Cognitive Presence in Blended Learning: An Investigation of Students’ Perceptions and Expectations

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Abstract
This study examines English students’ perceptions and expectations of the cognitive presence in a blended learning environment. It utilized the sequential explanatory strategy which combined the survey design and interview to obtain the data. The results indicate that students’ perceptions derived from experience are different from their expectations at some points. Few students take the initiative to prepare actively by reading more information related to the course or establishing learning goals. Additionally, students who do not prioritize preparation tend to depend solely on their teachers for course explanations. The findings suggest that self-regulation is critical to effective learning and that students need to explore and gather information themselves to succeed. Furthermore, students expect to search for relevant information online and participate in discussions to stimulate critical thinking and enrich their learning experience. These results can assist teachers and instructional designers in designing blended learning environments that promote students’ cognitive presence and foster effective learning.

Keywords: blended learning, cognitive presence, perceptions, expectations

Introduction
Blended learning, which combines online and face-to-face learning, has emerged as an alternative teaching approach in recent years (Hrastinski, 2019). In Indonesia, especially during and post-COVID 19, blended learning has been widely implemented by some higher education institutions (Sefriani et al., 2021). It is expected to provide an optimal learning experience by incorporating the advantages of both online and face-to-face learning (Nugroho et al., 2021). Additionally, it offers students the flexibility to plan their own study schedules (Boelens et al., 2015).

Additionally, to enhance students’ learning experience, cognitive presence has become a significant aspect of blended (Garrison, Anderson, & Archer, 2000). It involves the ability of students to engage in reflective and critical thinking activities and to demonstrate their understanding of course content through interactions with others (Garrison & Arbaugh, 2007). It can be fostered by participating in online and face-to-face discussions that allow students to actively construct knowledge through dialogue and reflection (Garrison & Vaughan, 2008).

Moreover, Garrison et al. (2000) proposed four phases of cognitive presence. There are triggering event, exploration, integration, and resolution. Triggering event, the initial phase, initiates inquiry as students conceive problems, define issues (Garrison, 2016),
and through questioning, recognize the importance of curiosity. Exploration, the second phase, students analyze problems through research and information exchange, engaging in critical examination, idea sharing, and fostering discussion readiness (Garrison, 2016). Integration, emphasizes the combination of information into a coherent concept (Garrison et al., 2001) by doing activities like discussions that build upon prior information and stimulate the analysis process. Resolution, the last phase, focuses on students’ learning and development for further courses (Garrison, 2015).

Furthermore, several studies have highlighted the significance of cognitive presence in blended learning. A recent study by Harb & Krish (2020) found that blended learning application is positively affected by cognitive presence. In line with results by Joo et al. (2011) that students’ cognitive presence was positively related to their critical thinking skills in online discussions. Furthermore, (Zhang, 2020) and Oktaputriviant (2021) found that blended learning has the advantage of maximizing access to various learning sources and media. Therefore, students’ understanding of the course materials is enhanced.

However, some studies argue that blended learning can promote cognitive presence. This issue is mostly related to the utilization of media and the digital divide (Aldosemani, et al., 2018). Some students face troubles like slow internet connection, inadequate home conditions, lack of digital literacy, and teachers’ less experience in utilizing learning media (Bhuana & Apriliyanti, 2021; Gonzalez & Louis, 2018; Rodriguez et al., 2021; Muñoz-Najar et al., 2021). Moreover, instead of facilitating more effective learning, blended classrooms became another issue faced by the students in Ghana (Gyamfi & Gyaase, 2015). It is due to the country’s slow internet connection. Also, the students accepted blended learning, but they needed more time to adapt to the new approach and expected more supporting facilities. Furthermore, Maqableh & Alia (2021) found that students got easily distracted during the online part of blended learning due to psychological matters, minimum physical interactions with teachers, and bad time management. These result findings indicate that reaching cognitive presence during blended learning is affected by many factors. Moreover, according to Shea and Bidjerano (2010), the cognitive load increased due to the lack of guidance from the teacher. Thus, students struggle to understand the course materials.

