Investigating the Interaction Patterns in EFL Virtual Classroom: A Case Study

Tian Havwini
Department of Mechanical Engineering
Politeknik Negeri Batam
Batam, Indonesia
tianhavwini@polibatam.ac.id

Abstract— In this study, the interaction pattern between teacher and students in a synchronous e-learning system was analyzed. The study focuses on the initiation acts from both teacher and students. Three class-sessions of an EFL virtual classroom were recorder and the whole classroom talk then transcribed. The results suggest that teacher has more initiation acts, as the most dominated initiation acts is elicit the genuine questions in purpose of getting information from the students. While from students' side, the most dominated initiation acts is also elicit the genuine questions in purpose of getting information from teacher. The results also indicate that in this virtual classroom, teacher still dominated most of the classroom talk. This paper offers the preliminary discourse analyses as part of an examination of the value of virtual places for instructional design.

Keywords— synchronous learning environment, virtual classroom, EFL classroom, interaction patterns, initiation acts.

I. INTRODUCTION

It has been known that the number of online learning environment in formal educational setting is increasing. The delivery of distance education is usually supported by various forms of technology. Recent and rapid improvements in information and communication technologies and the increasing bandwidth of internet access have made the use of synchronous solutions for instruction more popular [7]. The nature of interaction and the type of teacher support required by physical and virtual learning environments differ; and the use of synchronous conferencing techniques has unique benefits in education, as well as challenges. First, real-time interaction allows simulation of a real physical classroom learning situation and immediate interactive clarification of meaning [13]. Moreover, the teaching and learning process in the online learning system, may promise the significant increase to students' performance. Some researchers noted that synchronous conferencing through the internet offers participants a feeling of immediate contact, motivation, and even some fun, which is especially valuable for distance learners. It is also reported that the level of the students' motivation to EFL learning and learners' foreign language proficiency were increased during the online learning process [9, 11].

The investigation regarding the interaction patterns in synchronous learning has recently been a research interest which seeking to understand the nature and implications of virtual classroom interaction. Even though a real-time interaction through virtual learning offers the similar features of a physical learning, the interactional patterns in these two learning environments still may have some differences. The physical presence may be one of the issues in drawing the interaction patterns between teacher and students in the virtual classroom. Narrow down to the language classroom perspectives, the interactional pattern inside the class is one of significant role in the second language acquisition. Thus, it is interesting to take a deep look inside the virtual classroom's interaction patterns to gain a more depth understanding on how the interaction between teacher and students flow in the virtual classroom environment.

The purpose of this study is to investigate the interaction patterns between teacher and students in EFL virtual classroom, which focused on initiation acts from both teacher and students. Although many recent studies related to synchronous and asynchronous learning environment have been conducted, most of these studies are done in collaborative ways, which means that the online learning system was collaborated with face-to-face classroom. Very few studies have been done to examine how the interaction between teacher and students flows when the whole class session is conducted in the virtual environment. On the other hand, to the best of authors' knowledge, no research examined the teacher-students interaction pattern in the language virtual classroom, especially regarding the IRF pattern.

Therefore, one following research question is addressed to reach the purpose; what are the dominant discourse acts of initiation pattern between teacher and students in EFL virtual classroom's interaction? By analyzing the initiation patterns in this synchronous learning environment, the outcome of this study may help the language teacher to understand the interaction flow in the virtual classroom and in turn will help them to build the strategies to face the challenges in the online learning environment.

II. LITERATURE REVIEW

The emergence of the virtual classroom and online educational forums has been heralded both as opening possibilities for new, more powerful learning experiences, and

as inhibiting the creation of communities of practice in which learning is situated. When teachers and students enter the face-to-face classroom, they hold commonly shared expectations about how the interaction through which teaching and learning occur are constituted within it. Teachers and students do not so much expect to define the interaction within face-to-face classrooms as they expect to find their place within it. In contrast, in the current era of the online classes, teachers and students must deliberately consider some questions; how they will enter into the virtual classroom, where they will locate themselves and each other within it and how. Questions of how these acts of positioning shape the interactions through which teaching and learning occur are thus critical to understanding the implications the virtual classroom holds for teachers and teaching [1].

