

Research Article

Facilitating Students' Cognitive Engagement in Online Asynchronous Discussion Within a Remote English Foreign Language Learning Environment

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Abstract.

This study examined the cognitive presence of students in an asynchronous online discussion in the Second Language Acquisition (SLA) course. The course combined synchronous meetings through Zoom sessions to support student participation in asynchronous discussions. The study involved a cohort of 36 participants from the two remote extended campuses of Pattimura University in Maluku. Through content analysis, two key aspects were examined: (1) student participation rates, and (2) the extent of students' cognitive presence within the discussions. The content analysis findings revealed that although each student made a minimum of two contributions per topic during online asynchronous discussions, they exhibited a moderately high level of cognition, incorporating problem recognition, exploration, integration, and solution, not only in individual messages but also in the overall exchange of information within the discussion thread. These findings suggest that a combination of synchronous meetings through Zoom sessions, tailored prompts, feedback, and social interactions enhances students' active engagement and utilization of cognitive skills in online asynchronous discussions.

Keywords: online asynchronous discussion, English foreign language learning, cognitive presence

1. Introduction

Information technology in education takes various forms, one of which is the modification of learning methods by integrating internet technology and various digital applications, especially in higher education [1,2]. Technology integration aims to provide different learning experience options. This model is known by various names, such as online learning or e-learning, blended or hybrid learning, and a combination of online and face-to-face learning. These diverse learning models are intended to optimize the learning process for students concerning the content of academic knowledge and skills [3].

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Blending online learning modes, a combination of synchronous and asynchronous communication modes, has become popular in universities, particularly during the covid-19 pandemic. This combination facilitates learner engagement more effectively than solely relying on asynchronous communication [4,5]. Each mode has its own merits. Synchronous communication enables immediate feedback and encourages social engagement between students and teachers. Conversely, asynchronous communication cultivates advanced cognitive abilities, such as critical thinking, through writing or reflection from reading and watching audio-visual materials [6].

Several studies signify the importance of this combination, as it facilitates students' ability to form connections with their peers and instructors, while also keeping them actively involved in course-related tasks [7,8], provides flexible time and location, and the use of resources [9–12], effectively enhances student learning [13], and is superior to a simple in-person classroom meeting in terms of student satisfaction [10]. However, little is known about the combination of synchronous and asynchronous communication to enhance student learning, especially cognitive aspect of learning [13].

The purpose of this study is to explore and describe the patterns and characteristics of cognitive presence displayed by students in asynchronous discussions. The research question that guided this study is as follows: What are the cognitive presence patterns and characteristics observed in students asynchronous online discussions as an extension from the online synchronous meeting?

2. Literature Review

2.1. Designing Online Course

Designing online course requires careful consideration of various factors to create an effective and engaging learning experience. The community of inquiry (COI) framework provides a valuable model for designing and facilitating online courses to foster engagement between instructors and students [14]. The framework emphasizes the interplay of social presence, cognitive presence, and teaching presence. Social presence refers to the degree to which learners feel connected, valued, and engaged in the online learning community. It focuses on creating a supportive and interactive learning environment. Cognitive presence involves the development of critical thinking skills, deep understanding, and higher-order thinking. It focuses on engaging learners in meaningful learning activities that promote active inquiry and reflection. Teaching presence refers to the role of the instructor in designing and facilitating the learning experience. It

involves establishing a supportive and well-structured learning environment, guiding discussions, and providing timely and constructive feedback [15].

Even though COI framework serve as the foundation of developing blended online course, it is important to note that teaching presence, social presence, and cognitive presence are interrelated and influence each other in online learning environments. In examining the nature and the interactions of teaching, cognitive, and social presence, Ke (16) emphasized that instructional design and teaching elements are crucial prerequisites for a successful online higher educational experience. Similarly, Garrison and Cleveland-Innes [17] highlighted the importance of the teaching presence in stabilizing and sustaining a community of inquiry (COI). Judging from the design and organization of the online course, Shea et al., [18] emphasized the importance of communicating the course outcome, goal and expectation, as well as providing clear instruction, communicating due dates which are acceptable norms in online course.

