



# Exploring classroom interaction in online education

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## Abstract

This present study explores the nature and extent of classroom interaction in online English as a foreign language (EFL) classes at the university level. Based on an exploratory research design, the study involved the analysis of recordings of seven visits to online EFL classes given by different instructors with approximately 30 language learners in each class. The data were analyzed by using the Communicative Oriented Language Teaching (COLT) observation sheets. Findings provided an understanding of the interaction patterns in the online classes, by showing that there was more teacher-student interaction in online classes compared to student-student interaction, and the classes involved more sustained teacher speech, whereas the students' speech mostly encompassed ultra-minimal utterance patterns. Also, the findings showed that group work activities fell behind individual activities in online classes. In addition, the online classes observed in the present study were found to be instruction-focused, and discipline issues reflected on the language used by the teachers were found to be at a minimum level. Besides, the study presented a detailed analysis of teacher and student verbal interaction by unveiling that rather than form-related incorporations, message-related incorporations were common in the observed classes and the teachers commented on the students' utterances and expanded what they said mostly. The study brings some implications for teachers, curriculum planners, and administrators by providing insights regarding classroom interaction in online EFL classes.

**Keywords** Online education · Classroom interaction · COLT observation schemes · English as a foreign language

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## 1 Introduction

What language is and how it works have been considered in different ways from theoretical aspects, which has caused different approaches to come out in order to handle language problems in practical terms (Syarief, 2005). One of those approaches is Communicative Language Teaching, which encompasses the notion that second or foreign language learning should ameliorate communicative competence (Syarief, 2005). “Communicative Language Teaching has emerged as a theory-and-practice-based approach to language education” (Syarief, 2005, p.3). It is based on second language acquisition theories which are grounded on the importance of interactions in language acquisition (Savignon, 2018). Students who learn or acquire a language should be able to engage in classroom activities through which they are able to convey and discuss their thoughts for a mutual understanding with others. Interaction enables language learners to obtain various inputs and to have a chance for output. Therefore, language classes must be arranged with communicative activities in a way that learners are provided with rich input and opportunities to communicate with each other (Halliday, 1975). Learners’ language development is formed through the verbal interaction between the teachers and students as well as among students (Hall & Verplaetse, 2000). Thanks to the classroom discourse which teachers and students construct together, teachers and students form “the intellectual and practical activities that shape both the form and content of the target language as well as the processes and outcomes of individual development” (Hall & Verplaetse, 2000, p. 10). Hence, the verbal interaction between teachers and students and between/ among students has significance since it is the means and the outcome of learning, as Hall and Verplaetse (2000) explain.

The outbreak of the Covid-19 pandemic caused a fast conversion to online learning from traditional face-to-face learning in person or on campus because of the urgent physical distancing urged by the World Health Organization (Moser et al., 2020). This rapid shift led educators and learners to deliver their courses online using various means of technology in all fields of study, including language education, engaging them mainly in a learning process different from the learning methods with which they were familiar.

The research which has been done on the effects of online education on learning processes has shown both positive and negative impacts on instruction and learning. Concerning the positive effects of online learning, it has been reported that online learning has come up with certain positive effects on especially the students’ studying habits (Gonzalez, de la Rubia, Hincz, Comas-Lopez, Subirats, Fort, & Sacha, 2020) and easiness of the delivery of the classes without any boundaries of time and place while it has also yielded some negative effects ranging from reduced motivation to adaptation problems with the transformation of instruction into digital environments (Aguilera-Hermida, 2020; Bailey & Lee, 2020; MacIntyre et al., 2020; Mladenova et al., 2020).

Among all the negative effects mentioned in the literature, one concern regarding the drawback of online education stands out to be its detrimental effect on classroom interaction. For example, Aguilera-Hermida (2020) states that interaction is essential between students and professors, and online learning was reported to be a cause of the

absence of students' interaction with their professors. Likewise, Dong et al. (2020) unveiled parents' beliefs regarding online education and accordingly explicated that online education did not yield effective learning results. Instead, it led to poor social interactions and a learning atmosphere for young learners. Hence, while interaction has an unquestionable place in the language classroom, its quality and communicative value have been explored little in online language education.

The unfavorable effect of online learning has been mentioned in the previous studies on classroom interaction. Those studies were based on the use of questionnaires, non-organized/ unplanned observation and mostly based on teacher and student feedback. None of the studies have analyzed clearly the extent and the nature of the verbal interaction with planned observation and analysis techniques used in this study. To be precise, the extent refers to the degree to which the discourse between the teacher and students and among students continues. Thus, it presents whether the interaction is initiated by the teacher mostly or the students, whether there is more discourse among the students in the classroom, or whether the classroom discourse is mostly dominated by the teacher, etc. The nature of the interaction refers to the features of the verbal interaction; in that, what language patterns students and teachers use commonly. These features involve for example, whether the students' or the teachers' speeches are sustained or limited, whether the students and the teachers give predictable or unpredictable information during the discourse; whether the teachers focus on functional language, or whether the classes are mostly based on form-based instruction during classes, etc.

In spite of the studies referring to the influence of online learning on classroom interaction, none of those studies have clearly depicted classroom interaction as detailed as the present study reveals. Thus, the current study differs from the previous research, and it fills in the literature gap by exploring in detail the extent and the nature of interaction in online EFL classes. The study aims to contribute to the literature by providing a clear understanding of classroom interaction in online EFL classes.

## 2 Communicative Language Teaching and Classroom Interaction

Communicative language teaching aims to teach communicative competence, which includes the knowledge of language to use it for diverse purposes and functions appropriately and to maintain communication by using distinct strategies of communication (Richard, 2006). "Communicative competence is developed under the subdiscipline of sociolinguistics" (Richard, 2006, p. 9). It fundamentally involves the notion that the facilitation of language learning is based on learners' engagement in interaction and meaningful communication. Therefore, language learning is more effective and successful when learners are provided with opportunities to negotiate meaning and take part in meaningful communication in communicative language teaching, and learners learn through collaboration (Richard, 2006). The use of interaction during the learning and teaching process has a vital role in the communicative language teaching method inasmuch as the method pursues a goal to enable learners to improve their communicative competencies (Eisenring & Margana, 2019). The

communicative competence theories highlight the worth of interaction in the use of languages (Brown, 2001). A teacher is the initiator of the interaction in the classroom, and one of the preeminent methods which teachers can use to improve their initiation is questioning (Brown, 2001). Using the questions in the classroom, teachers are able to motivate students and give them a chance to produce language (Brown, 2001). There are different sorts of questions which can be used in the classroom effectively. Depending on the proficiency level of the students, the teachers can ask questions that aim to reveal the information already known by the teacher in the classroom or the ones that require information not easy to be anticipated by the teacher. Each type of question has importance to create an interactive classroom. Hence, teachers play a leading role in developing learners' communicative competence as they manage the classroom and interact with the learners. In a classroom where English is taught as a foreign language by means of the communicative language teaching method, there will be frequent interaction between students and teacher (Eisenring & Margana, 2019). This style of teaching will be based on a student-centered approach rather than a teacher-centered one and will involve students' active participation in the learning process.

Traditionally, in classes where the teacher talk is sustained and the teacher lectures and gives students drill-based activities, the lessons can be defined as restricted and teacher-dominated, and the students in such classes might have less chance of engaging in interaction and producing language effectively (Brown, 2001). Thus, students must be given opportunities to practice language individually more via activities such as group or pair work. Such activities create possibilities for "student initiation, practice in the negotiation of meaning and extended conversational exchanges" (Brown, 2001, p.178).

The interaction in the classroom is likely to involve the actions between the teacher and student(s) or student(s) and student(s) depending on the purpose and ability to communicate and discuss the meaning (Van Lier, 2014). This sort of interaction generally involves behavior patterns which start with the teacher's questions answered by the students and followed by the teachers' feedback. Walsh (2006) explains that the teacher has a central role to provide learners with meaningful input and opportunities for productive output. Walsh (2013) says that equal interactions need to be facilitated between teachers and learners by explaining that learners should be able to "ask and answer questions, interrupt where appropriate, take the initiative, seize the floor, hold a turn, and so on" (p. 21).

