Despite exploring the effect of explicit instruction on grammar learning in the previous studies, the similar aspect in all of them is comparing explicit and implicit instruction in T-leaning contexts. Among all the previous research studies, one cannot find a study which has investigated different approaches of teaching grammar in T-learning and LMS classes and also comparing the IRF model in these two types of classes, so this study aims at filling the gap.

## 3. Methodology

This study is a quasi-experimental, having quantitative data collection, pre- and post-tests, and experimental-comparative groups.

### 3.1. Participants

The participants of this study were selected from two groups, namely virtual (LMS) and T-leaning classes. In both groups, 94 male and

female students of TEFL freshmen had taken Writing Course as their requisite course at PNU. The participant's age ranged from 18 to 31 ( $M = 23.44$ ). Having administered a test of homogeneity (Nelson proficiency test), the researcher selected 60 (11 males and 49 females) learners. The participants of virtual class were assigned into two groups (explicit and implicit LMS groups) and the participants of the conventional group were divided into two comparative groups (explicit and implicit groups) - each consisting of 15 subjects.

### **3.2. Data collection**

In the T-leaning classrooms the interactions were audio-recorded. The interactions in LMS classes were automatically recorded by the system, so the participants' and the instructor's interactions remained on the screen for further analysis. After the treatment, all the data were transcribed, coded and analyzed. In the first session, all the subjects took the proficiency test and 60 participants were chosen and randomly divided into two experimental and two comparative groups.

For the pre-test (Appendix 1), the participants in the comparative and experimental groups were given a grammar test containing 40 items, 30 of which were related to the target structure (perfect tenses). The other ten items were not related to the targets of the study. A parallel grammar test was used as a post-test one week after the treatment to see the effect of the instruction. It should be mentioned that both pre- and post-tests were piloted on 20 learners similar to the sample of the current study. The reliability of both pre-test and post-test scores was calculated through KR-21 method which turned out to be 0.73 and 0.76 respectively.

Prior to the experiment, the students were asked to take a test on the twelve tenses of English. The three perfect tenses (Present, Past, Future and their progressive forms) were chosen in this study to be taught because these structures were diagnosed to be problematic as the participants failed to use them correctly.

### 3.3. Treatment

The teaching approach which was used for both LMS and T-leaning groups was based on Widodo's (2006) model. It involves five major stages, including: Rule initiation; elicitation; practice; activation; and enrichment.

Six sessions were scheduled. All took place in July, 2019. Each session lasted 90 minutes. In both explicit and implicit treatments, the same techniques were used for teaching English three perfect tenses except the second stage 'Eliciting functions of the rule or rule elicitation'. The difference was that in the explicit group, the rules were highlighted and named and were taught explicitly while in the implicit groups, the rules were not highlighted and were not directly taught.

A quantitative approach was adopted in this research work to investigate classroom interactions by observing the naturally-occurring EFL classroom discourse carried out by the participants of both T-leaning and LMS groups.

### 3.4. Treatment of the Conventional Groups

In the explicit in-class group, the instructor started the lesson by asking the participants about the previous, related topic. She gave examples in past simple then led in to present perfect. The instructor asked the participants to respond to some leading questions such as yes/no and information (w-h) questions orally as a whole then individually. Later on, the instructor wrote some model sentences on the board. At step 2, the instructor told the participants the name of the grammatical item learned and she modeled the structure by reading more sentences in the textbook and then explained explicitly the form, meaning, and functions of the present perfect tense.

In the third step, the focus was upon familiarizing the participants with the grammatical item in use. The instructor presented some different kinds of exercises to check the participants' comprehension, and encouraged their active involvement. They used the structure talking about their real life. The last step was focused on expanding their comprehension of the grammatical item being taught. In this

phase, the instructor gave the participants some homework to do for the following session.

Regarding the participants of the implicit group, the same teaching approach based on Widodo's (2006) model was used, except that the model sentences had not been underlined and named for the participants and explanations about the grammar rules were avoided.

### **3.5. Treatment of the LMS Groups**

Similar to the Widodo's (2006) model which was practiced with the T-leaning group's participants, the LMS groups received the same treatment. The participants joined the class on July 20 at 2p.m, for 6 sessions.