The virtual classroom is both a product of and constitutive of the central processes of globalization. Teachers and students, located in different time zones and separated by vast amounts of space, can interact beyond the boundaries of their physical locales via the printed text and the electronic signal. The separation of time and space creates latitude for social action and reaction that may violate the conventions of face-to-face classrooms [1]. For example, in the online classroom, students can easily choose not to respond to teacher questions and postings, as the teachers have few tools to demand a response from the students. They may communicate electronically, but students can still elect not to respond. In contrast, in the face-to-face classroom, basic conversational norms make it difficult for students not to respond to teacher questions in some way, whether in words or gestures, and teachers have a range of tools available to them to demand student responses, including physical maneuvering, verbal demands, and ultimately banishing students from the physical classroom. In short, like other arenas of social interaction opened by the forces of globalization, the virtual classroom makes possible new combinations and recombination of old and new social conventions and categories.

A number of study revealed that online education has increased the chance for the integration of multimedia and students' learning experience. Recent evidence suggests that instructor-personalized audio lectures improve students' engagement into the course. The study found that student-instructor connections are foster by using instructor-personalized audio lectures, thus in turn, significantly impacted to students' engagement to the course material [12]. In addition, promoting students' engagement in online problem-solving activities is reported to be successful by preparing a plentiful set of online resources and providing online interaction activities. Students' high engagement then affected their achievement in the online class [17].

In terms of the discourse, classroom discourse has several features that distinguish it from casual conversations in other interactive contexts. Many of these features relate to the teacher's role and power: (1) teachers control the children's participation in the discourse by initiating most linguistic exchanges, assigning turns, and having the right to the third move; (2) teachers have didactic and pedagogical purposes that need to be pursued in the discourse; (3) teachers assume the role of primary knower and direct the discourse in a pre-determined direction [4]. By applying these functions, teachers

can guarantee that in whole-class activities with about 25–30 students the discussion will proceed in an orderly manner, and that all participants will be assigned turns in the conversation.

Moreover, in the literature on classroom discourse, the three-move (or triadic) initiation response-feedback (IRF) pattern is traditionally considered as the basic unit of analysis [10]. This pattern is made up of three turns: the teachers *initiate* a linguistic interaction (generally directing a question to a selected student), the student then provides a *Response*, and the teacher replies with a *Feedback*.

In general, research on classroom interaction shows that IRF is a pervasive and dominant pattern, and a fundamental feature of classroom talk. Moreover, since most transactions in school take place through linguistic interactions initiated by the teachers, it is regarded as the main indicator of the teacher–student interaction with the teachers regulating the students' participation in the class activities through the management and control of linguistic exchanges [5]. It has been noted for some time that online discourse has a different nature than face-to-face interactions [6]. A primary difference between online and face-to face interaction is the difference between spoken and visual communication and text-based communication. This cause the discourse pattern in a real-time online learning differed with the pattern in the face-to-face learning environment [3].

III. METHODS

A. Participants

There were approximately 10-15 female students and one female teacher involved in this study. The teacher was a 24 years-old pre-service teacher, majoring in a master degree program of TEFL at a university in Southern Taiwan, while the students are Indonesian workers in Taiwan with the age range from 22 to 35. Teacher and students share the same native language, which is Bahasa Indonesia. As for students' proficiency are from beginner to low intermediate.

B. Class Implementation

In 2015, a private academic institution launched a continuing education program for Indonesian workers in Taiwan. This adult continuing education program is authorized by the Indonesian Ministry of Education and Culture. The program has the purpose to help Indonesian workers who haven't finished their secondary education to get the opportunity to pursue the education and get the degree. To support the flexibility for the students, this program implements a full online learning system, in which there is no face-to-face class for the whole session. This virtual classroom conducted through a cloud-based education platform called WizIQ.

The class was conducted twice a week with two hours for each class session. Teacher gave the lesson orally in real-time class using both Indonesia language and English. Students interacted with teacher and other students through texting in the chat room. If needed, teacher also can pass the microphone control to the students so they can respond to the teacher orally. The textbook for each subject was assigned by the

institution based on the educational curriculum in Indonesia.

C. Data Collection and Analysis Procedure

In total, 3 class sessions were observed and recorded using the teaching platform system. The data collector was present in the classrooms as a participant observer during data collection. Each class lasted about two hours and six hours class recording in total used as the database for this study. Transcriptions were made after the completion of data collection, coming up with approximately 4100 words and 325 turns from both teacher and students. Each class period covered homework discussion, teaching grammatical points, a reading passage, and vocabulary items.