Allen et al. (2013) mention the relationship between student-teacher interaction and students' success and underscore its importance for learning. The fundamental constituent of a positive classroom atmosphere, which involves, for example, a "teacher sensitivity to learners' needs, and recognition of their desire for peer interaction and a sense of autonomy regarding classroom activities," is crucial for effective learning (Allen et al., 2013, p. 94). Also, Allen et al. (2013) stress that student-teacher interactions are connected to the quality of instruction and emerge more in successful classrooms. In order to foster interaction in the classroom, teachers and students are able to make the most of the activities which enable them to negotiate meaning through dialogues, and scaffolding activities (Van Lier, 2014; Walsh, 2013).

Previous research indicates that the interaction between teachers and students positively influences students' achievement at school (Allen et al., 2011). Hence, Allen et al. (2011) assume that the increase in the interactions between students and teachers is likely to improve motivation and success. Based on their research findings, Allen et al. (2011) suggest that a teacher's content knowledge and his/ her effective interaction with and relation to the students motivate students academically.

In their research, Wang et al. (2020) indicate the impact of willingness to communicate on classroom interactions by investigating learners' perceptions of the desire to communicate in the target language. According to Wang et al.'s research (2020), learners' attitudes towards interaction in groups and with students vitally affect their willingness to communicate in the target language and the classroom communication in the target language. Wang et al. (2020) elucidate further, saying that learners will possibly be willing to communicate and perform interaction behaviors in the classroom so long as they find the opportunities created to interact with the other students worthwhile.

The literature shows the importance of classroom interactions for learners' learning and improvement and also presents suggestions of implications for policymaking. Pianta (2019) emphasizes the crucial importance of policy in education to accept that the interactions between teachers and learners are a unique and practical resource for the learners' success and academic development. Thus, it is recommended that as Pianta (2019) elucidates, policies in education that intend to increase teachers' effectiveness in the procedures in the classroom are to give special attention to the instruction and learning rather than the degrees the teachers will gain or the results the learners get from the tests.

### 3 Purpose and significance of the study

Interaction is undoubtedly vital in language classrooms since it enables learners to develop their language and enhance their communicative competence by promoting the target language in the learning setting (Yu, 2008). When the learners are presented with opportunities to engage in meaningful communication in class, the learning process will be facilitated with more interaction and motivation to learn and will use the target language (Yu, 2008). The literature displays that interaction is an indispensable part of learning and teaching processes by increasing learners' language knowledge (Rivers, 1987), facilitating vocabulary learning (Dobinson, 2001), and fostering learners' awareness of grammar (Takashima & Ellis, 1999).

The early research conducted at the beginning of the rapid change to online education has shown the concerns such as a lack of motivation and a decrease in interaction between the educator and learners during the pandemic phenomenon (Aguilera-Hermida, 2020; Dong et al., 2020). The previous studies have given insights into how online learning during the Covid-19 pandemic has influenced classroom interaction, but they were not conducted based on a systematic research design, and also, they do not reflect the extent and nature of classroom interaction in language classes in detail as this study aims to reveal.

Precisely, the effect of online learning on classroom interaction in previous studies was reported based on teachers' and students' unplanned observation and their experiences in classes. However, the present study was based on planned observation and detailed analysis of the activities done in the classroom depicting the interaction patterns in the classroom. The study presented a detailed analysis of teacher and student verbal interaction by unveiling the target language use, information giving and requesting information patterns, sustained vs. minimal speech patterns, reactions to form or message in teachers' and students' speeches as well as the incorporation of the teachers' or students' utterances (by correcting, paraphrasing, repeating, commenting, expanding, requesting for clarification and elaboration). In this respect, this study aims to reveal the extent and quality of classroom interaction in EFL classes at the university level when the courses are carried out online.

The findings of this study are thought to be significant for several reasons. Foremost, there is a paucity of previous research regarding how classroom interaction has been influenced by the online delivery of courses due to the closure of educational institutions at the tertiary level. Since the findings show the nature of the interaction between students and teachers in English as a foreign language class, the study will help lecturers gain discernment related to improving classroom interaction, strengthening their education programs, and integrating various technologies in their online classes.

## 4 Methodology

This study is based on exploratory research, and in this respect, through the analysis of the class records, the study aims to reveal and report how online education affects classroom interaction by responding to the research question (RQ) below:

**RQ** To what extent does online learning impact classroom interaction in EFL classes at the university level?

### 4.1 Setting and participants

The current research was carried out in the English preparatory school of a private university in Turkey. After the Covid-19 pandemic broke out, the education at the university underwent a fast change from face-to-face education to entirely online. The staff was provided with quick but detailed training about how to use technologies to adapt their traditional classes to the online version. All the courses were carried out via ZOOM, an educational platform which allows users to carry out courses online, and through the transformation of relevant class materials properly for the online classes. All the staff was equipped with the technological equipment (cameras, microphones, computers, the Internet, etc.) necessary for online courses. Since the very beginning of online education, as an outcome of the educational policy of the institute and based on the students' permission engaged in the classes, the students and the teachers participated in the classes with their cameras, and attendance was

taken into consideration. The teachers' ages ranged from 35 to 45, and their experience in teaching varied from 9 to 20 years.

When this study commenced, the staff of the preparatory school where this research was carried out had already been familiar with the online education procedures for almost two years. The students in the study were in their first year at university. They were studying at the preparatory school because they could not pass the proficiency exam which is a prerequisite for all the newly-enrolled students in the aforementioned university. Although the English education at the university is given to students at four basic levels (A1, A2, B1, and B2) as defined by the CEFR in the preparatory school, only B1 level students were recruited for the present study. The students all had different educational backgrounds when their high schools were considered, so they had further online education prior to their educational experience at the present one. However, all spent their third month at university when this research began. The age groups of the students were between 18 and 25.

All the participants took part in the study based on convenience sampling. In the recruitment of the participants, verbal and written consent was received. In the consent form, the participants were acknowledged about the purpose of the study, and they were assured that the data to be gathered would be used only for research purposes.

## 4.2 Data Collection

With the online learning process, which was a requisite outcome of the pandemic, the education in the institution where the current study was carried out was done through synchronous online classes in language education. The classes were done on an online teaching platform, *ZOOM*, and the platform enabled the teachers and the students to connect via the Internet. The students all participated in classes with their cameras and microphones on as a course requirement. All the students kept their cameras and their microphones open throughout the classes. As a function of the platform, the teacher could vividly see the students on the main screen in small images (live) and share the class materials with them. Figures 1 and 2 below show the screenshots from one online class recording. (The screen captures were blurred due to the principles of anonymity and confidentiality.) The online platform had a function to record courses. By using that function, based on the consent received from the teacher and the students at the beginning of the research, seven classes which involved teaching listening, reading, or/ and speaking skills and which were based on the use of a skill book for this purpose were recorded to analyze the verbal interaction of the teachers and the students in the classes.

