STUDENTS' INTERACTION IN COMPUTER MEDIATED LEARNING: ANALYSIS OF PRACTICAL INQUIRY MODEL

Lasito; Husam; Magpika Handayani
[1,2]English education Study Program, Universitas Negeri Jakarta
[3]English for Business and Professional Communication, Politeknik Tonggak Equator
lasito@unj.ac.id ; masuh11295@gmail.com; magpikahandayani@yahoo.com

Abstract- *Students' collaboration is essential for the construction of effective, deep, and reflective learning. In the context of computer-mediated learning, students' collaboration was facilitated by discussion forum. While discussion forum is used among distanced learners, there is still lack of knowledge on what really happens when students participate in the discussion forum. This study shed lights on students' engagement in three discussion forums of two language skill courses (Speaking 1 and Writing 1) conducted asynchronously. The engagement was measured from (i) students' posts or comments to see how much students' participation in the forum, (ii) engagement patterns they formed, and (iii) how such collaboration reflected the phases of practical inquiry in online-mediated learning. Results showed that during online-asynchronous seminars, students' participation was minimal and teachers' posts were prevalent with posts on confirming students' answers. This type of interaction, in turns, resulting in a one-way serial monologue – students did not response to each other posts. Analysis on practical inquiry model also confirmed the findings that students' engagements were in the level of triggering event by which students only responded to the teacher's thread and did not respond to each other posts. Students' exchange of information was not negotiated, thus not allowing students to move forwards to integration and resolution phases. The findings were linked with the tasks set out by the teachers in both courses.*
Keywords: collaboration; forum, language skills; pattern of engagement; practical inquiry model

I.   INTRODUCTION

In today's education, technology has intermediated learning. Many education institutions have integrated web-based technology in their education through the adoption of computer mediated communication (CMC), and thus making the teaching and learning process become online, flipped or blended. How technology intermediates learners into a collaborative learning have gained attention from scholars. Garrison (1994), for example, argues that technological characteristics in CMC were grounded from constructivism approach which forge students'

collaboration, particularly, in discussion forums. CMC has received a great attention because integration of CMC in learning has shown positive impact either for students or teachers (Marden and Herrington, 2011). They claimed that through CMC people will have a flexible access in learning in terms of time and space and also suited to students' learning styles.

One of CMC features, discussion forum, generates resourceful data for studies. The fact that all communication in the discussion forum is stored in the system and can be retrieved at any time suggest discussion records themselves be a useful approach. Despite the wealth of data that is available in transcript analysis, few researchers attempt an in-depth analysis of the content of the discussion record (Gunawardena, Lowe, & Anderson, 1998; Romiszowski & Mason, 1996). Analysis of discussion record encompasses patterns of interaction formed by the participants when they collaborate in the forum. These include how teacher and students interact in the forum, who initiate the interaction, how participants sustain the interaction during learning, and many more. The patterns of interaction also determine how message is delivered, how participants negotiated the message, and how each of the participants contributed in the forum. The patterns of interaction were informed by the work of Garrison, Anderson, and Archer (2001) on their Practical Inquiry Model. This model suggests that interaction takes place in four phases of interaction namely trigger, exploration, integration, and resolution. A trigger is usually teacher's thread (prompt) that students need to respond. When students are responding, they can express their thoughts following the prompt and engage in discussion (exploration) about the topic presented in the prompt. Students then can make inquiry or negotiate meanings to integrate a new construct from different views. Eventually, students can synthesize construct and make use of this construct to solve the learning problem (resolution).