To optimize online learning, Garrison and Arbaugh [19] established a set of parameters to determine the direction of each presence in online course. The following table summarizes the categories and indicators for each presence.

TABLE 1: Garrison and Arbaugh’s Community of inquiry elements, categories, and indicators.

Elements	Categories	Indicators
Social Presence	Open Communication	Risk-free expression
	Group Cohesion	Encourage collaboration
	Affective Expression	Emoticons
Cognitive Presence	Triggering Event	Sense of Puzzlement
	Exploration	Information exchange
	Integration	Connecting Ideas
	Resolution	Applying new ideas
Teaching Presence	Design and Organization	Setting curriculum and Method
	Facilitating Discourse	Sharing personal meaning
	Direct Instruction	Focusing discussion

These parameters serve as valuable tools for instructors to design and evaluate their online courses within the COI framework, enabling them to create engaging and effective teaching practices. Utilizing these parameters, instructors can ensure that their courses incorporate the necessary elements of teaching presence, social presence, and cognitive presence, leading to a more impactful and meaningful online learning experience for students.

2.2. Facilitating online discussion

Facilitating online discussions is a critical aspect of online teaching and learning. It relies on the interaction between students and the content, between students and instructors, and among students themselves. These interactions are essential in online courses as they promote active engagement, collaboration, and deeper understanding. However, it is important to recognize that meaningful learning outcomes are not solely dependent on high levels of interaction. According to Garrison and Arbaugh [20], the quality of cognitive content that emerges from these interactions determines the depth and significance of the learning experience. In other words, the high level of interaction does not guarantee that students are cognitively engaged in critical thinking and problem-solving. It could be possible, however, due to the result of a group interrelationship or cohesiveness that may not directly create cognitive development [20]

Several studies have identified key strategies that instructors can use to promote practical online discussions. A study conducted by Arbaugh and Hwang [21] suggested the instructors to provide clear guidelines and expectations to foster learners' engagement and meaningful discussion. Other studies recommended the use of various communication tools such as text-based discussion forums, video conferencing, and social media platforms to facilitate discussion [22,23]. In addition, providing timely and constructive feedback leads learners to gain a deeper understanding and promote critical thinking [18]. These strategies can create a supportive and engaging environment for online discussions that fosters collaboration, critical thinking, and deeper understanding.

2.3. Student Experience with Technology

The success of online learning is undeniably influenced by students' familiarity with technology. If students are unfamiliar in using the learning management system (LMS) or other digital tools, their participation and ability to keep pace with peers can be hindered [24]. This in turn, leads to a lower level of satisfaction among students which can negatively impact their motivation and engagement in the course [25]. To counteract these challenges, instructors have a vital role in providing adequate support to help students become familiar with the technology utilized in the course. This can be accomplished through clear instructions and readily available technical assistance, enabling students to navigate the learning management system and other digital tools with ease. By doing so, instructors can alleviate students' technological obstacles and empower them to fully engage in the learning process.

In addition, access to technology and a reliable internet connection stands as another crucial factor that significantly impacts students' satisfaction with online learning environment [26]. Students with limited access to the course may face significant challenges in completing assignments and participating in online discussion. This can result in lower engagement, motivation, and satisfaction levels. By contrast, students with unrestricted access to these resources are better equipped to succeed in the course and are more likely to have positive learning experiences. Therefore, it is important to acknowledge and address the diverse needs and resources of their students. By providing appropriate support, instructors can ensure that every student has an equitable opportunity to succeed in the course.

2.4. Maintain Student Involvement in Online Learning

Building and maintaining interactions and relationships with students in online learning affect retention, satisfaction, and student engagement with learning materials [27,28]. Angelino et al. [29] outlined several components require to maintain students' online learning engagement. These components include initiating contact with students via telephone calls, conducting pre-learning orientations with students, facilitating informal online chats, using inclusive language such as 'we' with students, building rapport with students through posting welcome and introductory videos, establishing online discussions or meeting hours, and developing group projects and tasks that foster relationships among members of the learning community. These strategies can enhance communication and engagement with students in online learning environments [29].