## 4.3 Instrument

In data collection, the Communicative Orientation of Language Teaching (COLT) observation scheme was employed. The COLT observation scheme dates back to 1984 and was first developed by Allen et al. (1984). The COLT reveals the details regarding the practices in the classroom, describing their interaction with learning results (Spada & Fröhlich, 1995) explain that the COLT observation scheme

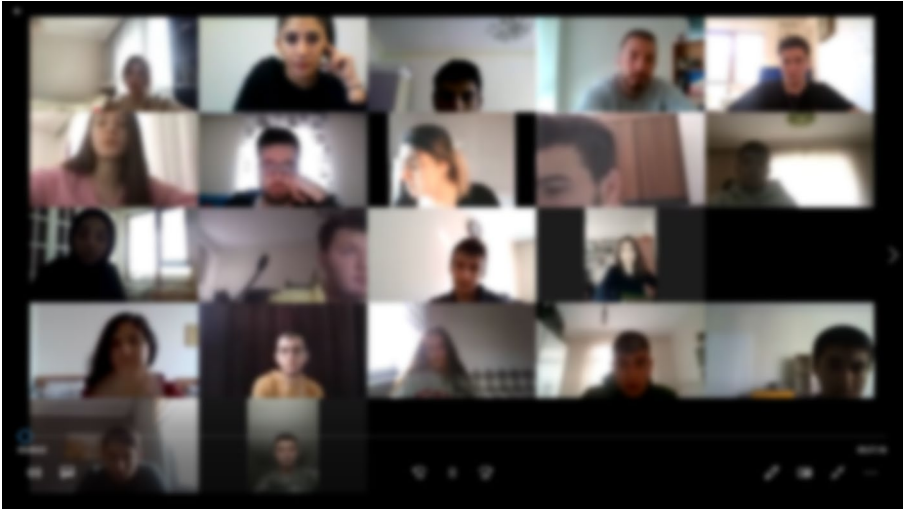


Fig. 1 Screenshot I

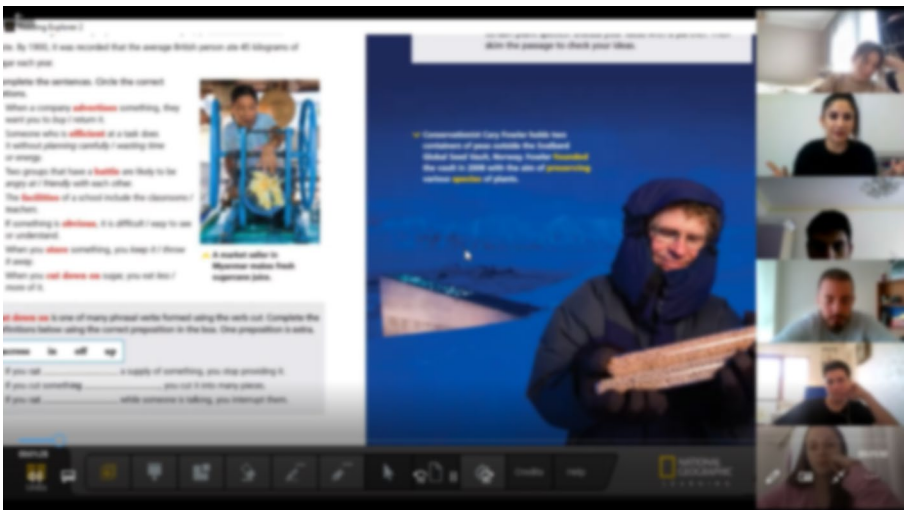


Fig. 2 Screenshot II

attempted to reflect communication which was described in “recent theoretical and pedagogical literature on communicative language teaching” (p.5).

Spada and Fröhlich (1995) point out that the COLT observation scheme aims to reveal two critical elements in L2 language learning: Communication and interaction. The scheme has two parts. The first part is used to describe instruction in the classroom regarding the activity types (Fröhlich et al., 1985). The other part is to show the communicative characteristics of the verbal interaction between student(s)-student(s) and student(s)-the teacher in the classroom. The elements in Part A are “activity, par-



Time	Activities & Episodes	Participant Organisation						Content				Content Control	Modality				Materials														
		Class	Group	Individual	Manag.	Language	Other Topic	Teacher/Text	Teacher/Text/Student	Student	Listening		Speaking	Reading	Writing	Other	Text	Visual	Source												
		Topic	S-5/C	Choral	Same Task	Different Task	Same Task	Different Task	Procedure	Discipline	Form	Function	Discourse	Sociolinguistic	Narrow	Broad	Teacher/Text	Teacher/Text/Student	Student	Listening	Speaking	Reading	Writing	Other	Minimal	Extended	Audio	Visual	L2 MS	L2 USA	Student Made

Fig. 3 COLT Observation Sheet: Part A

Off task	TEACHER VERBAL INTERACTION							STUDENT VERBAL INTERACTION						
	Target Language	Information Gap		Sustained Speech	Reaction to form/message	Incorporation of Student Utterances		Target Language	Information Gap		Sustained Speech	Reaction to form/message	Incorporation of Student/Teacher Utterances	
	L1	predictable	Giving info	Minimal	Message	Correction	Discussion initiation	L1	Predictable	Giving info	Ultra minimal	Correction	Correction	Correction
	L2	unpredictable	Requesting info	Sustained	Message	Repetition		L2	unpredictable	Requesting info	Minimal	Repetition	Repetition	Repetition
		Pseudo Req.	Requesting info	Minimal	Message	Paraphrase			Pseudo Req.	Requesting info	Sustained	Paraphrase	Paraphrase	Paraphrase
		Genuine Req.	Requesting info	Sustained	Message	Comment			Genuine Req.	Requesting info	Choral	Comment	Comment	Comment
				Ultra minimal	Message	Expansion					Restricted	Expansion	Expansion	Expansion
					Message	Clarification. Req.					Unrestricted	Clarification Req.	Clarification Req.	Clarification Req.
					Message	Elaboration Req.						Elaboration Req.	Elaboration Req.	Elaboration Req.

Fig. 4 COLT Observation Sheet: Part B

participant organization, content, student modality, and materials” (Fröhlich et al., 1985, p. 29). These elements show the communicative orientation of classroom instruction (Fröhlich et al., 1985). Part B investigates the activities in the classroom in terms of oral communication, and involves seven communicative characteristics to find out the target language use and how students are provided with a chance to use language “without teacher-imposed linguistic restrictions, to engage in sustained speech, to initiate discourse, to react to the meaning of what is being said, to elaborate on one another’s utterances, and to exchange unknown or relatively unpredictable information” (Fröhlich et al., 1985, p. 61).

Spada and Fröhlich (1995) indicate that the categories can be removed or added to the COLT schemes. In the present study, two observation sheets were adapted in alignment with the research purpose of the study. Accordingly, in observation sheet Part A (as shown in Figure 3 above), the real-time classroom activities were noted. The features and categories in Part A were time, activities & episodes, participant organization (class, group, individual), content (management, language, other topics), modality (listening, speaking, reading, writing), and materials (visuals and audio). Each feature and each category are further divided into binary or multiple categories, as seen in the figure above.

Part B of the COLT observation scheme (as shown in Figure 4 above) is used to thoroughly analyze teacher and student verbal interaction. As the figure above shows, the features and categories in the COLT observation sheets in the study were the use of target language (L1 or L2), information gap (giving information and requesting information), sustained speech (minimal, sustained, ultra-minimal --only in student

verbal interaction), reaction to form or message, and incorporation of student/ teacher utterances. Besides all the features and categories above, a different category, *discourse initiation*, was investigated in student verbal interaction so as to explore the extent to which the students started interaction.

The analysis of interaction involves investigating the communication patterns in a classroom utilizing coding systems (McKay, 2006). Thus, the classroom interaction which best fosters language learning is aimed to be defined; whether teachers employ effective communication patterns in their classrooms or not can be revealed; and for prospective language teachers, various communication patterns can be suggested for their class practices (McKay, 2006).

The COLT observation scheme, which was first developed by Allen et al. (1984) as a part of a project to explore the educational variables affecting language proficiency, is widely used in interaction analysis (McKay, 2006). The motive for the COLT observation scheme arose from communicative language teaching and its implementation in the classes (Spada & Fröhlich, 1995). Based on communicative language teaching, the instrument helped to reveal language learning processes and how they happened by pinpointing the features of interaction and communication which contribute to the success in language learning. Since the present study aims to reveal the characteristics of classroom communication and interaction, the COLT observation scheme is preferred to be employed as an instrument during the data collection and analysis procedures.