On the first day of the experiment, the teacher started teaching by asking the participants some questions about the tense in the form of yes/no and information (w-h) questions and asked them to chat their answers individually and share them in the class then more questions were asked and this time they were asked to chat their responses on the group. Then, some model sentences were presented. To assist the participants to focus on the rule, the verb form, and time signals were highlighted and typed in red. The instructor wrote the participants the name of the grammatical item and clearly explained when the present perfect tense was used, its functions and some examples of the present perfect tense were shared on the group. Later on, the instructor presented some exercises which had already been typed, and some links to check for the participants' comprehension, and encouraged their active involvement. At the end of the hour, the instructor provided an assessment to measure whether they completely learned what they had been taught. They were asked to provide examples of the present perfect usage.

Regarding the implicit experimental LMS group, fifteen participants were randomly placed in the group. They practiced the English perfect tenses according to the Widodo's (2006) model and received the same teaching approach like the implicit experimental conventional group.



**4.Results**

The descriptive statistics of all groups on both pre- and post-tests are presented in Table 1.

**Table 1**  
*Descriptive Statistics Pre- and Post-Tests*

Groups	N	Std.	Mean	
	Statistic	Deviation Statistic	Std. Error	Statistic
implicit conventional pre-test	15	2.7	.71	8.80
explicit conventional pre-test	15	1.8	.48	6.86
implicit conventional post-test	15	1.8	.47	10.73
explicit conventional post-test	15	2.3	.60	13.73
implicit LMS pre-test	15	2.3	.61	8.33
explicit LMS pre-test	15	2.05	.52	7.73
implicit LMS post-test	15	1.79	.46	15.73
explicit LMS post-test	15	2.26	.58	16.53
Valid N (listwise)	15			

As it is clear in Table 1, there was a considerable difference between the results of the four groups' pre-test and those of their post-tests. The raw data taken from the pre-tests and post-tests of all groups were first examined for the assumption of normal distribution and homogeneity of variance. The results of the Kolmogorov-Smirnov indices of normality (1.08) show that standard errors were lower than  $p > .05$ ; hence, normality of the present data was assured.

**Table 2**  
*The Analysis of the Post-Tests of the Groups, Analysis of Covariance*

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	308.9(a)	4	77.2	18.313	.000
Intercept	714.5	1	714.5	169.402	.000

Pretest	8.5	1	8.5	2.024	.160
Independent	308.3	3	102.7	24.365	.000
Error	231.9	55	4.2		
Total	12611.	60			
Corrected	540.9	59			
Total					

a. R Squared = .571 (Adjusted R Squared = .540)

As the result of covariance shows (Table 2), the p-value for the F ratio of 24.365 is .00, which is much smaller than the level of significance (0.05); therefore, there were significant differences between the two T-learning and LMS groups on the post-test scores.

**Table 3**

*The Analysis of Post-Tests of the Groups, Descriptive Statistics*

Groups	Mean	Std. Error	95% Confidence Interval	
Conventional implicit	10.586	.540	9.503	11.669
Conventional explicit	13.915	.545	12.822	15.008
LMS implicit	15.665	.532	14.598	16.732
LMS explicit	16.567	.531	15.504	17.631

According to Table 3, the highest improvement is made by the explicit LMS group (16.56) and the least achievement is by the implicit conventional group (10.58). It can also be clearly observed that the two groups, the explicit conventional (13.91) and implicit online (15.66) have done better on the post-tests.

**Table 4**

*Multiple Comparisons of Dependent Variables: Post-tests*

Mean Difference	Std. Error	Sig.	95% Confidence Interval	
			Upper Bound	Lower Bound

Conventional implicit	Conventional explicit	-3.00(*)	.75 7	.00 1	-5.00	-1.00
	Online implicit	-5.00(*)	.75 7	.00 0	-7.00	-3.00
	Online explicit	-5.80(*)	.75 7	.00 0	-7.80	-3.80
Conventional explicit	Conventional implicit	3.00(*)	.75 7	.00 1	1.00	5.00
	Online implicit	-2.00	.75 7	.05 1	-4.00	.00
	Online explicit	-2.80(*)	.75 7	.00 3	-4.80	-.80
Online implicit	Conventional implicit	5.00(*)	.75 7	.00 0	3.00	7.00
	Conventional explicit	2.00	.75 7	.05 1	.00	4.00
	Online explicit	-.80	.75 7	.71 7	-2.80	1.20
Online explicit	Conventional implicit	5.80(*)	.75 7	.00 0	3.80	7.80
	Conventional explicit	2.80(*)	.75 7	.00 3	.80	4.80
	Online implicit	.80	.75 7	.71 7	-1.20	2.80

\* The mean difference is significant at the .05 level.