Despite its merits and challenges, there is an ongoing debate about the significance of cognitive presence in blended learning. The lingering question is also related to whether cognitive presence can maintain the students’ critical thinking (Akyol & Garrison, 2011). In blended learning, cognitive presence is emphasized through online instructions and resources (Graham, 2006). Some argue that it adequately satisfies the requirements of cognitive presence, while others argue the opposite (Vaughan et al., 2013).

Thus, studying the perceptions from students’ perspectives has been essential to see their experiences and needs. Some students might see that blended learning helps their learning problems and can enhance their critical thinking, but others think differently. In this paper, perception is defined as how students perceive the learning process and its approach after they have experienced blended learning. As perception is related to students’ needs, this research tries to investigate their perceptions linked to their expectations of how blended learning should be conducted to develop cognitive presence. Meanwhile, blended learning in this study refers to the dynamic learning process during and post-pandemic in a state university in Indonesia. Its implementation was flexible, which combined the online and face-to-face meetings depending on the situation.
Method

This study utilized the sequential explanatory design that involved two methods of data collection. The first is by collecting data from an online questionnaire distributed to 101 students from the English Language Education study program of a state university in Java. The online questionnaire consisted of 24 question items—13 items for perceptions and 14 others for expectations. It used Likert’s scale from 1 (disagree), 2 (neutral), and 3 (agree). The items are adapted from the Community of Inquiry (CoI) framework proposed by Garrison et al. (2000) (see Table 1). The completed questionnaire was analyzed by using the percentage results provided by Google Forms.

Table 1 Students' practice of regulating learning in triggering events phase

<table>
<thead>
<tr>
<th>Variable</th>
<th>Sub-variable</th>
<th>Indicator</th>
<th>Perception</th>
<th>Expectation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive presence</td>
<td>Triggering event</td>
<td>Self-regulating</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Recognizing problems</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Questioning</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Exploration</td>
<td>Brainstorming</td>
<td></td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td></td>
<td>Exchanging information</td>
<td></td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td></td>
<td>Working collaboratively</td>
<td></td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td></td>
<td>Processing other’s suggestions</td>
<td></td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Integration</td>
<td>Describing information</td>
<td></td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td></td>
<td>Making conclusion</td>
<td></td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td></td>
<td>Developing explanation/solution</td>
<td></td>
<td>1</td>
<td>11</td>
</tr>
<tr>
<td>Resolution</td>
<td>Testing and defending self-opinion</td>
<td></td>
<td>1</td>
<td>12</td>
</tr>
<tr>
<td></td>
<td>Applying new knowledge</td>
<td></td>
<td>1</td>
<td>13</td>
</tr>
</tbody>
</table>

Then, the second is an interview with seven students. Since the focus of the population is students who experienced blended learning, the interviewees were chosen by their willingness to participate and their significant answers to the questionnaire. Moreover, the interview result was transcribed verbatim. However, only relevant transcription was put in the research results. Additionally, the second method was used to support the questionnaire and gain deeper information about students’ perceptions and expectations.

Results

Students' Perceptions of Cognitive Presence

**Triggering Event**

The triggering event covers three (3) question items related to how students regulate their own learning and materials. Most students believe they are determined to get good results.

Table 2 Students' practice of regulating learning in triggering events phase

<table>
<thead>
<tr>
<th>Question Items</th>
<th>Disagree</th>
<th>Neutral</th>
<th>Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I do my best for assignments during BL</td>
<td>2 (2.0%)</td>
<td>12 (16.8%)</td>
<td>82 (81.2%)</td>
</tr>
<tr>
<td>I read more information related to the course</td>
<td>33 (32.7%)</td>
<td>51 (50.5%)</td>
<td>17 (18.8%)</td>
</tr>
<tr>
<td>I prepare myself with questions before BL class</td>
<td>15 (14.9%)</td>
<td>33 (32.7%)</td>
<td>53 (52.5%)</td>
</tr>
</tbody>
</table>

Also to achieve learning goals, they know that reading more information about learning materials, as shown in Table 2, 81.2% of them always do their best for assignments. However, only half of the respondents (52.5%) do their own reading. As
stated by three interviewees who did learn by themselves before attending class for their successful learning.