#### 4.4 Data analysis

The adopted procedures to analyze the collected data involved scrutinizing the class recordings to complete the COLT-Part A and to code the transcripts prepared based on the recordings. Concerning the inter-rater reliability, Spada and Fröhlich (1995) underscore that more than one coder should engage in the coding process so that subjectivity can be provided during the analysis of classroom observation. In the present study, two coders were involved in the coding process. The coders worked on the recording of the classes by coding the data on the observation sheets independently from each other. For the inter-coder agreement, all the coded data were compared. The consistency between the two raters was calculated using Cohen's Kappa for Part A and Part B of the COLT observation schemes separately. The results showed substantial agreement between the two raters. The value for Kappa was calculated as 0.80 for the COLT-Part A, and 0.79 for the COLT-Part B, indicating a good level of agreement and a high level of inter-rater reliability coefficients. Later, for the differences between the raters in the coded categories, a negotiation process in which two of the coders involved assisted in coming to a reasonable conclusion regarding the code of the categories investigated.

The data analysis procedures involved the conventions determined and recommended by Spada and Fröhlich (1995), who were the developers of the COLT observation scheme. The coding process of the COLT-Part A involved marking the observation sheet while watching the recording of classes. When there was uncertainty, the recording was replayed and checked for coding. The coding of COLT-Part B was completed by working on the transcripts of the student and teacher verbal

interaction in the observed classes. After the coding finished, the marks for each category were calculated, and the percentages were figured out.

Coding was done by inserting checkmarks for appropriate categories. Spada and Fröhlich (1995) explain in the process of coding, the categories might have “exclusive focus”, which is when only one category is checked, or “combinations” which refer to the cases when more than one category is checked (p.31). Spada and Fröhlich (1995) describe the combinations are further divided as an equal and primary focus. The equal focus involves placing checkmarks for more than one category when the time and emphasis are given for an activity or episode to more than one category. However, the primary focus encompasses inserting a checkmark on the observation sheet for the category when an emphasis is given only to one category (when a lot of time is spent on an activity or episode in class). The primary focus is shown by drawing a circle around the checkmark in the category box.

#### 4.5 Findings

The findings from Part A and Part B of the COLT observation scheme are presented in this section respectively.

**COLT Observation Scheme-Part A** With reference to the data analysis methods elucidated in Spada & Fröhlich (1995), the activities and episodes in the seven classes which were subject to the present research were analyzed by using the COLT Observation Scheme-Part A. Spada and Fröhlich (1995) point out that Part A is coded in ‘*the real-time*’ whereas, in the present study, the analysis of Part A involved carrying out the research by employing methods based on watching the class videos many times and completing the COLT observation sheets of each class. The findings from the analysis were represented in Tables 1 and 2, and 3 below by grouping the data by class based on the features of *Participant Organization*, *Content*, *Modality*, and *Materials*.

In the feature of *Participant Organization*, the categories analyzed are *Class*, *Group*, and *Individual*, each of which is divided into further sub-categories. To begin with, *Class* involves the analysis of the interaction initiated and dominated by the teacher (talk) in the class. The category of *Class* also encompasses the analysis of the inter-

**Table 1** Participant Organization by Class

	Class		Group		Individual	
	T→S/C	S→T/S	Same	Different	Same	Different
Class 1	100%	47%	-	-	100%	-
Class 2	91%	94.51%	-	-	100%	-
Class 3	100%	70%	-	-	100%	-
Class 4	100%	70.49%	19.04	-	80%	-
Class 5	100%	74.02%	-	-	100%	-
Class 6	74.96%	86.06%	-	-	100%	-
Class 7	44.60%	91.22%	12.75	-	87.25%	-
Total	87.22%	76.18%	4.54	-	95.32%	-

**Table 2** Content by Class

	Management		Language		Other Topic	
	Procedure	Discipline	Form	Function	Narrow	Broad
Class 1	57.43%	-	48.78%	38.29	-	100%
Class 2	54.31%	-	60.83%	42.41%	24.16%	51.13%
Class 3	74.07%	-	27.71%	70.44%	25.92%	74.08%
Class 4	100%	-	13.39%	30.41%	6.66%	93.33%
Class 5	100%	-	39.62%	70.03	-	100%
Class 6	74.96%	-	45.71%	16.13%	6.85%	93.14%
Class 7	48.29%	-	12.47%	55.58%	11.87%	88.12%
Total	72.72	-	35.5%	46.18%	10.78%	85.68%

**Table 3** Modality and Materials by Class

	Modality			Materials	
	Listening	Speaking	Reading	Audio	Visuals
Class 1	33.76%	38.59%	23.30%	18.24%	100%
Class 2	88.35%	88.40%	42.05	-	100%
Class 3	92.92%	73.75%	40.84%	8.66%	100%
Class 4	72.03%	89.96%	90.86%	0.28%	100%
Class 5	97.01%	97.01%	29.17	-	100%
Class 6	91.54%	78.72%	13.56%	25.03%	100%
Class 7	99%	99%	5.99%	30.41%	100%
Total	82.08%	80.77%	35.11%	11.80%	100%

action initiated and pursued by the students. Thus, the categories reveal the flow of interaction between a student and students/ the teacher ( $S \rightarrow S/T$ ) and the teacher and the other students/ the whole class ( $T \rightarrow S/C$ ). The table above indicates that the interaction was in a direction in which the teacher started and maintained the interaction in most of the classes. Further analysis of the class video transcripts also revealed an *exclusive*, *primary*, and *equal* focus on interaction. In the table above, it is clear that in Class 1, all the episodes and activities involved  $T \rightarrow S/C$  interaction (100%), and 47% of the episodes and activities in class involved  $S \rightarrow S/T$  interaction. When analyzed in detail, it was calculated that the  $T \rightarrow S/C$  interaction was exclusive in 52.03% of all the activities/ episodes. 47% of  $S \rightarrow S/T$  interaction was not exclusive, but a combination of  $T \rightarrow S/C$  interaction and  $S \rightarrow S/T$  interaction with an equal focus. In class 2, of all the activities/ episodes, 42% involved  $T \rightarrow S/C$  primarily, while the interaction was also started and maintained by the students. The exclusive focus on  $T \rightarrow S/C$  was calculated as 8.28%, whereas  $S \rightarrow S/T$  was exclusive at 8.48%. In Class 3, of all the class time, 38.56% involved interaction between  $T \rightarrow S/C$  and  $S \rightarrow S/T$ , while the primary focus was on  $T \rightarrow S/C$  interaction. Besides, 29.55% of all the class time was found to have an exclusive focus on  $T \rightarrow S/C$  interaction. Of all the class time in Class 4, 11.74% encompassed  $T \rightarrow S/C$  interaction exclusively, lower than the other classes documented here. In this class, the teacher carried out a break-out room activity, which lasted 6.77 min, which led  $S \rightarrow S$  interaction to increase, which in turn reflected upon higher  $S \rightarrow S/T$  interaction in class. In Class 5, of all class time, the  $T \rightarrow S/C$  interaction was calculated to be 13.06%. In the rest of the class time, the interaction involved  $T \rightarrow S/C$  and  $S \rightarrow S/T$  (25%, in most of which  $T \rightarrow S/C$  interac-

tion received primary focus). In Class 6, the table above shows that as different from other classes, the interaction which students initiated and maintained was higher than teacher-initiated and dominated interaction. In further analysis, it was found that the exclusive focus on T→S/C interaction was 4.65%. Thus, in most of the class time, the interaction started and was pursued by the teacher, and the student/s received an equal focus without any findings regarding primary focus. Finally, in Class 7, the T→S/C interaction was far lower than the S→S/T interaction. The exclusive focus on T→S/C was 17.52%; 38.74% received equal focus, 14% of which primarily belonged to T→S/C interaction.

The next category analyzed in this section is *Group Work*. The overall percentage of group work in the observed classes was low, at 4.54%. Only in Class 4 (19.04%) and Class 7 (12.75%), the students were engaged in group work by doing the same tasks rather than different tasks. The teachers in these two classes placed the students in break-out rooms and asked them to discuss the given topics relevant to the class subject. The teachers formed about 12 break-out rooms, asking students to work in pairs or groups of three. The students were required to ask questions to each other by taking turns in groups. The break-out room activities lasted five to seven minutes in each class. At that time, the teachers waited for the students to do the exercise. When the time was over, the teachers called back all the students into the main session and closed all the break-out rooms. In addition to *Group Work*, the analysis of *Individual Work* showed that the students worked on the same task with a percentage higher than 80% in all classes (overall 95.32%). This showed that the students in the classes were assigned the same tasks, and they worked on them individually most of the class time.