In addition, the availability of time and instructor feedback is a crucial predictor of online learning success and student satisfaction [26]. Students who received timely and constructive instructor feedback were more likely to be engaged and motivated to learn. Shea et al. [18] highlighted the importance of guiding the form of illustrations or examples to avoid misunderstandings. They also emphasized providing formative feedback and positive responses to encourage students to explore new concepts or ideas. This can create a supportive and interactive learning environment that encourages communication and collaboration, leading to better learning outcomes in online learning environments.

3. Method

Data collection and analysis within the study followed a case study methodology [30,31]. This methodology allowed for the collection of multiple data sources using diverse analysis methods. To investigate participants cognitive presence and characteristics exhibited by students in asynchronous online discussions, quantitative data were collected and analyzed. In addition, qualitative data analysis was conducted to provide explanations, validation, and further exploration of the quantitative results. The case study approach also facilitated the utilization of content analysis to gain a better understanding of the cognitive presence patterns and characteristic displayed by students in relation to instructional design.

3.1. Context and Participants

This study took place at the new extended campus of Pattimura University which is located in two separated locations within the Indonesian Province of Maluku. One campus is located in Tiakur, in the South West Maluku district, approximately 494.55 miles away from the main campus. The other campus is situated in Dobo, in the South East Maluku district, about 724.26 miles. These two extended campuses were established in 2018. After their establishment, the teaching and learning process at these extended campuses was conducted through face-to-face interaction, with lecturers being sent from the main campus to teach the students for about two weeks meetings. However, due to the COVID-19 outbreak, the teaching and learning methods shifted to web-based instruction or a hybrid model where students attended classes remotely. Efforts have been made to improve infrastructure and provide reliable internet access to facilitate online learning in these two campuses include the establishment of internet hotspots, installation of large screens in the classrooms to enable students to participate in the virtual classes. In addition, the institutions provide various online learning platforms include synchronous and asynchronous modes which give free access to instructors to deliver the lessons to students.

This study was conducted in Second Language Acquisition (SLA) course at two extended campus. 17 students from the Tiakur campus and 19 students from the Dobo campus. The students were in their fifth semester when they enrolled in SLA course. They were active user of social media for informal communication, and had prior experience involving in synchronous online learning using Zoom meetings. In this course, the students established group communication through WhatApps for interaction among

them and with the instructor. However they have no experience of participating in formal asynchronous discussions forum. There was only one instructor who teach the course. The instructor had some previous training experience from Regional English language office (RELO) in Jakarta on how to design and facilitate online learning.

The courses were taught using a combination of synchronous and asynchronous modes, with zoom meetings and the canvas platform being used concurrently. The activities in synchronous (Zoom meetings) provide students with an initial understanding of knowledge and theory, bridging theory to practice. Activities in asynchronous (Canvas) comprise discussion on building student capacity of structuring the knowledge and deepening the initial understandings and then relate it to the practice. During the synchronous meeting, a specific topic of SLA was introduced and discussed to facilitate understanding of the concepts and relate it to practical implication in SLA process. Web-readings and video materials were used to help broaden the students knowledge and participation in the discussion. For the asynchronous discussion, Canvas Instructure was used as learning management system (LMS) hosting the tasks, and asynchronous discussion. After students participate in synchronous discussion, they were invited to take part in Canvas which served as an extended discussion of the synchronous meeting. The whole course consisted of three modules for a 14-week meetings , but the asynchronous discussion in Canvas for this study took the second module about the Interactionist Approach to Second Language Acquisition which consisted of 3 topics discussion, one topic each week. The first module contained only one asynchronous discussion forum, and it was regarded as to familiarize the students with Canvas discussion forum. The last module contained one discussion and project activity. It was not included in this study.

Prior to the course, the Canvas course link was sent to students' WhatsApps group include a video on how to register to the course in canvas instructor. The first meeting was used to discuss the course syllabus (the contents, quiz, topic discussion, assignments) include time agreement on each task and practice on Canvas navigation. Informed consent was gained prior to participation to the study and all personal details have been anonymized.