A post hoc test known as the Tukey test was calculated to specify the significant pairs with each other. The Asterisks show that the two groups being compared are significantly different from each another at the  $p < .05$  level.

The present study presented the classroom interaction patterns of four EFL classrooms of two different contexts. Before going to the findings, the discourse elements are reviewed shortly as follows:

In I (TT), it is the instructor who made the initiation. She offered the answer herself. R (TS) pattern refers to the exchange that comprises of only one initiating move from the instructor and a responding move from a student. In IRF (TST), the instructor raised a question, then the

students answered it, and the instructor gave an evaluative follow-up before raising another question.

In IRPRPR, the instructor gave feed-back to the student, in order to prompt further elaboration of their point of view. TSTSTS pattern is actually an extended sequence of TST. It usually occurred when the instructor was not satisfied with the response from the student, or she wanted to elicit more information by reinitiating the question, which was followed by another response from the student. S1S2S3... pattern refers to the exchange in which one student made the initiation followed by a response from another student. The frequency of each pattern in each class is shown in the following table.

**Table 5.**  
*The Frequency and Percentage of Interaction Patterns in Different Sessions of the Explicit Conventional Group*

Discourse element	Explicit Conventional Group											
	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	
	f	%	f	%	f	%	f	%	f	%	f	%
I(TT)	5	6.4	4	4.7	2	2.2	4	4.5	2	2.0	1	1
		1	0		3		0		2			
R(TS)	18	23.08	17	20	23	25.55	26	29.21	45	45.45	51	51
IRF(TST)	48	61.53	51	60	56	62.22	56	62.93	23	23.23	32	32
IRPRPR(TSTSTS)	3	3.8	5	5.8	3	3.3	0	0	12	12.12	8	8
IRPRPRE(TSTSTST)	4	5.1	5	5.8	0	0	1	1.1	12	12.12	4	4
ST	0	0	3	3.5	6	6.6	2	2.2	5	5.0	4	4
			2		6		4		5			
S1S2S3S4S5S6S7S9S10S11S12	0	0	0	0	0	0	0	0	0	0	0	0
Total	78	100	85	100	90	100	89	100	99	100	100	

**Table 6**  
*The Frequency and Percentage of Interaction Patterns in Different Sessions of the Implicit Conventional Group*

Implicit Conventional Group

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	
	f	%	f	%	f	%	f	%	f	%	f	%
	I(TT)	10	12.82	2	5.7	5	8.3	6	6.8	2	2.2	2
R(TS)	21	26.92	16	45.72	13	21.66	19	21.59	42	47.72	38	45.23
IRF(TST)	31	39.74	12	34.28	28	46.66	62	70.45	21	23.86	42	50
IRPRPR(TSTSTS)	1	1.28	1	2.85	12	20	1	1.13	11	12.5	0	0
IRPRPRE(TSTSTST)	1	1.28	2	5.71	0	0	0	0	10	11.36	0	0
ST	0	0	2	5.71	2	3.33	0	0	2	2.27	2	2.38
S1S2S3S4S5S6S7S9S10S11S12	0	0	0	0	0	0	0	0	0	0	0	0
Total	78		35		60		88		88		84	

According to Table 5 and 6, in both explicit and implicit conventional classes, the typical feature that occurred was teacher-initiated exchanges or IRF or TST which is larger than that of student-student interactions or S1S2S3S4S5S6S7S9S10S11.