Studies on CMC have been conducted from different foci, for example, how CMC can facilitate learning autonomy (Kessler G and Bikowski D, 2010; Kizilcec, Pérez-Sanagustín, and Maldonado, 2017 and Littlejohn et al, 2016; Soffer and Cohen, 2019; Wong et al., 2019), students' engagement in interaction (Chen, Lambert and Guidry, 2010; Holley and Oliver, 2010; King and Robinson, 2009; McKenzie and Murphy, 2000; Pawan et al., 2003; Yang, 2011), collaboration for

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

_____

080

learning (Gallardo del Puerto and Gamboa, 2009; Kessler and Bikowski, 2010), and students attainment in learning (El-Banna, Whitlow and McNelis, 2017; Hsiao et al., (2019); Lai & Hwang, 2016). Of particular, studies focusing on students' engagement in learning through CMC have revealed that integrating web-based technology for learning have revealed positive results in which it increases students' participation and engagement in the learning process (Chen, Lambert and Guidry, 2010; King and Robinson, 2009). However, Holey and Oliver (2010) were cautious that when web-based technology is integrated in learning it should consider students' differences (e.g. learning styles, convenience, access to technology, etc) so that it will not discourage learning. Most of the studies were only portrait the relationship of using web-based technology in learning to students' experience and perception of using it. With exception of McKenzie and Murphy (2000), and Pawan et al. (2003), these particular studies focused on how students engaged in the online learning environment by examining further what really happened in the discussion forum.

McKenzie and Murphy (2000), for example, examined the online discussion group as part of the learning environment in a graduate school of teachers training program in one of the universities in Australia. They focused their investigation on the level of participation and interaction in the discussion group, as well as analyzing the content of the messages when students engaged in 'Designing for Learning' course. Findings showed that participants were using the discussion forum in two ways: to explore content covered in the course, and to discuss practical problems and swap strategies for improving the participants' own teaching practice. Analysis of participation levels revealed that students were much more active when participation in the discussion forum entailed formal assessment. Pawan et al. (2003) extending the analysis to plotting students' engagement with practical inquiry model to examining pattern of students' interaction in discussion forum to design instructional intervention that may enhance students' collaboration. The study was conducted in three online courses namely Literature-Based Instruction, Teaching Critical Reading Skills, and Technology in Language Teaching. They found that pattern of interaction students formed was mostly one-way serial monologue – commenting to teacher's thread and they also confirmed Garrison,

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

081

Anderson, and Archer (2001) study that most of students' posts were coded as exploration.

Judging that McKenzie and Murphy (2000) and Pawan et al. (2003) studies deployed their analysis on Practical Inquiry Model in content-based learning, the present study is built up from those studies by extending the context to implementation of Practical Inquiry Model in the language skill development courses. While the nature of content subject courses is the mastery of concepts, the language skill development courses emphasize on building learner's language (English) or language proficiency. It is worth to know whether different focus of learning would result in different engagement or not. The engagement in computer mediated instruction can be seen from three measures, the participation, the patterns of interaction, and the phases of inquiry that the students engaged in. Therefore, the present study tried to examine students' participation in three forums of discussion to see students' level of participation, their patters of interaction, and whether or not their interaction led to inquiry which is essential for learning. Three research questions were set out to guide this study:

a. How much participation did students attend in computer mediated learning?

b. What kinds of interaction pattern did students perform in computer mediated learning?

c. What phases of practical inquiry model did students engage in computer mediated learning?

II.   METHODS

Research Design

This study is a content analysis to the discussion forums in students learning management system during their participation in two language skill courses: Speaking 1 and Writing 1. These two courses were decided as the source of data collection for some considerations. First, these courses are part of language skill courses offered in that semester. Second, as this study focused on students' interactions in discussion forum, the lecturers made use of more discussion forums (were more active) in these two courses than the other language skills course. Table 1 provides detail information about the task students engaged in the three discussion

forums from Speaking 1 and Writing 1 classes. In this section, the author should briefly describe sufficient detail in preparing the study; it includes research design, data collection, and data analysis.

