

# **Students' Interaction in Asynchronous Blended Learning: The Analysis of Community of Inquiry Framework Implementation**

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The purpose of this study is to describe students' interaction in asynchronous blended learning as a part of community of inquiry activities. This research is self-observational study in ICT-based course for pre-service English teachers. There were 91 students who participated in blended learning activities. Data were obtained from offline teaching journals and online activities in Google Classroom Platform. The data were analyzed by using community of inquiry framework to describe social, cognitive presence and teaching presence. The findings showed that offline activities provided more social presence, cognitive presence and teaching presence. Meanwhile, online activities only provided teaching presence and cognitive presence without strong social presence. The implication of this research is students attend the online learning as a part of required instruction in the course only, not because of self-awareness of building knowledge.

Key words: interaction, asynchronous Blended Learning, community of Inquiry framework

*Tujuan dari penelitian ini adalah untuk menggambarkan interaksi mahasiswa dalam pembelajaran campuran asinkron sebagai bagian dari kegiatan "community of inquiry". Penelitian ini adalah studi observasional mandiri dalam mata kuliah berbasis TIK untuk calon guru Bahasa Inggris. Terdapat 91 mahasiswa yang berpartisipasi dalam kegiatan pembelajaran campuran. Data diperoleh dari jurnal pengajaran luring dan aktivitas daring di platform Google Classroom. Data dianalisis dengan menggunakan kerangka "community of inquiry" untuk menggambarkan dukungan sosial, kognitif dan pengajaran. Temuan penelitian menunjukkan bahwa aktivitas luring memberikan lebih banyak dukungan sosial, kognitif dan pengajaran. Sementara itu, aktivitas daring hanya memberikan dukungan mengajar dan kognitif tanpa dukungan sosial yang kuat. Implikasi dari penelitian ini adalah mahasiswa menghadiri pembelajaran daring hanya sebagai bagian dari instruksi yang diperlukan dalam mata kuliah saja, bukan karena kesadaran diri untuk membangun pengetahuan.*

## INTRODUCTION

Interaction in blended learning is crucial (Blaine, 2019) because blended learning instruction is the combination between offline instruction and computer mediated instruction (Graham, Blended learning systems: Definition, current trends, and future directions., 2006). To build students' interaction, there are two important components in blended learning interaction, emotional engagement and cognitive engagement (Graham, Manwaring, R, Henrie, & Halverson, 2017). However, most students still perceive online meeting as a course requirement so they have less effort to maximize online meeting as a part of learning (Owston, York, & Murtha, 2013). Garrison and Vaughan raised the issue of blended learning interaction by discussing about community of inquiry (CoI) framework as potential instruction in blended learning (Garrison & Vaughan, 2008). Community of Inquiry framework or CoI provides connection and collaboration among learners to help them understand the course because it creates balance among social, cognitive and instruction (Garrison & Vaughan, 2008).

Some studies have discussed CoI as part of research in blended learning and the result shows that students in blended learning course have good perception on teaching presence of three domain; design, facilitation of discourse and direct instruction because they have opportunity to build their understanding during face to face interaction with the instructor (Garrison, Akyol, & Ozden, 2009). CoI in blended learning can assist students who are not able to or want to participate in a social component of active learning. There should be alternative for the students to make sure that they still achieve learning goals (Cooper & Scriven, 2017). In this study, the research on CoI and blended learning took setting in private higher education by using asynchronous blended learning. It analyzes students' interaction in asynchronous blended learning based on CoI elements; social presence, cognitive presence and teaching presence (Garrison & Vaughan, 2008).

Community of Inquiry (CoI) framework provides learning environment for students to deep their learning and support each other to achieve learning goal (Garrison, Akyol, & Ozden, 2009). It gives opportunity for students to challenge themselves in receiving different perceptions from other students through connection, trusting relationship and open discussion. By providing social environment, it leads to critical inquiry activities, such as creative thinking and problem solving (Cooper & Scriven, 2017). In short, CoI helps us to view a study about collaboration constructivist educational transactions (Makri, Papanikolou, Tsakiri, & Karkanis, 2014). In terms of CoI framework in blended learning, the framework could create more opportunity in building community. Online meeting supports independent learning for students and offers long life learning by accessing wider approaches meanwhile offline meeting provides community building, brainstorming, decision making and group formation (MacDonald, 2008). A study also shows that online discussion brings positive environment for students because they share their opinion (Smith, 2019). However, another study mentions that online meeting needs full support and guidance to make sure all students participate in learning process (Pradita, Prasetya, & Maharsi, 2019).