The following table presents the results regarding the next feature, *Content*, with three categories analyzed: *Management*, *Language*, and *Topic*.

The first category, *Management*, was divided into two subcategories as *Procedure* and *Discipline*. In the process of class observations, no disciplinary remarks were marked on the observation sheet. However, the analysis indicated that teachers gave procedural remarks with 72.22% in all of the activities and episodes. The procedure-related utterances by the teachers encompassed more than 50% of all the activities and the episodes in Classes 1, 2, 3, 4, 5, and 6, as shown in the table above. The procedural remarks encompassed 48% of all the activities only in Class 7.

The second category analyzed was *Language*, which had two subcategories: *Form* and *Function*. Form involved the aspects in which the teacher focused on the formal language. In the present study, it was evident that the teacher's verbal behavior involved correction, teaching specific forms, or correcting or modeling the correct pronunciation in all the classes. The subcategory, *Form*, did not occur in all of the activities and episodes, as shown in Table 2. In Classes 1, 3, 4, 5, 6, and 7, the average of the teachers' focus on the formal aspect of language (35.5%) was lower than 50% of all the activities and episodes. The percentage was higher than 50% of all the activities only in Class 2.

The following subcategory under *Language* is *Function*, which involves achieving communicative features of the language. In the present study, as shown in Table 2, in all of the classes, this category was checked off with a percentage higher than 50% in Classes 3, 5, and 7, while it had a percentage lower than 50% in Classes 1, 2, 4, and

6. In the classes under scrutiny in the present study, the utterances checked off for the subcategory, *Function*, involved *expressing opinions* and *asking for giving opinions*.

Finally, the category, *Other Topic*, involved investigating whether the topics dealt with in classes were *narrow* or *broad*. The analysis revealed that the percentages of narrow-type topics covered in courses were low in Classes 2, 3, 4, 6, and 7 (with an average of 10.78%). Narrow-type topics were not even focused on in Classes 1 and 5. Instead, broad-type topics were addressed to the students in all the classes with higher percentages (with an average of 85.68%) as shown in Table 2.

Table 3 indicates the student modalities and the materials used by the teachers. The student modalities in all classes encompassed listening (with an average of 82.08%) and speaking (with an average of 80.77%) with high percentages. Besides, reading modality was found to be present. Compared to the listening and speaking modalities, the reading modality had lower percentages (with an average of 35.11%) in most of the classes (except Class 4, which had 90% percent of all the activities and episodes the students engaged in).

In all of the classes, the use of visuals covered the whole class time. Depending on the activities, the use of audio material showed variety throughout the classes. In Classes 2 and 5, there was no use of audio material for the activities and episodes. However, in Classes 1, 3, 4, 6, and 7, the use of audio material was checked off in very few of the activities and episodes.

**COLT Observation Scheme-Part B** Compared to the COLT-Part A, the analysis of the COLT-Part B was more detailed and done on the transcripts of seven classes. The COLT-Part B features the communicative aspects of the teacher and student verbal interaction. The results of the analysis which was carried out by two coders were presented in this section. The entire class time was included in the analysis. To code teachers' and students' verbal utterances, teacher and student turns were taken into consideration (Spada & Fröhlich, 1995). For the analysis of the COLT Observation Scheme-Part B, the transcripts of seven classes were prepared first. The analysis was done by putting checks in the appropriate boxes under the categories on the observation sheets. Each category in Part B was calculated as a percentage of its main feature, as suggested by Spada and Fröhlich (1995). The checkmarks in one specific category were counted and divided by the total number of the check marks in that particular feature. All the categories given under the main features on the observation sheet (Part B) were calculated as a proportion. Still, only *discourse initiation* does not have a subdivision. It belonged to the students, so in the calculation of this feature, all the turns which students initiated were counted and divided by the number of all student turns.

Figure 5 below depicts the averages which belong to the teacher verbal interaction.

In all of the classes analyzed in this research, the *Target Language use* was L2 in all teachers' verbal interactions. The teachers all used L2 in their observed classes for their instruction and interaction with the students throughout class time. The second feature investigated was the *Information Gap*, which has a binary division of the categories, *Giving Information* and *Requesting Information*, each of which has a binary division of categories themselves. In the category of *Giving Information*, it was found

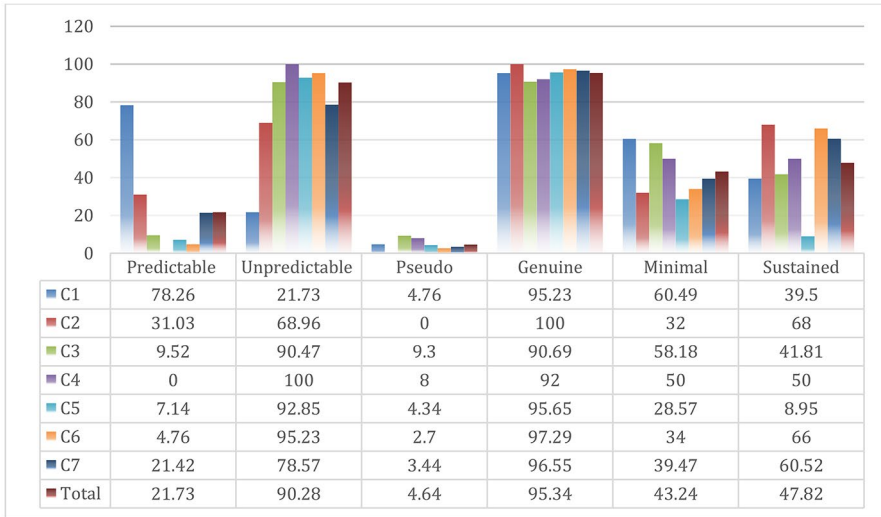


Fig. 5 Averages of the Categories in Teacher Verbal Interaction

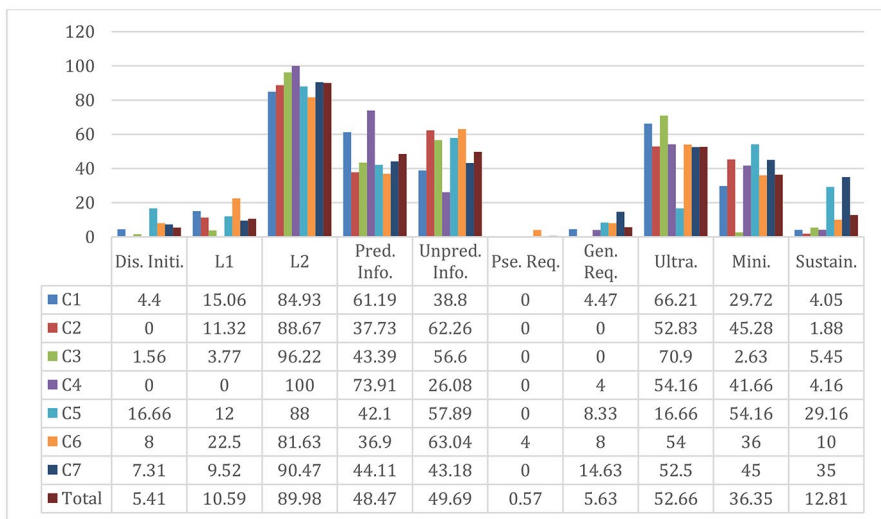


Fig. 6 Averages of the Categories in Student Verbal Interaction

that the average of giving unpredictable information (90.28%) was higher than the predictable information (21.73%), which suggests that in all of the classes, teacher utterances were marked as unpredictable. The message is not predicted easily; plenty of information is provided. For example, in Class 1, the average of predictable information (78.2%) was higher than the unpredictable information (21.73%).