Table 1. Online Learning Activities

Courses	Meetings	Tasks
Speaking 1	Meeting 7	Discussion of 'Talking about Daily Activity and The Time'
Writing 1	Meeting 4	Discussion of 'Writing a Grammatically Correct Sentence (Compound Sentence)'
	Meeting10	Discussion of 'Writing a Good Concluding Sentence (Describing Object)'

The two courses employed a threaded asynchronous discussion forum. Speaking 1 course had an opened task with a discussion on 'Talking about Daily Activity and The Time'. The discussions forum was active for 6 days. The thread in Speaking 1 was as follow (Teachers' name are present in codes and students' names are pseudonyms):

Edit | Delete | Reply

CDF MEETING 7 IS HERE ONLY

by Dosen-00300

HI, HELLO FRIENDS.

MY NAME IS Dosen-00300 AND I INVITE YOU TO BE SO ACTIVE IN THIS FORUM. TRY TO START CONVERSATION TO ANY FRIENDS AND TALK TO THEM ABOUT TIME AND ACTIVITIES. GO AHEAD AND BE HAPPY.

Example 1. Teacher's thread of Speaking 1 (Meeting 7th)

Writing 1 in both meetings had a more structured task. The 4th meeting discussion forum was active for 4 days. Students were asked to write concluding sentences or provide feedback of their friends' concluding sentences. The thread was as follow:

Edit | Delete | Reply
Writing A Concluding Sentence
by Dosen-01935
Dear class

Please write a good concluding sentence or check your friend's concluding sentence. Please do either one. Thank you.

Example 2. Teacher's thread of Writing 1 (Meeting 4th)

The next online seminar of Writing 1 was on meeting 10th and the forum was active for 3 days. Students were asked to write their grammatically correct sentences or they may comment on their friends' sentences. The thread of meeting 10th was as follow:

Edit | Delete | Reply
Writing a grammatically correct sentence
by Dosen-01935
You may do either one.
You can write a grammatically correct sentence or
You do check your friend's sentence.
Thank you.

Example 3. Teacher's thread of Writing 1 (Meeting 10th)

Context and Participants

The study was conducted in one of the universities in Tangerang, Indonesia and situated in a blended learning context in which students were required to attend session(s) of online seminars asynchronously. There were two groups of students participating in the study – students taking Speaking 1 class and Writing 1 class. There was only one session of online seminar in Speaking 1 class (meeting 7th) and two sessions of online seminar in Writing 1 class (meeting 4th and 10th).

Data and Data Analysis

Data were taken from students and teachers' posts in the discussion forums. To see how much students' participation in the discussion forums (the first research question), I counted numbers of posts students and teacher made as a basis of analysis. These posts are called as units. A unit is a speech segment and identified as "the smallest unit of delivery linked to a single theme, directed at the same addressee (all, individual, subgroup), identified as a single type of act, and having a single function" (Henry and Rigault, 1996:62). Below is example of unit coding from students and teacher' posts.

Edit | Delete | Reply
Writing A Concluding Sentence
by Dosen-01935
Dear class
Please write a good concluding sentence or check your friend's concluding sentence.
Please do either one.
Thank you.

Edit | Delete | Reply
Re: Writing A Concluding Sentence
by ADITYA 171010600115-79202-P
In other words computer can make some jobs easier.
Edit | Split | Delete | Reply
Re: Writing A Concluding Sentence
by Dosen-01935
Nice try, Adit. However, you still to work on the punctuation.

Example 4. Sample of unit coding

Example 4 shows segment of discussion thread from Writing 1 class. The teacher set out the prompt by giving instruction to students to write their concluding sentences or comment on their friends concluding sentences. This is coded for one unit of participation for the teacher. The teacher's thread was responded in the first place by Adit with his concluding sentence, and thus earns Adit one unit of participation. The teacher then responded Adit's thread with confirmation and feedback to Adit's sentence, and made her earn another unit of participation. So, in this segment we can see that the teacher earns two units of participation and the student earns one unit of participation. To respond to the second research question, kinds of engagement patterns students performed in computer mediated learning, I used interaction maps (Howell-Richardson and Mellar, 1996; Pawan et al., 2003) to map the flow of the discussions. Interaction maps provide a visual representation of the frequency of individual participation, discussion thread development, and whether discussions are one way (replying to the prompt) or two ways (replying to the reply).