Blended learning presents different teaching approaches, especially in asynchronous blended learning because instructor and students have time to prepare presentation or design before sharing their opinions to others. Preparation time is necessary in blended learning because some students need more assistance in building their interaction among other students. Instructor's role in that case is creating friendly environment either during online or offline meeting, for example: provide various kinds of media to lead students' understanding, using informal approach in selected events, giving more feedbacks, invite students to contribute regularly and use synchronous blended learning sometimes (MacDonald, 2008). However, online activity needs full and strong commitment for teachers and students to share, discuss and give feedbacks to all responses. It takes longer time preparation and implementation (Smith, 2019).

This study narrates the experience of instructor in using CoI in asynchronous blended learning. Instructor provided community building either during offline or online meeting. It is expected that students can participate actively in both platforms.

## **METHOD**

### ***Research Design***

This research is self-narrative study (Hayler, 2011) which narrates experiences in using community of inquiry framework in 3 theoretical courses for higher education level. It also included observation during learning process (Ai & Wang, 2016). Self-narrative study is appropriate for this study since it highlights the experience naturally without any intervention or experiment.

### ***Setting and Participants***

The data were collected from March until July 2019 (one semester). There were 91 pre-service English teachers to be observed during offline and online meetings. They attended 3 courses, related to ICT and pedagogy competence. Some of the meetings were conducted offline to deliver theory and consultation and some meetings were conducted online to deliver some activities and assignments.

### ***Data Collection Method and Analysis***

There were two main resources of data; 1) teaching journal (offline meeting) and 2) google classroom (online meeting). Teaching journal records content, allocation time and sub topic in every offline or online meeting meanwhile Google Classroom provide records on online discussion, assignment submission dan online feedback. Students also used email and *Whatsapp* to maintain informal communication but main data were only obtained from Google Classroom in formal communication settings. The data were analyzed by using community of inquiry framework from Garrison and Vaughan (Garrison & Vaughan, 2008). There three elements of analyses; social presence, cognitive presence and teaching presence.

*Table 1. Community of Inquiry Framework Elements*

Elements	Indicators	Description
Social Presence	Open communication Group cohesion Affective/personal	Students are allowed to express their ideas and emotion to promote collaboration.
Cognitive Presence	Triggering event Exploration Integration Resolution	Students are able to exchange information to connect some different perspectives and try to propose new ideas based on the information.
Teaching Presence	Design & Facilitation of discourse Direct instruction	Setting learning activities to allow students to share personal meaning of learning through discussions.

## FINDING AND DISCUSSION

Based on the analysis of teaching journal and Google Classroom, it shows that cognitive presence and teaching presence occurs more often than social presence. Instructor provided opportunity for students to build rationale connection from some perspectives and case studies so they could design or modify new idea based on their innovation. In terms of online learning, instructor provided sharing ideas through online discussion and feedbacks for students' work. However, there was lack of collaboration process during online meeting, either collaboration among students or collaboration between instructor and students, for example: instructor did not give routine feedbacks during offline and online meeting, students did not always have opportunity to do collaborative work. Most of main assignments were individual work. As the impact, students' interaction could not help students to build awareness for online participation.

### Cognitive Presence

Based on four elements of cognitive presence; triggering event, exploration, integration and resolution (Garrison & Vaughan, 2008), instructor provided all elements. In trigger event, students had opportunity to conduct problem-based discussion through Google Classroom platform. Each student created case study related to content and share the problem during online meeting. Each student should answer at least one case study by commenting on the post. This activity was a part of assessment to measure their understanding. Unfortunately, not all students gave significant comment (see figure 1). Their answered and comment were very short and there was no argument among them. Instructor tried to trigger the discussion but they did not present deep opinion to respond others. They accepted others' opinion without any objection or disagreement (see figure 2). As the impact, it was hard for the instructor to measure their

understanding of the concepts. To overcome the challenge, instructor used offline meeting to confirm students' understanding.