**Table 7**

*The Frequency and Percentage of Interaction Patterns in Different Sessions of the Explicit LMS Group*

Discourse element	Explicit LMS Group											
	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	
	f	%	f	%	f	%	f	%	f	%	f	%
I(TT)	12	68	2	0.1	3	0.1	4	0.2	4	0.2	3	0.1
R(TS)	17	109	19	10.8	67	2.9	56	3.3	67	4.3	56	3.6
IRF(TST)	46	25.1	36	18.9	37	16.6	24	14.1	10	6.6	18	12.1
IRPRPR(TSTSTS)	1	89	0	89	6	79	1	49	3	9	9	15
IRPRPRE(TSTSTST)	23	12.97	34	17.1	46	20.7	28	17.1	40	26.1	50	32.1
ST	1	97	1	9	7	85	7	25	1	1	1	21

IRPRPRE(	26	15	23	12.	35	15.	50	30.	40	26.	37	24.
TSTSTST	7		1	12	6	89	4	3	2	12	8	30
)												
ST	89	5	10	5.3	99	4.4	12	7.2	61	3.9	19	1.2
			2	6		2	0	1		6		2
S1S2S3S4	54	30.	67	35.	87	38.	45	27.	50	40.	40	26.
S5S6S7S9	1	39	1	22	1	90	1	11	1	43	9	30
S10S11S1												
2												
Total	17		19		22		16		15		15	
	80		05		39		63		39		55	

**Table 8**

*The Frequency and Percentage of Interaction Patterns in Different Sessions of the Implicit LMS Group*

Discourse element	Implicit LMS Group											
	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	
	f	%	f	%	f	%	f	%	f	%	f	%
I(TT)	19	1.4	3	0.1	2	0.0	4	0.3	3	0.1	6	0.3
		1		7		9		1		8		8
R(TS)	10	7.6	17	10.	89	4.3	60	4.7	67	4	87	5.5
		3		8		63		4				9
IRF(TST)	40	29.	30	17.	30	15.	30	23.	98	5.8	17	11.
		2		93		1		6		9		31
IRPRPR(T	17	13.	29	17.	40	19.	10	8	30	18.	40	26.
STSTS)	8	25	8	80	2	64	2		9	58	9	28
IRPRPRE(	19	14.	19	11.	37	18.	30	24.	40	24.	29	18.
TSTSTST)	8	74	8	82	8	47	9	23	7	47	0	63
ST	56	4.1	10	6.5	76	3.7	10	7.9	98	5.8	79	5
		6		9		1		1		9		
S1S2S3S4	38	28.	58	35	79	38.	39	31.	68	40.	50	32.
S5S6S7S9	7	81	7		0	61	8	21	1	95	9	71
S10S11S1												
2												
Total	13		16		20		12		16		15	
	43		74		46		75		63		56	

According to Table 7 and 8, in both explicit and implicit LMS classes, other variations of the IRF structure were observed. Analyzing interaction patterns presented by the participants of the four groups, it was shown that the S1S2S3S4S5S6S7S9S10S11S12 and ST or the

participants-initiated exchanges were the most frequent discourse element observed within both implicit and explicit LMS groups. Regarding TST, there were very few situations within the two conventional groups in which the teacher posed a problem or a question that made the student answer to that and the teacher gave feedback. Although such situations were more frequent in the online classroom than the T-learning one.

### **5. Discussion**

The first goal of the present study was to compare the IRF pattern of classroom interactions within four EFL classrooms of two different contexts. This comparison was made among four groups: explicit and implicit conventional and explicit and implicit LMS classes.

Regarding the first move of the IRF structure, i.e. in both online and T-learning classes, the instructor opened the interaction through presenting the I move and she was forced to give the R move herself. The frequency of this move in the first sessions of both online and conventional classes was more than the other sessions but gradually its frequency decreased in both types of classes. Unlike the online classes, in T-learning classes, every interaction was initiated by the instructor's question and then followed by one of the participant's response toward the instructor's question and ended with the instructor's verbal feedback toward the participant's answer. In both T-learning classes, the instructor controlled the classroom discourse and started the first part of the IRF pattern by asking some questions from the participants, in other words, the classroom structure was teacher fronted and it was the instructor who dominated the classroom discourse which confirms the findings of Asadi, et al. (2019); Banafshi, et al. (2020); Candela (1999), Hall and Walsh (2002), Farahian and Rezaee (2012), Rodríguez and Arellano (2018).