For the third research questions, what phases of practical inquiry students engaged in computer mediated learning, we refer to the work of Garrison, Anderson, and Archer (2001) on the framework of practical inquiry model. Before coding the data for occurrences of each of the phases, first we distinguished the unit of posts whether they are on-task or off-task units. On-task units are defined as those related to the discussion at hand, such as answering a question raised by the discussion

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

085

starter. Off-task units may involve small talk or asking questions about something other than the discussion topic. For example, In Speaking 1 course the teacher put up tread to ask students to write their routine activities and the time usually they do activities. However, the posts from Ade and Hilza were not really responding to the task (thread) and thus considered as off-task posts.

> Edit | Split | Delete | Reply
> Re: CDF MEETING 7 IS HERE ONLY
> by ADE 171010650157-79202-E - Monday, 26 March 2021, 6:19 AM
> is that right tama the exam for UNBK had started.. Are you supervisor for the exam?...
> Edit | Split | Delete | Reply
> Re: CDF MEETING 7 IS HERE ONLY
> by HILZA 171010650146-79202-E - Monday, 26 March 2021, 10:15 AM
> Yap, I am the supervisor of UAMBNBK, And in this agenda or UAMBNBK there is the good way, who gets the value 85 until 100 in every subjects, will be passed in all of University without test.

Example 5. Off-task Unit

In this segment, Ade and Hilza did not respond to the teacher's instruction to write their daily routines. They just shared their recent activity at that time – that was proctoring national examination in their school and anything related to it. Only the on-task units were coded for the phases of practical inquiry model. The model indicates four main phases namely trigger (triggering the event) – exploration – integration – resolution. Details of elaboration of each phases and examples of each are discussed below.

Phase 1. Triggering the Event – The posing of issues, dilemmas, or problems

Units coded in phase one are usually prompt from the teacher or questions from other students that require responses from the others. In this example, Ayu responded the thread from the teacher by posting her sentence. At the same time Ayu's post was opened for feedback from her friends and the teacher thus making another starter/prompt.

> Edit | Split | Delete | Reply
> Re: Writing a grammatically correct sentence
> by AYU 171010600127-79202-P - Saturday, 31 March 2021, 3:42 PM
> People in this village know, He is a thief.

Example 6. Triggering Event Unit

Phase 2. Exploration – Engagement in brainstorming, questioning, and exchange of information

Phase 2 extends the discussion from the triggering event to the sharing and comparing of thoughts from other students. In the example below Roza and Reza were extending feedback to Ayu's sentence. Their feedback concerned with the capital letter Ayu used in her sentence and suggested as unnecessary. It was also strengthened by the teacher post to remind Ayu with the capitalization she used in her sentence.

Edit | Split | Delete | Reply
Re: Writing a grammatically correct sentence
by ROZA 171010600033-79202-P - Sunday, 1 April 2021, 2:58 AM
People in this village know, He is a thief. = People in this village know, he is a thief.

Edit | Split | Delete | Reply
Re: Writing a grammatically correct sentence
by REZA 171010600034-79202-P - Sunday, 1 April 2021, 3:53 AM
People in this village know he is a thief.

Edit | Split | Delete | Reply
Re: Writing a grammatically correct sentence
by Dosen-01935 - Sunday, 1 April 2021, 2:29 PM
Hi, Ayu Lestari.
Kindly check your sentence capitalization, please.

Example 7. Exploration Unit

Phase 3. Integration – Construction of meaning from the ideas generated in the exploratory phase

In Phase 3 the discussion moves from sharing new information to making connections between ideas shared by other members to create a synthesis of new understandings. The exploration phase could have moved to integration phase if Ayu (in Example 6 and Example 7) had responded or confirmed her friends' and teacher's feedback. Unfortunately, after scrutinized analysis of the units, the Integration phase was not present in the data.