Interviewer: What do you do to support your own learning?
Interviewee E: By studying the learning materials before coming to the class, so when the course starts, we can follow the learning process.
Interviewee R: Spending a little more of my time to study by myself.
Interviewee H: I usually observe and pay attention to the lecture in class or online meetings.

Even though some students prepare themselves by reading, most of them do not prepare questions related to the material before attending the class, as proven by the result (16.8%). An Interviewee replied that she does not ask any questions beforehand but she pays attention to the teacher’s explanation and reread the materials after class.

Interviewer: Why don’t you prepare yourself with questions before class?
Interviewee H: Directly asking the teacher in class if I do not understand the materials explained.

**Exploration**

Exploration phase covered five (5) questions related to students' perception of learning sources and working collaboratively to achieve the same learning outcomes.

| Table 3. Students' experience working collaboratively in the exploration phase |
|-----------------------------------------------|-----------------|-----------------|------------------|
| Question items                                      | 1 (Disagree) | 2 (Neutral) | 3 (Agree) |
| I search for relevant information on the internet to do assignments. | 2 (3.0%) | 9 (8.9%) | 89 (88.1%) |
| During BL, I can have a lot of discussions. | 28 (27.7%) | 34 (33.7%) | 39 (38.6%) |
| I work better with friends. | 9 (8.9%) | 26 (25.7%) | 66 (65.3%) |
| I get more insight while working collaboratively. | 4 (4.0%) | 14 (13.9%) | 83 (82.2%) |
| I use discussion results as learning sources. | 9 (8.9%) | 28 (27.7%) | 64 (63.4%) |

As shown in Table 3, most of the respondents (88.1%) find it easier if they search for information on the internet for assignments. The learning sources can be found online and add more information in face-to-face meetings. In line with the interview result the respondent admitted to searching for course materials.

Interviewer: How do you add your knowledge to get better assignment results?
Interviewee A: Looking for additional material that is not given by the teachers but is needed.

Interviewee H: Opening the browser to search for materials that I less understand.

To finish assignments, discussion could be one of the steps to get better results. However, blended learning does not give them more opportunities. As shown in Table 2, only a small number of students (38.6%) think so. Other students (27.7%) think more discussion can be done in any kind of learning method.

Interviewer: Does blended learning give you more opportunities to have discussions?
Interviewee F: Not only in blended learning but in other educational programs, discussion is important.

Although blended learning does not give more chances for discussion, more than half of the respondents (65.3%) know that they can do better if they work in groups. Both online and offline groups give them more support in their learning process. Working in a group also helps students (82.2%) answer questions because they gain more insight from each other.

Interviewee: Why do you work better with friends?
Interviewee R: We can discuss while studying in class, that’s the most needed. From here, we can get more insight.
Half of the students (63.4%) use the results of discussions as a learning source. Meanwhile, the other half believe that they will not lack learning sources because they can find other sources while participating in blended learning.

**Integration**

Integration phase consists of three (3) question items related to how students process information from one course to another.

<table>
<thead>
<tr>
<th>Question items</th>
<th>1 (Disagree)</th>
<th>2 (Neutral)</th>
<th>3 (Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I can re-describe the materials from the courses.</td>
<td>4 (4.0%)</td>
<td>44 (43.6%)</td>
<td>53 (52.5%)</td>
</tr>
<tr>
<td>I make a conclusion after following activities in BL.</td>
<td>6 (5.9%)</td>
<td>43 (42.6%)</td>
<td>52 (51.5%)</td>
</tr>
<tr>
<td>I develop solutions for my own learning problem.</td>
<td>9 (8.9%)</td>
<td>26 (25.7%)</td>
<td>66 (65.3%)</td>
</tr>
</tbody>
</table>

By following the activities in blended class, half of 101 respondents (52.5%) admit they understand what they have learned and are able to explain it in their own words. Once they can reexplain, it is easy to make conclusions about the materials. However, only half of them (51.5%) can do so although they have followed all learning activities in blended learning. An interviewee stated that making conclusions with her own words adds to her understanding.