Regarding R(TS), there were few situations within the four classes in which the instructor posed a problem or a question that made the participants answer to that in which the instructor did not give her feedback. Although such situations were more frequent in the online

classrooms than the conventional ones, this frequency was not so noticeable. For example:

*T: What is the tense of the sentence?*

*S1: past*

*T: What about the second sentence?*

*S2: Past*

Another important point is related to the whole IRF structure where this pattern occurred more within the online classes (on average, 288.33 times in explicit LMS and 264.50 times in implicit LMS) than the conventional ones (on average, 44.33 times in each session in explicit conventional class and 32.66 times in each session in implicit conventional class).

*T: What's the past participle of break?*

*S1: broken*

*T: correct, what about see?*

*S1: seen*

*T: correct*

One more considerable difference between the online and T-learning classes was related to the extension of the classroom pattern, for example, within the online classes when the instructor gave feedback to the students' responses, the other students also gave follow up feedbacks to their peer comments, but in the T-learning classes, the participants didn't express their opinion about others' comments. For example:

*T: Will you have been online for 2 hours by 10 o'clock?*

*S1: Yes, I will have been online for 2 hours.*

*S2: good student*

*S3: big like*

*S4: kisses*

*S5: woooooooooooooooooooo*

*S6: punctual girl*

*S7: she is telling a lie; she was on line from 9*

*S8: like, like, like*



*S15: come on Zahra, wake up*

Another interactional pattern which was investigated within classes was the exchange in which one student made the initiation followed by a response from another student (S1S2S3S4S5S6S7S9S10S11S12 and ST). No interaction of this kind was observed within the conventional classes while within the online ones many times this pattern was observed (on average, 574 times in each session in explicit online class and 558.66 times in each session in implicit online class). As the results show, the participants' talk occupied much more time than the instructor talk which is against the discourse of the T-learning classrooms. The results are also in line with Luk and Lin (2007) who state that one way for making the classroom more dialogic is developing the Initiation turn to the students in order to give them a more agentive experience. In line with Petrides (2002), the collaborative working of the participants in online courses was more than the face-to-face classes. This finding is not in line with those of Vonderwell (2003), Woods (2002), Levin et al., (1990) who found out that there is the lack of interaction between the instructor and the participants in online classes.

Moreover, in online classes, most of the participants' comments and responses were heterogeneous and variable and were not related to the instructor's questions. The results are in line with Song and McNary (2011) who claim that in conversations, students make comments which are not related to the teachers' comments, in other words, disrupted adjacency occurred. This feature did not occur in T-learning classes. For example:

*T: great, I see that most of you watched a movie last week. Can you tell me what is the tense of this question? What did you watch last week?*

*S1: past tense*

*S2: Past*

*S3: big like*

*S4: Zahra what did you make for lunch?*

*S5: watched is past, it has ed, and it has last week*

*S1: simple question*

S3: *I will go out.*

S4: *yes, easy*

S5: *clever*

Another important difference between online classes and conventional ones was that the instructor herself provided the participants in the conventional classes with several cases of recast and made them understand their ill-formed responses, but in the online classes the recast was made by the participants themselves. Another big difference between the online classes and the conventional ones was the case of scaffolding which just happened in the online classes. The results support Alian et al., (2017), Heidari et al., (2018), Miyazoe (2008), Naseri and Khodabandeh (2019), Smith and Hardaker (2000), who showed that students' interaction in online class increases.

- *T: let me ask you some questions about what you did last week.  
T: for example, did you watch any movies last week?  
T: Maryam (Calling one of the students.)  
S: yes  
T: How many movies did you watch?  
S: one  
T: You watched one movie, yes?  
S: Yes, I watched one*
- *T: What about you Mina?  
S: I watched  
T: what did you watch?  
S: cartoon  
T: You watched a cartoon last week?  
S: Yes.*
- *T: Now let me ask you about this week? Have you watched any movies this week?  
S: yes  
T: Yes, you have  
S: Yes, I have*

### Explicit instruction in the online class

- *T: What will you have you done by the end of the week?*

*S1: cleaning*

*S2: woowoow, u will have cleaned the house*

*S4: good girl*

*S3: really, u will have cleaned the rooms and the bedrooms.*

*S1: I will have cleaned the whole house by the end of the week.*

Another dominant feature of online classes was the absence of turn taking, this feature is more dominated in conventional classes because the instructor often addressed special students while asking questions and other participants couldn't answer until the one who was speaking was finished. But in online classes, the participants answered the questions without taking turns. This is in line with Warschauer (2000) who argued that the learners' participation in online classes is more than conventional ones as they have no fear of making errors.