When the categories under the feature of *Request Information* were analyzed, it was revealed that the *genuine request* category (95.34%) was a lot higher average

than the *pseudo questions* (4.64%). Thus, it proposes that the teachers requested information which they did not know beforehand in all of the classes. The sustained speech feature involved two categories *minimal* and *sustained*. The analysis showed that sustained teacher utterances (47.82%) were slightly higher than minimal teacher utterances (43.24%). However, it should be noted that the average of the category, minimal speech, was not low. In Class 1 (60.49%), Class 3 (58.18%), and Class 5 (28.57%), the averages of minimal teacher utterances (Class 1=60.49%; Class 3=58.18%; Class 5=28.57%) were higher than the sustained speech (Class 1=39.5%; Class 3=41.81%; Class 5=8.95%).

In a similar way to the teacher verbal interaction, the communicative features of the student verbal interaction were analyzed. The averages of categories in the student verbal interaction are as seen in Figure 6.

*Discourse initiation* revealed the averages of the turns which students started unexpectedly in the class. The figure above shows that the percentages of *discourse initiation* by the students were very low (with an average of 5.41%) in the classes under examination in the current research. The next feature is *target language use*. It was not given in the figure of teacher verbal interaction since all the teacher utterances in the classes observed were in L2. However, whether the students used L1 or L2 was investigated in students' verbal interaction. The analysis showed that the students' verbal interaction involved L1 use in most classes. The average was low (10.59%), though. The frequency of L2 use was higher in all the classes (the average is 89.98%). Therefore, it suggests that the students mostly used L2 in their utterances. When the category of *giving information* was analyzed, the averages were high in both subcategories: *predictable* (the average is 48.47%) and *unpredictable* (the average is 49.69%) *information*. The results here suggested that students' messages in the classes were sometimes easy to anticipate and sometimes not because the students provided information that was not easy to be known or guessed by the others.

The analysis of the following category, *information request*, was done by looking at all the student turns in the classes and by dividing the number of *pseudo* and *genuine questions* by the total number of student turns in one particular class. The results indicated that in the student verbal interaction, the averages of this feature were very low compared to the other categories. When compared to *pseudo* and *genuine requests* in themselves, the averages of *genuine requests* were higher. Still, overall, compared to the other categories, it was clear that the students did not address *pseudo* or *genuine questions* to each other and the teachers at high levels. The feature of *sustained speech* feature indicated that samples of *ultra-minimal*, *minimal*, and *sustained speech* were found in student verbal interaction; however, the comparison unveiled that the students' utterances were mostly ultra-minimal (52.66%) in the classes observed, which followed by minimal (36.35%) and sustained speech (12.8%) respectively. This result indicates that the students' utterances were mainly limited to one sentence.

In the COLT observation scheme, the main features mostly have the binary distinction of the categories, yet the main features such as the incorporation of student/teacher utterances have multiple categories and are sometimes double-coded. The calculation of these categories was done by considering whether the incorporations



**Table 4** Teacher Verbal Interaction/ Incorporation of Student Utterances

Form-Related Incorporation	Message-Related Incorporation		
• Correct+Paraphrase	0.81%	• Comment	15.64%
• Correct+Repeat+Comment	4.26%	• Comment+Expand	17.61%
• Correct+Repeat+Comment+Expand	1.98%	• Comment+Clarification Req.	0.64%
• Correct+Repeat+Expand	0.95%	• Comment+Expand+Elaboration Req.	0.94%
• Clarification Request	0.27%	• Comment+Elaboration Req.	1.79%
• Repeat+Paraphrase+Comment	0.27%	• Repeat	5.46%
• Comment	0.54%	• Repeat+Expand	2.68%
• Comment+Expand	0.54%	• Repeat+Comment	14.70%
• Comment+Elaboration Req.	0.27%	• Repeat+Comment+Expand	5.09%
		• Repeat+Elaboration Req.	3.34%
		• Repeat+Clarification Req.	0.35%
		• Repeat+Paraphrase+Comment	0.35%
		• Repeat+Comment+Expand	0.64%
		• Repeat+Expand+Clarification Req.	0.29%
		• Repeat+Comment+Clarification Req.	0.29%
		• Repeat+Paraphrase	0.29%
		• Correct	4.67%
		• Elaboration Req.	5.14%
		• Expand	9.72%
		• Clarification Req.	1.84%
		• Paraphrase	0.35%
		• Paraphrase+Comment	1.64%

involved a reaction to *Form* or *Message* (Spada & Fröhlich, 1995). Table 4 indicates the averages calculated for teacher and student incorporation of the utterances.

The analysis of the teachers’ incorporation of student utterances was done on the class transcripts. The coding of the categories of *Form* and *Message* was done in combination with the sub-categories in the teachers’/ students’ incorporation of the utterances. This is because both *Form* and *Message* embody the returns to the things said beforehand. All the categories in the incorporation of student/ teacher utterances feature encompass correction, repetition, paraphrase, comment, expansion, clarification request, and elaboration request. These categories all have the potential to occur

**Table 5** Student Verbal Interaction/ Incorporation of Teacher/ Student Utterances

Form-Related Incorporations	Message-Related Incorporations
-	• Comment 73%
-	• Expansion 14%
-	• Comment+ Expansion 5.71%
-	• Repetition+Expansion 0.28%
-	• Clarification Req. 2.01%

alone, while they are also likely to come with the other categories in the feature of the incorporations of student/ teacher utterances.

The table above indicates the teachers' form and meaning-related incorporations of student utterances. Compared to the message-related incorporations, the teachers' form-related incorporations were less than message-related incorporations. The teachers' reactions to the linguistic structure of an utterance were coded in combination with the various categories. The average of the combination of correction and repetition (4.26%) had the highest average when the data from all the classes were taken into consideration. It was followed by the combinations of *correct*, *comment*, and *expansion* (1.98%) and *correction*, *repetition*, and *expansion* (0.95%) with the other highest averages in all the classes. To be more precise, the averages here give insights into how the teacher responded a linguistic form of an utterance. In the classes examined in the study, the teachers gave reactions to the students' pronunciation, vocabulary, or some minor grammar mistakes by repeating the corrected form of the utterance. The second combination of the categories the teachers used while responding to the student utterances showed that the teachers corrected the form, commented on it, and expanded the idea. In addition, repetition of the corrected form and addition of new ideas were also among the mostly used combinations of categories the teachers used to give reactions to the grammar, vocabulary, or pronunciation problems in the classes. As the table indicates, the combinations of *repetition*, *paraphrase*, and *comment* (0.27%) and *comment* and *elaboration request* (0.27%), as well as *clarification request* (0.27%) in the teachers' reactions to the linguistic forms of the students' utterances, occurred much less frequent than the other categories.

The teachers' incorporation of the students' utterances mainly involved message-related reactions. It means that the teacher gave reactions to the content of the students' utterances. The teacher's reactions were coded as one category or as a combination of more than one category. The table shows that with an average of 17.61%, the combination of categories of comment and expansion was the message-related reaction to the students' utterances. This indicates that the teachers mostly remarked on the students' utterances and expanded the content of the utterances the students said formerly by providing related information. After that, the highest average belongs to the category of *comment* (15.64%), which indicates that the teachers gave either positive or negative comments on the content of the preceding utterance(s) of the student(s). Another combination with one of the high averages on the list in the table is *repetition and comment* (14.70%). It shows that the teachers in the study repeated partially or fully what the students uttered and made a comment on the content.

On the whole, the teachers' reactions included message-related incorporations of the students' utterances commonly as opposed to form-related incorporations. The

teachers' reaction to the content was checked off with various categories solely or jointly with different categories. The least used categories were found to be *repetition*, *expansion*, and *clarification requests*; another combination was when the teacher repeated the students' utterance, commented upon it, and asked for a related clarification request (0.29%). Likewise, the average of the combination of *repetition and paraphrase* (0.29%) had a low percentage among the categories on the list of message-related incorporations.