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

087

Phase 4. Resolution – Finding, testing, and implementing a solution to problems presented in the Triggering Phase

In Phase 4, the synthesis or new understanding reached in Phase 3 is vicariously tested or applied to the emergence context (problem in the Triggering Phase). No evidence of Resolution Phase was identified in the data

III. FINDING AND DISCUSSION

This study looked at students' engagement in computer mediated learning, with specific objectives of examining students' participation, types of engagement pattern students performed, and phases of practical inquiry model students attended in online English language learning.

Students' Participation

Table 2 summarizes students' participation in Speaking 1 Class and Writing 1 class of three online asynchronous learning. Students' participation was measured from unit of participation generated from students' posts in the discussion forums. The table showed number of students participating in three online discussion forums, how many posts students produced from the threaded message, the average of post per students, and the number of teacher's post to determine the total amount of students' post relative to teacher's posts. This section should clarify the results of research and analysis.

Table 2. The amount of students' participation

Courses	Meetings	No. of Students	SS' Posts	Avg	Ts' Posts	Total Posts
Speaking 1	M. 7	27	155	5.7	20	175
Writing 1	M.4	20	33	1.7	26	59
	M.10	17	19	1.1	17	36

Table 2 shows the amount of students' participation in Speaking 1 class and Writing 1 class. In Speaking 1, 27 students were participating and generated 175 total posts with 155 posts from the students (5.7 posts per student) and 20 posts from the teacher. In writing 1 class, the total number of posts in the 4th meeting was 59 posts with 26 posts were from the teacher and 33 posts from the students (1.7

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

088

posts per student). In the 10th meeting, the total number of posts was smaller generating only 36 posts suggesting only one post per student.

Engagement Pattern

The way how students interacted in the discussion forum was also examined to determine students' engagement pattern. There are 2 types of pattern, a one-way serial monologue, where students did not respond to each other post, and a two-way peer-to-peer interaction, where students responded to each other post.

Table 3. Pattern of students' engagement

Courses	Meetings	One-way-serial monologue	Two-way-peer to peer
Speaking 1	M. 7	77	78
Writing 1	M.4	32	1
	M.10	17	1

Table 3 shows how students managed their interaction in threaded discussion forum. In Speaking 1 course, the engagement pattern was a two-way peer-to-peer interaction, where participants respond to each other post. While in writing 1 course, the engagement pattern was dominated by a one-way serial monologue. In this course, most of the reply to student posts were from the teacher – suggesting feedback on students' sentences without any follow-up from the other students.

Engagement to Inquiry

Whether or not discussion forum facilitates students to engage with inquiry learning was also the prime concern of this study. At this point, we shall refer to the Practical Inquiry Model (Garrison, et.al., 2001) to see how far student engaged in inquiry process. The model suggests four phases that students should undergo for learning to take place. The first phase is the triggering event phase which is a discussion starter. The second phase is the exploration phase – when learners exchange information. The third phase is the integration phase – when learners begin to "construct meanings" or solutions from the discussion. The fourth phase is a resolution phase – when the proposed solution is tested.

*Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model*

089

Table 4. Engagement to Practical Inquiry Model

Courses	Meetings	No of Posts	Trigger	Explo-ration	Inte-gration	Reso-lution	Off-task
Speaking 1	M. 7	175	57	88	0	30	30
Writing 1	M.4	59	24	35	0	0	0
	M.10	36	18	18	0	0	0

Table 4 shows phases of inquiry students attended when they performed discussion in the Speaking 1 and Writing 1 forums. From the total amount of 175 posts in speaking 1, 57 posts were allotted to trigger phase – students' response to the teacher's prompt. These posts then received feedback from the teacher or other students and lead to information exchange (exploration) as many as 88 posts. There were also instances when students discussed unrelated topic (off-tasks) as many as 30 posts. In writing 1 class, discussion in meeting 4 and meeting 10 were all on-tasks with 24 posts indicated trigger, 32 posts entailed exploration, and 3 posts of integration in meeting 4. While in meeting 10, it was identified that 18 posts were trigger and 18 posts were exploration, and no instance of integration phase. There were also no instances of resolution in the three discussion forums.