Regarding the second research question, the participants' performances on grammar pre-tests were compared. The statistical analysis showed no significant difference between the explicit and the implicit online and conventional classes. However, the post-tests results showed that the explicit conventional class ( $M = 13.91$ ), had a better performance than the implicit conventional class ( $M = 10.58$ ). Likewise, the explicit online class ( $M = 16.56$ ) had a better performance than the implicit online class ( $M = 15.66$ ). Moreover, among the four groups, the explicit online class ( $M = 16.56$ ) had the highest improvement and the implicit conventional class ( $M = 10.58$ ) had the least achievement. Based on the results of the current research, it can be inferred that both explicit online and conventional classes outperformed the implicit instruction classes if not in teaching grammar generally, in teaching perfect tenses at least. The obtained finding is in line with Akakura (2012), Andrews (2007), Baleghizadeh and Derakhshesh (2017), Gabriel (2009), Macaro and Masterman (2006), Nezakat-Alhossaini et al., (2014), Radwan (2005), Rajabi and Dezhkam (2014).

## 6. Conclusion

The purpose of this study was first to examine interactions between the instructor and her students and between students themselves that took place in T-learning and (LMS) classes. Also, two different approaches of teaching grammar in four different classes were examined to see which method was more beneficial for learning grammar. The results of the pre-and post-tests confirmed the positive effect of teaching grammar both explicitly and implicitly on LMS classes. The results can be linked to the fact that in LMS classes, the participants were active and participated more than their peers of the T-learning classes in the interactions. Their explanations, scaffolding and negotiations were distributed among students. Contrary to the T-learning classroom discourse, the participants' initiation, response and feedback were the dominant patterns in the online classrooms. Contrary to the IRE discourse structure identified in the T-learning classes of the current study, in the online classes, the structure of classroom discourse departed from the basic IRF pattern.

Considering these results, it is understandable that the online-based instruction provided through LMS was a better substitute for teaching grammar than the conventional instruction conducted in physical classroom as it provided an interactive environment which is an essential factor for learning second language skill and sub-skills.

Like other studies, this study had also some limitations. The most important limitation that bothered the participants was that some students couldn't connect to the LMS system on time, the problem was sometimes related to the Internet that was disconnected 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.

As another limitation of this study, it was not easily possible for the instructor 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 T-learning class which the students are in front of the instructor and under the supervision of her/him, the

instructor 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 participate in the class regularly. Limited duration of the study was also another limitation and this was because of the nature of PNU system. Access to small number of participants in each group can be mentioned as another limitation of this research.

It is recommended that in future related studies, researchers take these limitations into account and try to remove the negative effects of them on the research results. Further studies can be also conducted both on the virtual classroom environment introduced in this research and other virtual environments provided through other systems and software in order that the possibility and advantages of using such virtual environments for instructional purposes in general and language learning/teaching in specific are recognized.

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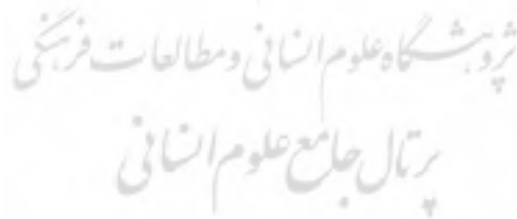
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**Appendix I**

## Pre-test Exam

Complete the following sentences using appropriate tense forms of the verbs.

1. Where could the horse .....?
  - a) went
  - b) have gone
  - c) had gone
2. Circumstances ..... him to leave school when he was just ten.
  - a) forced
  - b) have forced
  - c) were forcing
3. What ..... for breakfast?
  - a) do usually you have
  - b) do you usually have
  - c) have you usually
4. He heard that his brother .....
  - a) arrived
  - b) has arrived
  - c) had arrived
5. My brother ..... very hard at the moment, because some of his colleagues are off sick.
  - a) working
  - b) works
  - c) is working
6. I ..... my homework.
  - a) completed
  - b) have completed
  - c) had completed
7. He ..... before I reached his place.
  - a) left
  - b) have left
  - c) had left
8. Kathy usually ..... in front of the window during the class.
  - a) sits
  - b) sitting
  - c) sit
9. The children ..... their homework by now.
  - a) will finish
  - b) will have finished
  - c) will be finishing
10. Shakespeare's plays ..... into nearly all languages.
  - a) have translated
  - b) have been translated
  - c) were being translated
11. Indians ..... skilled mathematicians for thousands of years.