In a similar manner, the students' verbal interaction was analyzed with an examination of form and message-related incorporation. The same categories (correction, repetition, paraphrase, comment, expansion, clarification request, and elaboration request) were also analyzed in the students' incorporation of the teachers'/ students' utterances. The following table presents the students' incorporation of the teachers'/ students' utterances.

It is worth reporting that students' incorporation of the student utterances was not found in the present study in online classes. Instead, students were mostly in contact with the teacher, and their incorporation was message-related; form-related patterns were not found.

Table 5 shows that the category with the highest average was *comment* (73%). It indicates that the students remarked on the content of the teachers' utterances. It was followed by another category, *expansion*, (14%). The finding here could be interpreted that the students provided more information related to the teachers' messages in the classroom. A combination of the categories *comment* and *expansion* had an average of 5.71%; *clarification request*, 2.01%; *repetition and expansion*, 0.28%. Thus, the students' verbal interaction was reflected to be mainly based on *comments*. When the information in Fig. 2 is considered, it may be asserted that those comments mostly involved one word or a few sentences (ultra-minimal or minimal) the students uttered related to the message conveyed to them.

## 5 Discussion

This present research aims to depict the nature and the extent of classroom interaction in online classes. The findings presented in the previous section are discussed in this part, respectively. To begin with, *the participant organization by class* feature revealed that the interaction flow from teacher to student(s) had a higher average than the interaction flow from student to student(s)/ teacher in the classes observed. The students worked individually on the given tasks, and the average of group work was relatively low when all the classes were taken into consideration. Interaction has a crucial place in the classroom. For effective learning, meaning is to be negotiated (Long, 1996). Interacting with teachers bears vital importance for students because the teacher is the one who can provide them with effective input in the classroom (Knutson, 2001). All the same, students are also to take advantage of engaging in communication with others in the classroom (Knutson, 2001). Therefore, facilitating the communication or interaction in the classroom with the involvement of more speakers (namely, engaging students in contact with each other in the classroom) is equally essential (Knutson, 2001). The current study's findings revealed that in

online classes subject to research, teacher-initiated and maintained interaction had a higher percentage average than student-initiated and maintained interaction. Considering this result, one may conclude that the students' communication engagement with each other fell behind, which signals a hinder on the quality of interaction in the online classes. In this type of interaction, the interaction is dominated by the teacher, and the students' role in the classroom remains at a minimum (just giving answers to the questions and receiving commands) (Al-Zahrani & Al-Bargi, 2017). This contradicts the purpose of instruction which involves sharing knowledge with the students by keeping the teachers' involvement at a minimum, and by encouraging students to be involved in communicative activities in the classroom more and to yield communicative outcomes. The findings also unveiled that the students worked on the same tasks in all of the classes, and the group work activities could not have been done. Galegane (2018) expounds that group work activities have the potential to maximize the interaction between and among students, so engaging students in group work activities in the classroom is important to increase interaction. This finding may also correlate with the results of Yüksel and Uysal (2021) that present the lack of group work activities in online classes. In comparison to face-to-face mode of instruction, it is difficult to manage group works and watch the students working in groups carefully in online language classes (Yüksel & Uysal, 2021). This leads students to have fewer chances to use the target language in the classroom.

Moore (1989) explained the interaction between learners (whether it is between each other with or without the teacher) is a crucial part of learning. In the present study, the results indicated that the interaction between students was at a minimum. Instead, the interaction between teacher and the students had a higher percentage average. The software the teachers used in the online classes provides a feature of break-out rooms, which enables the teachers to place students in small groups and work in small teams, though. Only in two classes, this feature was used by two teachers. However, it should be noted that throughout the time the students worked in the break-out rooms, the students' behavior could not have been observed. Therefore, the student interaction there was not explored in the present study. Seedhouse (1996) emphasizes the value of natural discourse in the classroom by explaining that the interaction in the classroom is to encompass teachers' and students' equal contribution to the conversation by taking turns. Providing students with more chances to engage in conversation and increasing students' time of talk in the classroom foster learning (Seedhouse, 1996). In this respect, Thornbury (1996) similarly underscores that negotiating meaning while interacting is vital, so students are supposed to ask questions. The negotiation of meaning is the core of interaction since students engage in interaction actively during the verbal exchanges between themselves and the teacher, so students should be encouraged to exchange meaning in the classroom (Al-Zahrani & Al-Bargi, 2017). Thornbury (1996) expresses that the discourse started by the students is essential since it displays equal partnership in discourse in the classroom. When the low average of student-initiated conversation and lack of interaction between the students in the present study are considered, the online education might be thought as a hindrance of fostering student-student interaction in the classes.

The analysis of the categories under the feature, *content*, gave an understanding of the management, language, and topics discussed in the observed classes. For the

first thing, it was revealed that the teachers did not spend any time on any discipline-related statements. Instead, most of the class time was spent on procedural remarks to give directions or instructions about the activities to do and the questions to answer. Referring to face-to-face instruction settings, Macías (2018) explains that classroom management issues, a few of which could include dealing with differences in individuals, organizing classwork, not having sufficient classroom materials, dealing with crowded classrooms, having difficulty in arranging sitting, keeping the noise in the classroom down, etc. are the causes of challenge in a class for the teachers. However, when the findings from the present study is considered, it could be concluded that online classes were mainly instruction-focused. Thus, time loss to disciplinary issues could have been minimized, which might have helped have more instruction-focused classes during online courses.

When the modality and materials by class are considered, it is clear that the classes observed in this study were mainly based on listening and speaking skills. In the classes, the use of visuals encompassed the entire class time, while the use of audio materials involved only a small part of the whole class time. Given that the classes were based on the instruction of skills rather than grammar teaching, it is not surprising that the average percentage of the function-based language feature had higher percentage than the form-based language instruction in the observed classes. The form-based language features in the teacher talk were marked when the teachers corrected a pronunciation mistake, some grammar forms, or vocabulary problems in their online classes.

In the observed classes, it was revealed that broad topics were addressed to the students more than narrow topics. In the coding of this category, the topics were marked as broad if they did not refer to familiar topics such as “personal information, school topics, everyday routines” but involved “a broader range of reference” (Spada & Fröhlich, 1995, p. 50). One reason for the higher percentage of broad topics may be the sourcebook used in the observed classes. The units covered in the observed classes led the teachers to ask questions addressing broad topics. The other reason may be a result of the students’ proficiency levels in English. All the students participating in the present research were at the B1 level. At this level, students are supposed to express their opinions on topics that are not limited to their immediate environment. Had the participants been students at a lower level of proficiency in English, more different results would have been obtained regarding the topics discussed in classes.

Spada and Fröhlich (1995) explain that in natural discourse, unpredictability is crucial, as well as taking turns and asking questions. When the present study’s findings were evaluated in terms of the unpredictability of the language used by the teacher and students, it was found that the average percentage of unpredictable information was a lot higher than predictable information in the analysis of teacher verbal utterances. In the analysis of students’ verbal utterances, the average percentages of predictable and unpredictable information were really close to each other. This result suggests that the teachers provided the students with information which they could not anticipate easily. This might have been relevant to the broad topics discussed in the classes. The teachers gave further information regarding the concepts discussed in the classroom material. Thus, this may have affected the giving information fea-

ture. As for the analysis of the same feature in the students' verbal interaction, the averages of predictable and unpredictable information were found to be really close to each other. Spada & Fröhlich (1995) indicate that asking genuine questions would trigger unpredictable information. The fact that the teacher asked more genuine questions might have fostered the unpredictable information in the students' talk. Asking questions is the most commonly used technique which teachers benefit from in the classroom, and it has several functions such as helping to control interaction in the classroom, presenting the opportunity to practice for the students and giving teachers feedback about students' learning process (Xiao, 2006). Also, it helps teachers involve students in class more actively, which has a motivational aspect, too (Xiao, 2006). Walsh (2006) explains that the questions, the answers of which teachers already know, differ from the questions to which teachers do know the answer. Accordingly, when teachers ask questions whose answers they know or guess easily, the students are less likely to produce "natural responses", and their responses are not as long or complicated as the ones given to the questions the answers of which are not known by the teachers (Walsh, 2006; p. 8). In this vein, questioning has a value to trigger communication and interaction in the classroom. Not only teachers but also students could ask questions. As Juzwik et al. (2013) explain, the fact that students are able to ask questions related to the course content gives a good understanding of the process of their learning, which assists teachers to make lessons clearer in response. Hence, when students start asking questions, they take an active role in learning and the distribution of discourse in the classroom between students and the teacher becomes equal (Yüksel & Yu, 2008).