The study found that the amount of students' participation was minimum in both classes (ranging from 1 to 2 posts per students in Writing 1 class and 1 to 6 posts per students in Speaking class). If we compared with teachers' contribution, they produced more posts in both courses (ranging from 17 to 26 posts). This was indicating that students were not really engaged in the discussion forum. This finding was somewhat different with McKenzie & Murphy (2000) study which claimed discussion forum allow students to build social interplay between students, and students and teachers to establish learning community. This difference should be seen with cautious that their study was built upon a task which required students to express their thoughts on some concepts based on the literature they had read (e.g. bloom taxonomy, learning outcomes, learning objectives, etc). Such tasks allow students to express their understanding freely and interact with reference messages from their peers. While the tasks in this study were asking students to express their activities on a particular day (Speaking 1) and write one grammatically correct sentence (Writing 1), such tasks only made students to post single message

(answer). There was no need to negotiate messages as the messages were not reflecting certain concepts that need to be explored for further understanding. In Writing 1 (meeting 4), for example, the teacher asked students to write a good concluding sentence. Once the students posted their concluding sentence and their sentences were confirmed correct by the teacher, that was just end of students' participation. This can be seen from the following of segment.

Edit | Split | Delete | Reply

Re: Writing A Concluding Sentence

by TERRA 171010600015-79202-P

Overall, marijuana has more value than recreational value, it may be one day recognized as a respected healing tool.

Edit | Split | Delete | Reply

Re: Writing A Concluding Sentence

by Dosen-01935

Correct example, Terra. Keep up your good work.

Example 8. Student's single response

The types of task also influenced how students participate in the forum. In Speaking 1 course, the engagement patterns were split between one-way serial monologues and two-way peer-to-peer engagement. One-way pattern is mostly the trigger event of the discussion or a reply to the trigger event. Two-way pattern is a reply to a reply of the trigger. It is evident that in Speaking 1, the participants were more active with exchanging information and replying to each other as illustrated in the following example.

Edit | Split | Delete | Reply

Re: CDF MEETING 7 IS HERE ONLY

by ANISA 171010650127-79202-E

Good morning Ms.. Im anisa

Hi guys, this morning i woke up at four pas ten because my nephew was noisy.. How about you guys?

Is there someone that wakes up too early like me?

Edit | Split | Delete | Reply

Re: CDF MEETING 7 IS HERE ONLY

by LANI 171010650113-79202-E

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

091

Hi Anis, yes I also wake up 4 a.m My mother already busy in that time because today is the day where my mother was fasting

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Edit | Split | Delete | Reply

Re: CDF MEETING 7 IS HERE ONLY

by ANISA 171010650127-79202-E

Hi lani,

Thats great, do you fasting too?

Edit | Split | Delete | Reply

Re: CDF MEETING 7 IS HERE ONLY

by HILZA 171010650146-79202-E

Hi Lani, are you sure that you woke up at 4 am ?

I woke up at four o'clock, but I just check my phone, after that I continue my self for sleeping.

Example 9. Replying to a reply.

While in writing 1, both meetings were mostly on the one-way pattern. Most of the participants in this course were just posting the required responses (answers) given by the teacher. Even when the teacher tried to engage in the discussion, the students didn't give any follow-up to the lecturer feedback. They just posted out their own responses (answers) to the teacher's prompt. This evidence is exemplified in the following segment.

Edit | Delete | Reply

Re: Writing A Concluding Sentence

by ADITYA 171010600115-79202-P

In other words computer can make some jobs easier.

Edit | Split | Delete | Reply

Re: Writing A Concluding Sentence

by Dosen-01935

Nice try, Adit. However, you still to work on the punctuation.