- a) are  
b) have been  
c) were
12. The boys performed all the tasks we ..... for them.  
a) have planned  
b) had planned  
c) were planning
13. Rice \_\_\_\_\_ in cold climates.  
a) don't grow  
b) aren't grow  
c) doesn't grow
14. He forgave his enemies who ..... him.  
a) have wronged  
b) had wronged  
c) had been wronged
15. I \_\_\_\_\_ by then.  
a) will be leave  
b) will have left  
c) will leaving
16. Will you \_\_\_\_\_ by 8am?  
a) have arrived  
b) be arrive  
c) have arriving
17. You \_\_\_\_\_ the bill by the time the item arrives.  
a) 'll have received  
b) will receiving  
c) 've received
18. She has a lot of work to do. I doubt she ...  
a) is going to come  
b) will come  
c) is coming
19. Melissa and Mike will be exhausted. They \_\_\_\_\_ slept for 24 hours.  
a) will not  
b) will not have  
c) will not be
20. He will have \_\_\_\_\_ all about it by Monday.  
a) forgetting  
b) forgotten  
c) be forgetting
21. Will you \_\_\_\_\_ the contracts by Thursday?  
a) have mailed  
b) mailing  
c) to have mailed
22. The boss \_\_\_\_\_ by the time the orders come in.  
a) will leave  
b) will be left

- c) will have left
23. Sue wasn't hungry. She \_\_\_\_\_ anything.
- a) ate  
b) wasn't eat  
c) didn't eat
24. September works for us. Lisa will not \_\_\_\_\_ by then.
- a) graduating  
b) have graduated  
c) be graduate
25. I \_\_\_\_\_ the kitchen floor yesterday.
- a) mopped  
b) was mopped  
c) am mopping
26. I will let you in. I \_\_\_\_\_ with the keys by the time you come in.
- a) will have arrived  
b) will be arrival  
c) will be arrived
27. By November, we'll \_\_\_\_\_ here for five years.
- a) have been living  
b) live  
c) be living
28. When I saw Dave, he \_\_\_\_\_.
- a) is working  
b) worked  
c) was working
29. I expect Anna will be tired when she arrives. She \_\_\_\_\_ for over 20 hours.
- a) will have travelled  
b) will have been travelling  
c) will be travelling
30. I was sure that I \_\_\_\_\_ her before.
- a) had saw  
b) seen  
c) had seen
31. By Christmas Dominic will \_\_\_\_\_ as project manager for five years.
- a) be working  
b) have been working  
c) have worked
32. What do you think those men were doing in Charles's garden yesterday?
- a) I expect they'll have been doing some gardening.  
b) I expect they'll be doing some gardening.  
c) I expect they'll do some gardening.
33. I'm flying to Florida tonight. This time tomorrow, I'll \_\_\_\_\_ on a beach drinking cocktails!
- a) be lying  
b) have been lying

- c) lie
34. We \_\_\_ in Minsk since 1975.
- a) had been living  
b) have been living  
c) has been living
35. Gregory told me he \_\_\_ to the UK before.
- a) would have never been  
b) had never been  
c) has never been
36. I \_\_\_\_\_ my friends for dinner after work tomorrow.
- a) will meet  
b) am meeting  
c) am going to meet
37. I haven't made any plans for Easter. I \_\_\_\_\_ at home.
- a) am going to stay  
b) will probably stay  
c) am staying
38. The film \_\_\_\_\_ by the time we got to the cinema.
- a) had start  
b) had started  
c) has started
39. By the time we reach the next service station we \_\_\_\_\_ for over 4 hours!
- a) will have driven  
b) will have been driving  
c) will drive
40. You can't meet him at my office at 11. He ... to the bank at 10.
- a) will have gone  
b) will have been gone  
c) had gone

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