The data transcribed were further analyzed in detail to derive the patterns of interaction among participants in EFL virtual classrooms. The present study used the framework of discourse acts constructed earlier [8] which was based on literature [14, 15] for the following reason. First, using authentic and naturally-occurring data as a source for examples, it offers refinements and extensions to well-developed descriptive frameworks and establishes in the process new insights into the sequencing of patterns of interaction. Furthermore, this framework takes a three part exchange as an organizational unit of conversation, including an initiation, a response and a follow-up. Within each of these three classes, subclasses further identified. All talk that went on in the classrooms observed was classified into two groups: Teacher Talk, and Student Talk. However, the present study only focuses on the initiation part of both participants. Fig. 1 and 2 below shows the final framework used in analyzing the data.

Head Acts	Subclasses		
Initiating acts	1. Requestives	a) Request for action *	d) Invitation
		b) Request for permission *	
		e) Proposal	c) Offer
	2. Directives	a) Advisives	1. Advice
			2. Warning
		b) Mandatives	1. Instruction
			2. Threat
	3. Elicitations	a) Elicit: inform*	
		b) Elicit: confirm*	
		c) Elicit: agree	
		d) Elicit: repeat*	
		e) Elicit: clarify*	
		f) Elicit: commit	
	4. Informatives	a) Report*	
		b) Expressive*	
		c) Assessments	1. Assessing*
			2. Compliment
			3. Criticism
			4. Self-denigration
			5. Self-commendations

Fig. 1. An Intuitive Taxonomy of Discourse Acts Occurring in Teacher Initiation

Head Acts	Subclasses		
Initiating acts	1. Requestives	a) Request for action	d) Invitation
		b) Request for permission	
		e) Proposal	c) Offer
	2. Directives	a) Advisives	1. Advice
			2. Warning
		b) Mandatives	1. Instruction
			2. Threat
		c) Nominate	
	3. Elicitations	a) Elicit: inform	A. Display Qs
			a) Factual Q.
			b) Yes-No Q.
			c) Reasoning Q.
			d) Explanation Q.
			B. Genuine Qs
			a) Opinioning Q.
			b) Information Q.
			C. Restating Elicit
		b) Elicit: confirm	
		c) Elicit: agree	
		d) Elicit: repeat	
		e) Elicit: clarify	
		f) Elicit: commit	
	4. Informatives	a) Report	
		b) Expressive	
		c) Assessments	1. Assessing
			2. Compliment
			3. Criticism
			4. Self-denigration
			5. Self-commendations
		d) Clue	

Fig. 2. An Intuitive Taxonomy of Discourse Acts Occurring in Students Initiation

IV. RESULTS AND DISCUSSION

A. The Dominant Discourse Acts of Teacher Initiation

The dominant discourse acts of teacher initiation patterns in all three virtual classrooms observed were identified using the final framework. The results of the analysis are shown in the figure below. Fig. 3 shows the dominant patterns of Teacher Initiation.
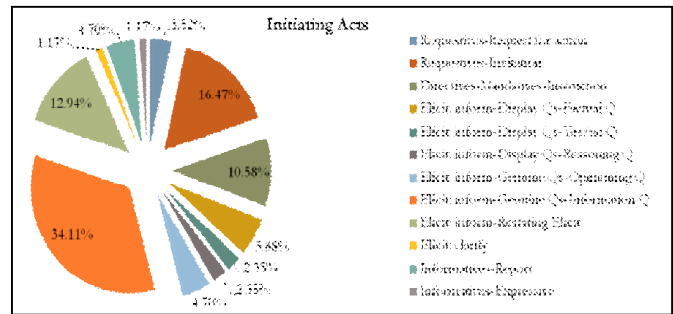

Fig. 3. The dominant discourse acts of Teacher Initiation

As shown in Figure (2), a large number of discourse acts were present in *Teacher Initiation*. The most dominant discourse acts of teacher's initiation is elicitation acts (34.11%), when teacher asked the genuine questions for the purpose of getting information from students. This finding is interesting since in the real classroom, genuine questions from teacher are rarely to be found. In the virtual classroom, elicitation for the purpose of getting information from students is a need, since the presence of students is hardly known by the teacher. Teacher needs to check students' understanding toward the lesson, the class condition, students' presence, and even to check the teaching platform's connection as in the following example:

S1: *Good evening, Teacher.*

T: *Hello, good evening.* ***Can you hear me clearly?***

S1: *Yes I can.*

T: *Okay. Umm, it seems that you're the only one who has*

been here already. That's fine, let's wait the others.

S1: Okay, Teacher.

In the utterance above, the teacher asked a genuine question to check the class condition, whether everything was ready to start the class. This kind of question may not be found in the real classroom where teacher and students are in the same place.