Edit | Split | Delete | Reply

Re: Writing A Concluding Sentence

by Dosen-01935

Anyway, anybody can help Adit out here?

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

092

Edit | Split | Delete | Reply

Re: Writing A Concluding Sentence

by CHELSIE 171010600128-79202-P

So that you have to practice and improve your skills.

Edit | Split | Delete | Reply

Re: Writing A Concluding Sentence

by Dosen-01935

Yes, you wrote a good example, Chelsie. However in some contexts, you need to write a comma after "so that".

Example 10.   No follow-up response

This finding confirms Pawan et al.'s (2003:136) claim that in asynchronous mode of learning, students' participation was "rather a routine that required one-way responses to pre-existing prompts." Some other times, the teacher also encouraged students to participate in the discussion forum (when students posted incorrect answers). Despite the teacher's effort to engage students in the discussion, there was no development occurred (Pawan et al., 2003). This is evidence when the teacher invited students to give further comments on their friends' sentences, but no one responded for further feedback.

Analysis on interaction map also showed that two-way interaction was minimum in Writing 1 course. There was only one engagement that was coded as a two-way peer-to-peer interaction in Meeting 1 and one engagement of two-way peer-to-peer interaction in meeting 10. Illustration of interaction map in Writing 1 course is set out in Figure 2.
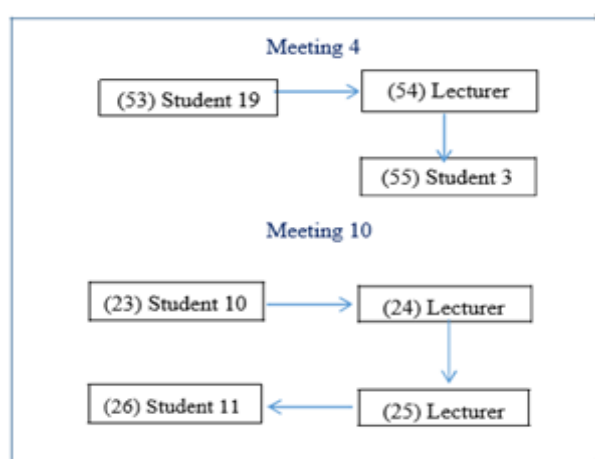

Figure 2. Example of Interaction Map in Writing 1

Collaboration;
Forum,
Language
Skills; Pattern
of
Engagement;
Practical
Inquiry Model

_093_

In these two meeting, the interaction that was coded as two-way were either feedback to other students post or a confirmation of feedback from the lecturer. While in Speaking 1 course, half of the students' posts were coded as a two-way interaction and it involved many participants to comment on one's rely as shown in the following interaction map.
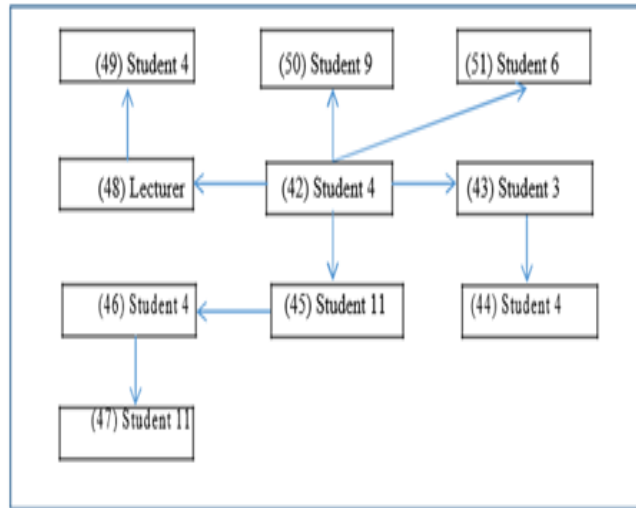

Figure 3. Example of Interaction Map in Speaking 1

NOTE: The one-way arrow (->) indicates the direction of posting and numbers in bracket indicate the chronological order of the post by appearance in the discussion forum.