The category of pseudo-questions had a meager percentage in teachers' and students' verbal interaction patterns. All the same, the reason for the high percentage of predictable information in students' verbal interaction analysis could be expounded with the fact that the student talk was also involved in their responses to the exercises in the class material. Thus, the information the students provided for the questions was regarded as predictable by the researchers (raters/ coders), which might have increased the percentage of the predictable information in the students' verbal interaction.

The analysis of the teachers' verbal interaction showed that the patterns of sustained speech had a higher percentage than the minimal speech patterns in the teachers' utterances. In contrast, in the students' verbal interaction, ultra-minimal speech patterns had a much higher percentage than the patterns of minimal or sustained speech. This finding showed that the students' responses were mainly one or two-word utterances in the observed classes. Besides, the discourse initiation category had a deficient percentage. All the results may put forward that in online classes, student verbal interaction was limited, while the teacher talk was more dominant. However, a more precise conclusion of a comparison of the results from an interaction analysis of face-to-face classroom practice would bring in more sound results.

A further detailed analysis of teachers' verbal interaction while incorporating student utterances showed that the teachers' incorporation of the students' utterances was based on message-related incorporations. Besides, different categories were found. The categories, commenting on student utterances and expanding why they said, had higher percentages. The form-related incorporations remained at a minimum. In this

respect, the results of the teachers' incorporation of the students' utterances were in alignment with the results from the language feature (form or/and function) analysis. The students' incorporation of the teachers' utterances was message-related, and it was found that the students mostly commented on the teachers' utterances. The form-related incorporations of the teachers' utterances were not expected in the students' verbal interaction. Nonetheless, it could have been possible to reveal the incorporation of their peers' utterances in the students' verbal interactions. The study did indicate that student-student interaction remained at a minimum.

One salient point emerging in this study was the lack of student-student interaction in the observed online classes. The interaction between students was doubtlessly crucial in learning settings. Swan (2002) explains that online education has been under criticism due to the lack of affective means of communication in it, and thus, learning fails. Having said that, Swan (2002) reveals the opposite and expresses that the students compensate for the lack of affective means of communication by participating in a lot of verbal immediacy behavior. In his study, Swan (2002) expresses that verbal immediacy behaviors enabled participants to create a social presence. The participants were, hence, able to compensate for the lack of affective communication channels in online communication. In the present study, no indication of verbal immediacy behavior such as using humor, praising, sharing information about themselves with others (Swan, 2002) were explored in students' verbal interaction. Indeed, the lack of communication between the students had a prevalent occurrence in the classes. Thus, the study presents a conclusion related to a crucial issue in online classes, the lack of student-student interaction, by underscoring that student-student interaction ought to be considered and organized well in online classes with integration of some practical activities to increase the exchange between/ among students.

Moore (1989) stresses that the main drawback of distance education problems arises from using a single method, which restricts the interaction to one kind only. More precisely, Moore (1989) explains that the teleconference group, for example, has the potential to increase the interaction between the students or the instructor and the students when it is not used only for the delivery of the courses with presentations. Likewise, Huang et al. (2020) state in remote education, the teacher's and students' interaction have crucial importance, and the interaction could be increased, using "online discussion, project-based learning, online debate, brainstorming, experiential learning and gamifying learning" (p. 50). To promote interaction in the classroom, language instructors are to be trained to employ various strategies; thus, language instructors would create more space for student talk, decreasing their presentation time and engaging the students more in language activities (Weizheng, 2019). In this respect, Moser et al. (2020) also explain the importance of training educators to deliver courses online and using technology, which is significant both in online courses and traditional face-to-face education.

## 6 Conclusion

This study has sought a response to the research question of how online learning impacts classroom interaction in EFL classes at the university level. In particular, the study has aimed to reveal the nature of classroom interaction by indicating the degree of teacher-student(s) and student(s)-student(s) interaction and the nature of classroom interaction in online EFL classes by unveiling the features of the teachers' and students' verbal utterances.

One main aim of the present study was to address the lack of research evidence on how online learning affects classroom interaction in the EFL classes. Based on the findings related to online learning practices, some research (Aguilera-Hermida, 2020; Dong et al., 2020) has indicated the negative effects of online learning on interaction between teachers and students, whereas some other research (Ana et al., 2020) has suggested that interaction could be maintained in online classes. There is no doubt that the interaction in the EFL classroom has a major contribution to the educational processes since it fosters and assists learning. Therefore, it is essentially important for teachers to be aware of its significance in teaching and learning practices so it could be maintained in classes. In traditional classes where the instruction mode is face-to-face, interaction is easy to initiate and maintain with the students. However, in online education, the practices of which have increased with the Covid-19 pandemic, the question of how online learning practices affect interaction in the EFL classrooms has been answered based on the reflections taken from the practitioners. No previous research indicated a detailed picture of the online classes in terms of the degree of teacher-student(s) interaction and student(s)-student(s) interaction and analyzed the verbal speech patterns in online EFL classes (to the knowledge of the researcher).

Based on the findings, the study provides implications for the practitioners of online EFL learning about the interaction in online EFL classrooms at the university level. One result derived from the findings of this study is that teacher-student interaction is more pervasive than student-student interaction in online classes, which shows that in online education, student-student interaction needs to be re-considered, and more attention should be paid to the ways to increase it. Thus, the study suggests that teachers should be aware of the problem and organize their classes to increase student-student interaction in online classes by giving more activities to engage students in group or pair work so that they can practice the language with each other.

The findings related to the detailed analysis of verbal utterances of teachers and students in the present study indicated that the teachers' speech was in fact more message-related rather than form-related, they asked genuine questions and provided the students with unpredictable information. Pondering this finding, one may assume that the teachers' verbal utterances reflected a communicative value in the sense of triggering students' engagement in communication; however, the required response failed to be obtained from the students in the same communicative property. The interaction was found to be dominated by the teachers. Furthermore, the students' responses primarily involved ultra-minimal utterances, and it was revealed that the students rarely asked questions in the classes. When the findings here are considered, it can be concluded that the students' speech patterns were not communicative in the current study, and thus, the interaction could not have been enhanced in the classes.



Therefore, the study suggests that it is necessary to plan online classes by taking the students' engagement in classes more actively. This requires that language teachers be informed or trained in pre- or in-service training programs about the engagement of students in the classroom activities in online classes.

Differentiating from the previous research, the present study provides a clear understanding of the nature and extent of interaction between students and teachers in online classes with an analysis of the verbal patterns. Nonetheless, the findings of the study are to be interpreted with caution, and various limitations of the study should be considered for future studies. One of the limitations of the present study was its sample size. Had the study been carried out with a larger number of student and teacher groups, the results of the study could have displayed a clearer and more accurate picture of the interaction in online education. Besides, a comparison of the interaction patterns in face-to-face education to online education (when the same class materials are used, and the same skills are aimed to be improved in classes) would help better understand the minuses and pluses of either education type over one another in further studies. This study focused on the instruction of listening, speaking, and reading skills in online education. In further studies, other language skills such as grammar and writing could be investigated, and the results from those studies could be compared with the present one. Also, further work is required to examine how interaction takes place in online EFL classes with students with different English proficiency levels and from other age groups.

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**Data availability** The datasets analyzed during the current study are not publicly available since they contain information that could compromise research participant privacy/ consent but available from the corresponding author on reasonable request.

## Declarations

**Disclosures** All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation. Informed consent was obtained from all the participants for being included in the study. Additionally, the questionnaires were used with the permission of the researchers who originally developed them.

**Conflict of interest** The authors declare that there is no conflict of interest.

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