As for the second dominated discourse acts of teacher initiation, the *Requestives Acts* shows the significant number (16.47%) among others discourse acts. The purpose of the *Requestives Acts* is to invite students to participate in the classroom interaction. This strategy was used by the teacher to catch students' attention to the lesson since in the virtual classroom, sometimes students will distracted easily by other things.

B. The Dominant Discourse Acts of Students Initiation

The dominant discourse acts of students initiation patterns in all three virtual classrooms observed were identified using the final framework. The results of the analysis are shown in the figure below. Fig. 4 shows the dominant patterns of Students Initiation.
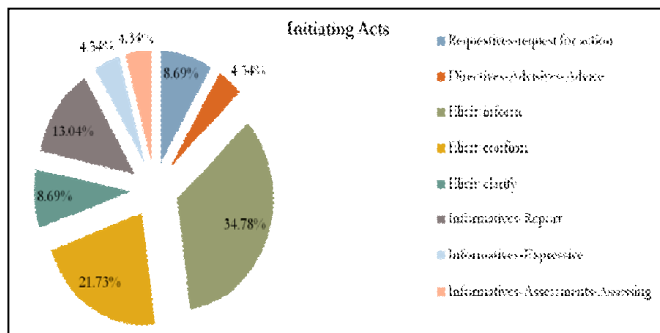

Fig. 4. The dominant discourse acts of Students Initiation

As shown in Figure (3), a large number of discourse acts were present in Students Initiation. The most dominant discourse acts of students initiation is elicitation acts (34.78%), when students asked the genuine questions for the purpose of getting information from teacher. The questions usually are the lecture-related questions. As for the second dominated discourse acts of students initiation, the elicitation acts for the purpose of confirming teacher's talk shows the significant number (21.73%) among others discourse acts. Students need to check their understanding toward the lesson, typically by using confirmation question as in the following example:

T: Okay, do you understand?

*S5: **This class will be recorded, won't it?***

*S3: **Does it depend on the sentences?***

S2: Yes.

T: Yes, Syifa. We record the class. I'll upload the class

recording by next week.

T: Okay, Ratna. For the punctuation, you can choose to use either period or semicolon after the first clause, it depends on you. Okay?

S3: Oh, okay!

In the utterance above, the students asked a genuine question for the purpose of checking whether her understanding toward the lesson is correct or not.

The findings above shows the discourse acts of initiation patterns both from teacher and students in the virtual classroom interaction. The findings revealed that from the total classroom initiation, teacher's initiation still dominated the class interaction patterns. Students' initiation only took 21.30% of whole class initiation, which means that almost eighty percent of the class initiation came from the teacher. Some reasons may answer the following question; why did teacher dominate the class? First, the pedagogical purpose of the class does not attempt to encourage learners to be able to communicate with the target language, instead to help them get the basic knowledge about the target language. As mentioned earlier, the purpose of the program is to facilitate adult learners to pursue their unfinished secondary education and get the degree. This is in line with previous study in the literature which reported that a skill-based subject area may produce less communication between students, as the nature of this topic is commonly instructor-mediated (the instructor lectured and gave sample problems). Meanwhile, other courses of a more content-based nature would probably elicit greater discussion among students [16].

Furthermore, the low number of students' initiation acts also represents a low students' engagement in the virtual classroom. As reported in the literature, students are likely more engaged when authentic learning is implemented [2]. Meanwhile, the focus of this class is mostly about grammar structure, form, and vocabulary items, in which the real-world relevance discussion is difficult to be created. It thus leads to the minimal initiation acts produce by students.

Moreover, the limited access and time in the virtual classroom is also one of difficulties to make the class goes interactively. Unlike the real classroom, there are lots of activities that may promote students active participation in the language classroom which cannot be done in the virtual classroom. The students' condition is also necessary to take into consideration. As mentioned earlier, the students are adult Indonesian workers in Taiwan. Since they have to work during the day time, the class only conducted at night. At that time, students may already feel tired and can't concentrate to the lesson. Thus in turn, they will not participate actively, even for responding teacher's questions.

However, even though the whole class initiation was dominated by teacher initiation, the interaction between the teacher and students was not following a rigid IRF pattern in which the teachers were the only initiators of talk. The students also did initiate exchanges with the teachers and among themselves by being given a chance to express their opinions,

feelings, and personal experiences. The present finding also support the past study which concluded that when teacher prepared the personalized-audio lectures, students are likely involved in the class participation [12].