To help students initiate the discussions, the instructor provide a prompt for example " after reading the article on "Three potential sources of comprehensible input for second language acquisition, and Input-based activities": How input-based activities enhance language learning? Share your thoughts and provide specific examples from the readings and video to support your viewpoint". The instructor encouraged the participants to share their views on the issue by providing background information,

TABLE 2: Synchronous and Asynchronous acativities.

Module	Topic	Sub-topic discussion	Synchronous activities in Zoom meeting	Asynchronous discussion in Canvas
2	The Interactionist Approach to Second Language Acquisition	Language input and SLA	Highly structured in three stages: activating prior knowledge, learning about theory reflecting on experience	Read two web articles Watch one video tutorial on a similar topic Respond to the prompt Reply to the peers
		Technology: language input, output and feedback		
		Sociocultural context and interaction		

examples, and rationale for their answers. Additionally, participants were required to reply to their classmates either by agreeing with them or by providing a different perspective.

3.2. Data Collection and Analysis

The data were obtained from written records of students’ online discussion. First, the participants’ online participation was analysed by calculating instructor’s and students’ weekly number of forum entries and words they produced in every message on each discussion topic. Second, interaction patterns of students and instructor were examined both quantitatively and qualitatively. For quantitative analysis, matrix was used to calculate the discussion entries participants posted in response to the prompt as well as in response to another participant’s forum entry included the instructor. Instructor forum entry was regarded as teaching presence (TP) while Participants’ forum entries contain two elements: cognitive presence (CP) and social presence (SP). These two presences were accepted as an indication of the students’ engagement in the discussion, and were examined separately to identify the patterns and characteristics exhibited by students. Third, qualitative content analysis was conducted to explore the structure of all discussion threads to identify the pattern and characteristic of CP appeared throughout the discussion as a result of TP and SP. The structure of all discussion threads were explore inductively in term of what post was sent in response to what. Fourth , CP and SP were quantified using content analysis based on indicators (see Appendix A) adapted from [18]. Content analysis involves identification of TP, CP and

SP, and calculating frequencies. The unit of analysis for quantitative content analysis was identifying and categorizing themes within individual messages on each topic discussion. This is possible to code a single discussion entry for more than one category where needed. After the data were coded, TP, CP and SP figures were calculated from each participant discussion entry and instructor.

In order to ensure reliability, the researchers met and studied the adapted version of indicator by Shea et al. [18]. A training session was conducted to ensure that the researchers understand and apply the coding guidelines correctly. During these sessions, the researchers familiarized themselves with the coding manual, explaining the coding categories, indicators, and criteria. To assess the reliability of the coding process, we initiated a pilot coding phase. A subset of the asynchronous online discussions was selected and each coder independently coded the discussions according to the coding manual. This pilot phase would allow us to measure the intercoder reliability and identify any areas of discrepancy or confusion. To calculate the intercoder reliability, we employed statistical measures, Cohen's kappa. By comparing the results of each coder for each coding category, we assess the level of agreement and identify any inconsistencies or discrepancies.

Based on the findings from the pilot coding phase, we address any coding discrepancies by reviewing the coding results, discussing them with the coders, and examining the specific coding decisions that led to disagreements. This process helped clarify any ambiguities in the coding manual and provide additional clarification to improve consistency among the coders. Once the coding guidelines are finalized, the full coding phase was commenced. The coders would independently code the entire dataset of asynchronous online discussions based on the defined coding categories and indicators. The inter-rater reliability was 80%.

4. Results

4.1. Students and Instructor Involvement in the Discussion Tasks

Participants were provided with 3 discussion topics for 3 weeks, with each topic sequentially introduced at a week intervals. Number of forum entries and the average number of words per weekly topic are represent in Figure 1. During 3 weeks discussion on different topics, 36 students and an Instructor produced a total of 247 entries in the discussion threads, with 221 (89%) entries representing students' interactions with the

content of the discussion, and the remaining 26 (11%) entries representing the instructor's contributions.