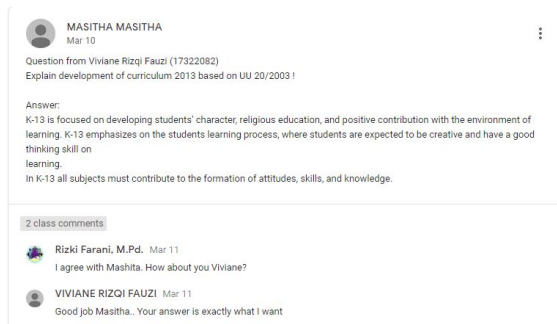


Figure 1. Problem-based Discussion by using Google Classroom

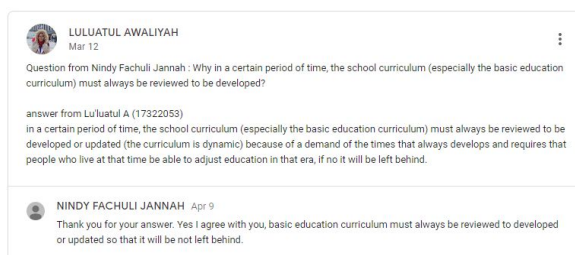


Figure 2. Students' Respond to Case Study

### Teaching Presence

In terms of teaching presence, instructor designed blended learning with various strategies, for example: content delivery during offline meeting, discussion during online meeting and feedback in both offline and online meeting. Instructor also gave some field projects, for instance: observation and interview with students and teachers at junior or senior high schools. Students had opportunity to consult their understanding through consultation session to make sure their project is on the track. During online meeting, instructor tried to give short and clear instruction to help students understand their assignment (see figure 3 and 4).

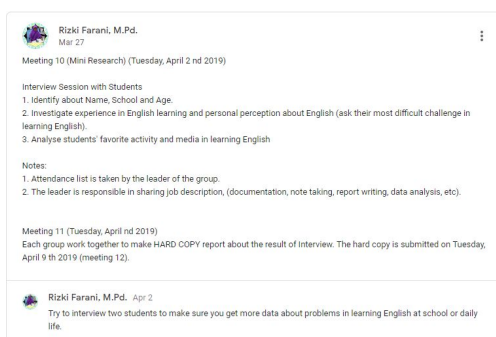


Figure 3. Direct instruction for Field Project

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Question Student answers

Due Feb 28, 4:20 PM

What is the media, described in the journal and How to use the media for English learning?

Rizki Farani, M.Pd. Feb 27

1. The journal should be in English.
2. Your answer should be in English.
3. Post your answer between 14.41-16.20 (Thursday, 28th 2019)
4. The score will be taken 5 % from all scores in this course.
5. Mention the media, explain how to use it and mention the references.

Figure 4. Assignment Instruction

### Social Presence

In social presence, instructor tried to conduct three aspects; open communication, group cohesion and affective/personal. Instructor started the conversation to trigger discussion between two students by giving questions. It was expected that students would share some perspectives. Unfortunately, the discussion stopped in only one comment. As self-reflection, instructor realized that there should be more comments from instructor to encourage students to share more opinion. However, instructor did not give sufficient support for the discussion. Based on this finding, instructor' role was really limited to small contribution so there was not enough learning environment to motivate students in online meeting (see figure 5).

NAOMI NIRWASITA DEWI  
Mar 10

Question from : Mashita (17322029)  
What is your opinion about the concept of curriculum based on Dick & Carey model ?

Answer :  
Curriculum concept based on Dick & Carey model :  
Use more book language, teacher is not left flexible, make a straight lesson plan, consider the social background in the school.  
The conclusion is Dick & Carey curriculum concept is closer to 2013 Curriculum, and the process sequence from general to specific.

2 class comments

Rizki Farani, M.Pd. Mar 11  
Agree, do you like Dick and Carrey Mashita? Do you think its more like K13? Do you agree with Naomi?

MASITHA MASITHA Apr 9  
I obviously agree with naomi's answer Ma'am. In my opinion, the Dick & Carey model is similar to the K13 Curriculum which is really suitable with today's schools curriculum.

Figure 5. Instructor' role in starting the online discussion

The results of this study confirm 3 issues: a) maintaining interaction in blended learning is important (Blaine, 2019); b) most students consider online participation as a part of the learning contract. The do not see online participation as an opportunity to learn (Owston, York, & Murtha, 2013) and c) building online interaction need full support (Pradita, Prasetya, & Maharsi, 2019). Thus, community of inquiry framework cannot stand alone as the only approach in blended learning. It should be combined with another learning approach to build strong social presence.

## CONCLUSION

Results of this study concludes that building interaction during online activities is still one of the challenges in asynchronous blended learning. Although CoI provides opportunity to build community strength during offline learning but instructor should maintain social presence during online learning to make sure that the community is still on the track. As recommendation for further design or research, community of inquiry framework is potential for blended learning but it is more effective to match the framework with more collaborative activities during online learning.

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