From the findings above, it is obvious that the Speaking 1 class was more active in engaging students in the course discussion than Writing 1 class did. This is also associated with different tasks the teachers employed in both courses. In speaking course, the lecturer gave an opened task (free task) on a discussion of the participants' daily activities. This allowed the participants a free-flowing discussion although the discussion may go off-topic. Meanwhile, the writing course had a more structured task, where the participants were assigned specific tasks – both were to write grammatically correct sentences.

In terms of learning inquiry, based on the analysis of practical inquiry model (Garrison, Anderson, and Archer, 2001), we found that students attended the trigger phase and exploration phase and no evidence of integration and resolution phases. This finding was not in line with the previous studies (Curtis and Lawson, 2001; Garrison, Anderson, and Archer, 2001; Gunawardena, Lowe, and Anderson, 2007;

Pawan, et, al., 2003) which showed students' engagement in integration phases. This difference laid on the task/topic employed in the discussion forum. Pawan et al. (2003), for example, set out all free discussion formats to the students in which students were asked to comment on one of literary work and give feedback on two posters. In their design, they also allowed students to post discussion questions (as starters) from two topics of discussion on "authentic audience" and discussion on a book chapter. Such tasks are certainly able to promote deliberations and negotiations among students. Meanwhile, the present study was situated in a language skill development. In such situation, there was no need for students to deliberate and integrate others' point of view to construct meaning. In the case that students could have engaged in integration phase, e.g. when students made mistakes in their sentences, other students responded with direct correction – not allowing students who wrote incorrect sentences to integrate feedback from peers and correct themselves.

IV. CONCLUSION

While studies on CMC advocates the benefits of discussion forum to facilitate construction of knowledge in learning, this study tried to portrait such construction of knowledge using practical inquiry model (Garrison, Anderson and Archer, 2001). Our findings showed that the teachers' contribution in the discussion forums were more prevalent than students' contribution. This indicates that the learning process is teacher-centered and teacher failed to engage students in a more interactive discussion. Students' participation and interaction were also one-way serial monologue – suggesting that students only responded to teachers' prompt (task) and their participation was just administrative. This was due to the prompt (task) that the teachers gave to the students such as writing example of compound sentence or writing a concluding sentence. With such tasks, students will ultimately focus on writing their own sentences without having concern to other students' sentences because the task require them to do so. In order to get the discussion more engaging, the lecturers can modify the task, for example, by providing some sentences with errors in the structures (compound structure) and invite students to suggest revisions or provide a paragraph with no concluding sentence and ask students to suggest the

concluding sentence fit to the paragraph. Most importantly, the lecturers should also encourage other students to give comments on their friend sentences. This way, students will not only respond authoritatively to teacher's instruction but also tune in to their friends' responses/comments. During the discussion, students were exchanging information (exploration phase) following the trigger (triggering event phase) from the teachers or the students' posts. There was no instances of integration and resolution phases. Once again, these findings were pretty much related with the tasks/instruction the teacher set out in the forum. As Garrison, Anderson, and Archer (2001) have suggested, such conditions need teaching presence intervention in order to develop engagement and students' higher order cognitive skills. The teaching presence should accommodate instructional design and facilitation to the course (e.g. meaningful task selection) which enable students to engage in argument/counter-argument type of discussions that may lead to integration/new understanding and resolution to the problem.

Studies adopting practical inquiry model to date concern with interaction in discussion forums in content-related subjects. This study is novel in that it explores phases of inquiry learning in the context of language skills development in EFL classes. The findings of this study have highlighted how tasks influence students' engagement in the phases of practical inquiry model. Careful task selection and designing facilitative tasks are keys to engage students in the computer-mediated learning. With a limited amount of research in this juncture, therefore, it suggests exploration on the implementation of ELT task-based conducted in the web-based technology to be investigated. This exploration will shape understanding on what sort of tasks may facilitate students' language skill learning when delivered with technology.

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Collaboration;
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Practical
Inquiry Model

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