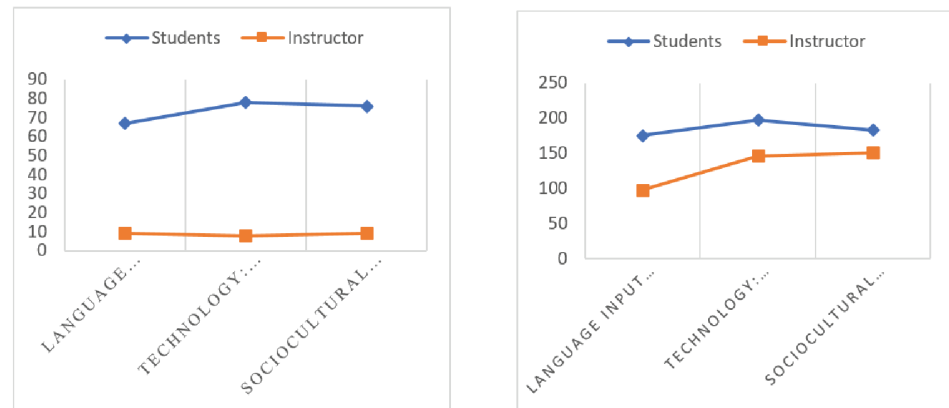


Figure 1: Number of forum entries and the average number of words per weekly topic

In term of the number of entries, the students dominated the discussion, with the instructor's role in creating a learning environment in which students took responsibility for their learning and were responsive to each other. Most students posted on the discussion board more than once per topic to meet minimum course requirements. Each participant wrote three paragraphs in response to the prompts, averaging 185 words. When responding to their classmates' main views on the issue, each participant posted a paragraph-length response in the threaded discussion averaging 75 words. On the other hand, the instructor wrote on the average 131 words which mainly contained a guidance to ensure that the discussion remained on track, giving feedback and eliciting detailed information. Figure 1. Indicating that students were highly active during the discussion.

4.2. Cognitive and Social sa et al.(2010).

The cognitive dimension is divided into four categories: problem recognition, exploration, integration, and solutions or implementation, whereas the social dimension is divided into three components: affective, open communication, and group cohesion. The data showed that 167 (68%) of the 247 posts or entries in the discussion contained cognitive cues, while 80 (32%) contained social interactions between students and the instructor as well as between students themselves.

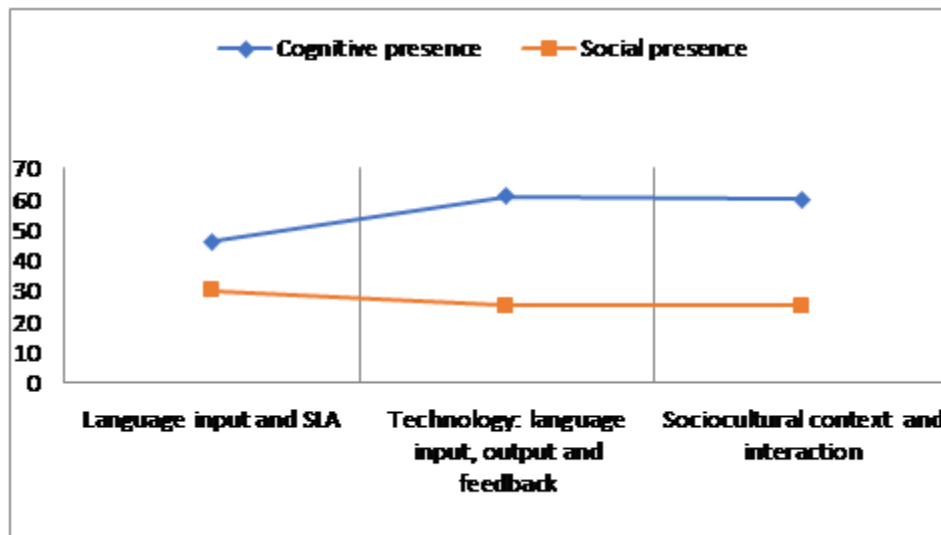


Figure 2:

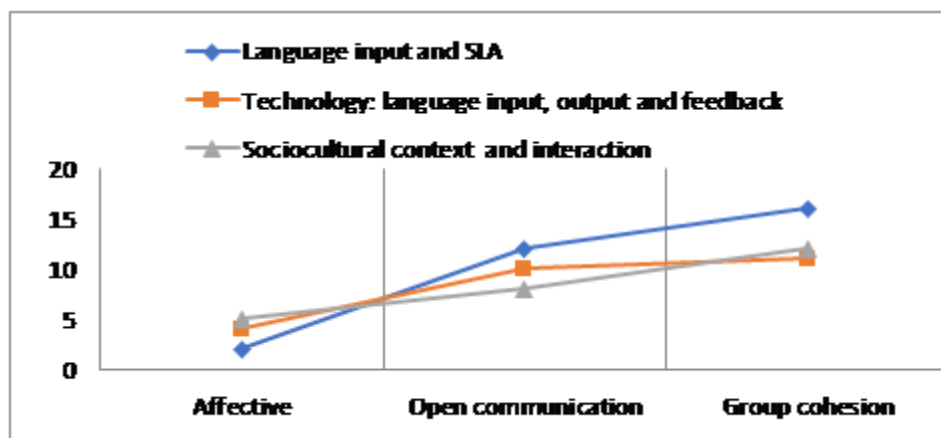


Figure 3: Pattern of social skills exhibit in the discussion.

4.3. The pattern of social skill exhibit in the discussion

Group cohesion and open communication were the two most frequently observed indicators of social presence in group interactions. These social cues were present in all discussion topics, occurring between students and the instructor and between students themselves

Social interactions between students primarily aimed to show approval or disagreement with one another’s opinions or arguments and offer compliments and advice. For example:

“I agree with your statement about using mobile phones to accelerate L2 acquisition in response to idea 17. If teachers apply the games, students will not feel bored. They can learn some language phrases and use them in playing games.”

“Thanks for your comment, dear. I think you are absolutely right because, as you said before, it is not easy for children to learn English in the same way that they learn L1. So, thanks Lia for your comment.”

“Your opinion is good, Femi, but question 3 asked you to choose two options and explain each of them. I noticed that you only chose one option.”

“Thank you so much, kak. It’s not about being right or wrong, it’s about presenting my opinion. We still have a lot to learn, so let’s learn together.”

Social interaction between students and the instructor mainly involved giving compliments, suggestions, or advice to encourage students to provide clear and detailed information. For example:

“ Hi, everyone! I’m really excited to hear all your perspectives on the issue we’re discussing. But now, I’d like you to take a step further to connect those viewpoints to something practical in the context of EFL learning in Dobo or in Tiakur. For example, Imagine we’re in an EFL classroom, and we want to explore the use of input-based activities. As you read from the article, these activities involve using real-life materials like news articles, podcasts, or videos to expose learners to authentic language usage. I want you to think about 1) What do students actually learn from using authentic materials like these? 2) Why is it important for them to do so? And 3) how can we incorporate these materials into our lessons? Cheer ”

Social presence is an indicator of students’ involvement in discussions. As the course progressed, students were expected to become more comfortable with each other during the discussion.

4.4. The pattern of cognitive skills exhibit in the discussion

Regarding the cognitive presence displayed in the content discussion, we analyzed the students’ cognitive skills related to problem recognition, exploration, integration, and solutions or implementation. To spark the discussion on each topic, we proposed a prompt to stimulate students to exhibit these cognitive skills by presenting their points of view. Clarifying questions usually arise during online discussions provided by instructors. Figure 4 show the cognitive skills exhibited during the discussion.

The data provided the distribution of cognitive skills exhibited in asynchronous discussions across the three different discussion topics. The analysis revealed that these four cognitive elements are mostly found in a single message. Exploration ability was the most frequently exhibited cognitive skill. This ability was primarily demonstrated through information exchange across individual messages, and became a frequent