V.   CONCLUSION AND IMPLICATION

By applying discourse analysis methodology to the analysis of the interaction taking place between the teachers and the students in EFL virtual classroom, the present study has shown the followings. First, the most dominant discourse acts of teacher's initiation are: (1) elicit a genuine question for the purpose of getting information from students, (2) requestives acts for the purpose to invite students' to participate in the classroom discourse, (3) restating the previous elicitation, and (4) requestives acts for the purpose of giving instruction to the students.

Second, for students' initiation patterns, the most dominant discourse acts are: (1) elicit a genuine question for the purpose of getting information from teacher; usually lecture-related question, (2) elicit a genuine question for the purpose of confirming whether her understanding toward the lesson is correct or not, and (3) giving the information to the teacher for the purpose to report the happening situation.

Nevertheless, the limitation in this study is necessary to be address. Due to the merely limited observation time, the data used in this study was hardly enough to draw a solid picture of what really happen in the virtual language classroom. For further research, it is worth to take this into consideration. Furthermore, due to the limited time, the data in the present study was only analyzed by the researcher. There's no inter-rater or intra-rater utilized in this study. Other researcher also need to consider to explore the others two interaction pattern (i.e. response and feedback) in the future search.

Practically and theoretically, the findings of the present study may be useful to EFL teacher who interesting in conducting virtual language classroom, in helping them to understand the interaction pattern between teacher and student; to understand what actually is going on between teacher and students in the language virtual classroom. The findings may also contribute to the literature of language teaching and learning research, especially those which related to the technology usage as a teaching and learning medium.

REFERENCES

[1]   Anagnostopoulos, D., Basmadjian, K., & Mccrory, R. (2005). The decentered teacher and the construction of social space in the virtual classroom. *The Teachers College Record*, *107*(8), 1699-1729.

[2]   Britt, M., Goon, D., & Timmerman, M. (2015). How to better engage online students with online strategies. *College Student Journal*, *49*(3), 399-404.

[3]   Epp, E. M., Green, K. F., Rahman, A. M., & Weaver, G. C. (2010). Analysis of student–instructor interaction patterns in real-time, scientific online discourse. Journal of Science Education and Technology, 19(1), 49-57.

[4]   Lin, A. M. Y. (2007). What's the use of "triadic dialogue"? Activity theory, conversation analysis and analysis of pedagogical practices. Pedagogies, 2(2), 77–94.

[5]   Molinari, L., Mameli, C., & Gnisci, A. (2013). A sequential analysis of classroom discourse in Italian primary schools: The many faces of the IRF pattern. British Journal of Educational Psychology, 83(3), 414-430.

[6]   Murray, D. E. (1991). *Conversation for action: The computer terminal as medium of communication* (Vol. 10). John Benjamins Publishing.

[7]   Ng, K. C. (2007). Replacing face-to-face tutorials by synchronous online technologies: Challenges and pedagogical implications. The International Review of Research in Open and Distributed Learning, 8(1).

[8]   Rashidi, N., & Rafieerad, M. (2010). Analyzing patterns of classroom interaction in EFL classrooms in Iran. The Journal of Asia TEFL, 7(3), 93-120.

[9]   Salmon, G. (2000). *E-moderating: The key to teaching and learning online.* London: Kogan Page.

[10]   Sinclair, J., & Coulthard, R. M. (1975). Toward an analysis of discourse. The English used by teachers and pupils. Oxford : Oxford University Press.

[11]   Shishkovskaya, J., Bakalo, D., & Grigoryev, A. (2015). EFL teaching in the e-learning environment: updated principles and methods. *Procedia-Social and Behavioral Sciences*, *206*, 199-204.

[12]   Steele, J. P., Robertson, S. N., & Mandernach, B. J. (2018). Beyond Content: The Value of Instructor-Student Connections in the Online Classroom. *Journal of the Scholarship of Teaching and Learning*, *18*(4), 130-150.

[13]   Steeples, C., Jones, C., & Goodyear, P. (2002). Beyond e-Learning: A future for networked learning. In C. Steeples & C. Jones (Eds.) Networked Learning: Perspectives and issues. London: Springer-Verlag.

[14]   Tsui, A. (1985). Analyzing input and interaction in second language classrooms. RELC Journal, 16(1), 8-32.

[15]   Tsui, A. (1994). English conversation. Oxford: Oxford University Press.

[16]   Wang, A. Y., Newlin, M. H., & Tucker, T. L. (2001). A discourse analysis of online classroom chats: Predictors of cyber-student performance. *Teaching of Psychology, 28*(3), 222-226.

[17]   Wang, F. H. (2017). An exploration of online behaviour engagement and achievement in flipped classroom supported by learning management system. *Computers & Education, 114*, 79-91.