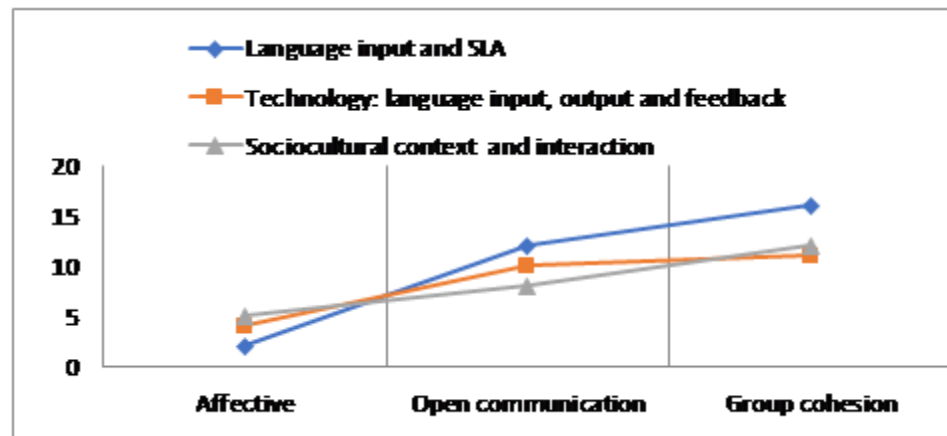


Figure 4: Cognitive Skills exhibit in the discussion.

representation of cognitive presence in asynchronous discussions. Problem recognition seemed problematic during the first week as many students tended to avoid it. However, in subsequent discussion topics, this skill was demonstrated, mainly in a single message. Integrating information was very low at the first week as most of the students excluded this element from the discussion. However in the following weeks, this skill exhibited in discussion topics. The integration skill was mainly found within a single message as a response to the prompt from the instructor. Nevertheless, peer contributions by connecting personal experiences and ideas were also part of the integration in some of the students post. The solution or the implementation element was the least frequently exhibited cognitive skill that appeared in the message. Most students excluded this element from their messages. In other words, students were not aware of the importance of including solutions or applications as part of the discussion.

5. Discussion

Asynchronous discussions allow students to reflect on the course materials. This learning environment provides opportunities for students to construct knowledge by interacting with peers and technology. Such activities significantly enhanced their learning outcomes, particularly in the context of learning English as a foreign language, where opportunities for language use outside the classroom are often limited. Students can improve their language skills and expand their knowledge by engaging in asynchronous discussion.

Our content analysis revealed that students processed the material at a moderately high level of cognitive ability, incorporating elements such as problem recognition, exploration, integration, and solutions. Exploration was the most frequently exhibited cognitive skill, primarily demonstrated through single messages and information exchanges across individuals, such as providing suggestions, personal experiences, and ideas. Other cognitive skills such as problem recognition, integration, and implementation varied across discussion topics. Their presence in the discussion task was due to tailored discussion prompts, which encouraged the development of different cognitive skills.

Cognitive presence was undoubtedly influenced by students' social interactions in synchronous and asynchronous modes, particularly in online discussions. The content analysis showed that social interaction between the students and the instructor appeared in different forms, such as providing compliments, expressing agreement and disagreement, offering personal advice, and most importantly, using inclusive pronouns such as 'we' in addressing the issue. This form of interaction creates a friendly learning environment as a learning community that supports one another in achieving the goal [32]. The exchange appeared in 80 posts (32%) throughout the discussion from topics 1 to 3.

Using synchronous and asynchronous modes encourages students to focus on reading, instead of simply relying on their experiences. Using the synchronous mode helps students receive explanations and clarifications on the concepts contained in the readings before asking them to participate in asynchronous discussion. This is particularly important for content materials (readings and videos), and the discussion to take place. The utilization of both modes encourages students to participate in the discussion by responding to the prompt (an average of 185 words in a single message) and responding to their classmates' main views on the issue in the threaded discussion (an average of 75 words in length).

In asynchronous discussion, the inclusion of guiding questions support the students in exploring the topic deeply. The analysis revealed The analysis reveals a progressive emergence of cognitive skills throughout the discussion as it transitions from one topic to another. Although other factors may influence, the guiding questions posed by the instructor during the discussion appeared to have aided in eliciting the types of cognitive skills displayed in online discussions [6]. The frequency of certain cognitive skills in each topic discussion demonstrates adequate level of cognitive skills that affect the development of student's knowledge of the topic.

This study has shown that the success of the online discussion was enhanced by the implementation of a synchronous platform, such as zoom meeting. In the context of English as a Foreign Language (EFL), it can be difficult for students to thoroughly explore and exchange information, justify their positions, and offer temporary solutions within a limited timeframe of one week. Therefore, the utilization of synchronous meeting played a pivotal role by providing an opportunity for students and the instructor to discuss the underlying concepts. This model fostered discussions that facilitated the integration of theoretical concepts with practical applications for each topic. Consequently, it encouraged students to actively engage in reading and maintain a focus on their discussion tasks. The students' active involvement was evident as they contributed a total of 221 messages (accounting for 89% of the overall participation) within the discussion thread, with each student making at least two posts per topic. As highlighted by Hara et al. [33], the exchange of information is a typical characteristic of online discussions.

6. Conclusion

Blending online learning modes, combining synchronous and asynchronous delivery modes, creates opportunities for students to effectively engage in course content. Activities in synchronous mode via zoom meetings, such as providing concept clarification, examples, discussing problems, and solutions, support the student's participation in asynchronous discussion. Tailored discussion prompts, guiding questions, feedbacks and other forms of social interaction are essential in supporting students to explore topics deeply and use their metacognitive skills to reflect on the content. The analysis of the asynchronous discussion revealed that students processed the material at a moderately high level of cognition, incorporating problem recognition, exploration, integration, and solutions. The discussion also fostered various forms of social interaction between students and instructors, creating a friendly learning environment that supports one another in achieving the goal. Therefore, the combination of synchronous meetings, tailored prompts, feedback and social interactions enhances students' active engagement and utilization of cognitive skills in online asynchronous discussions.

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TABLE 3: Sample coding of the data.

Coding Scheme for Social Presence					
	SP category	Indicator	Code	Defenition	Example
Social presence (SP)	Affective (AF)	Expressing emotions	SPFV	Conventional expressions of emotion include expressions of likes, dislikes an	I'm really annoyed... I'm so happy...
	Open communication (OC)	Continuing a thread Quoting from others' Messages Complimenting expressing appreciation Expressing agreement Expressing disagreement	SPOC1 SPOC2 SPOC3 SPOC4 SPOC5	Using reply feature of software, rather than starting a new thread Using software features to quote others' entire message Direct references to contents of others	In your message you talked about... I really like your interpretation of the reading I was thinking the same thing I don't think... I think it is different... You are right.....
	Group cohesion (GH)	Addresses or refers to the group using inclusive pronouns in greeting, social sharing	SPGH1 SPGC2	Addressing or referring to the participants by name Addresses the group as we., us, our, group Communication that serves a purely social function; greetings or closures	Hi all; Hi John; That's it for now; We're having
Coding Scheme for Cognitive Presence					

TABLE 3: Continued.

Coding Scheme for Social Presence						
	CP Category	Indicator	Code		Defenition	Example
Cognitive presence (CP)	Triggering events (TE) Exploration (EX) Integration (IN) Resolution (RE)	Recognize problem	CPTe CPEX2 CPIN1 CPRE	CPEX1 CPEX3 CPIN2	Presenting background information that may culminate in a question or present a problem Asking question that take discussion in a new direction Unsubstantiated agreement or disagreement/contradiction of previous idea Many different idea. These presneted in one message Personal narrative or description or fact (from sources as website, article, etc. Justified, developed tenative assumption Integrating idea from one or more sources (article, personal expereince , others post or peer contribution Defending why a problem was solved in a spesific manner	It has been argued that the only way to deliver effective distance education is trough a system approach. However, this approach is rarely used, why do you think that is?. One reason that I think a system appraoch is seldom used in that it is..... Just thinking about.... Here is my thoughtWhat if... , How about... We also had trouble getting cooperation. Often the use of new tools require new organizational structure..... We address this issue when we implement a systhen approach consideering that How we solve this problem was...
		Exploration within the online community				
		Exploration within a single message				
		Information exchange				
		Suggestion for consideration				
		Integration within a singke message (response to the prompt)				
		Connecting idea, synthesis				
		Creating solution				
		Defending solutions				