Interviewer: Why do you make your own conclusions even though the teacher will conclude the course at the end of the class?

Interviewee F: It is much easier to understand the material that has been taught if I make conclusions with my own words.

Moreover, no more than half of the students (43.6%) can develop solutions for their course problems. Creating solutions for learning difficulties is not easy even though they have set learning goals, doing assignments, and working in groups. The fact that only half of the respondents can complete the integration phase shows that it is difficult to explain, draw conclusions, and develop learning solutions. Therefore, the solution they can come up with is to search for more learning materials and ask friends for explanations.

Interviewer: How do you solve your learning?

Interviewee O: Searching relevant sources on the internet, asking friends who understand more or asking them to explain if they are willing to.

Interviewee H: By contacting friends, ask them, or I will browse the related materials.

Interviewer: Why don’t ask teachers?

Interviewee H: I am not used to asking teachers and I have less interaction with them.

**Resolution**

Resolution phase contains two (2) items related to the importance of having the ability to defend and apply the knowledge to all courses. After doing all the activities in the previous phases, students must be able to defend their answers or opinions.

<table>
<thead>
<tr>
<th>Question items</th>
<th>1 (Disagree)</th>
<th>2 (Neutral)</th>
<th>3 (Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Can you defend your opinion because you have gathered all relevant information?</td>
<td>8 (7.9%)</td>
<td>41 (40.6%)</td>
<td>51 (51.5%)</td>
</tr>
<tr>
<td>Can you apply your knowledge from one course to other courses?</td>
<td>5 (5.0%)</td>
<td>33 (32.7%)</td>
<td>63 (62.4%)</td>
</tr>
</tbody>
</table>
Yet, the result is only half of them (51.5%) who are confident to stand on their opinion, because they have collected relevant information from online and offline sources.

Interviewer: Why don't you defend your opinion?
Interviewee F: When my classmates have previously expressed their opinion that is like mine. I feel as though I have said it before, I worry I would waste learning time.

Then, if a friend’s opinion is more thorough.

Then, the knowledge they have gained in one class should be useful for other classes. 63 students (62.4%) know they can apply the knowledge they gain from one course to other courses. Meaning that they have been able to think critically during the blended learning.

Students’ Expectations of Cognitive Presence

Triggering Event

Triggering event that covers four (4) items. The items focus on students’ expectations of their own learning regulation.

<table>
<thead>
<tr>
<th>Question items</th>
<th>1 (Disagree)</th>
<th>2 (Neutral)</th>
<th>3 (Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to make my own learning goal for the BL class.</td>
<td>14 (13.9%)</td>
<td>45 (44.6%)</td>
<td>42 (41.6%)</td>
</tr>
<tr>
<td>I want to do my best for good grades.</td>
<td>2 (2.0%)</td>
<td>7 (6.9%)</td>
<td>92 (91.1%)</td>
</tr>
<tr>
<td>I want to get a lot of information from useful learning materials.</td>
<td>0 (0.0%)</td>
<td>6 (6.9%)</td>
<td>95 (94.1%)</td>
</tr>
<tr>
<td>I want to be able to answer many questions related to the course before attending the class.</td>
<td>14 (13.9%)</td>
<td>26 (25.7%)</td>
<td>61 (60.4%)</td>
</tr>
</tbody>
</table>

The result, as shown in Table 6, is that less than half of respondents (41.6%) have set learning plans and goals. Moreover, some respondents did not set learning goals because, in line with the interview result, an interviewee just followed course outcomes from the teachers.

Interviewer: Why don’t you want to have your own learning goal?
Interviewee A: For the learning goals, I follow the teachers.

Even though most of them are not sure about setting goals, almost all of them (91.1%) realize that they want to do the assignments optimally to get good results. The majority of the students (94.1%) actually want to prepare before attending the course. They admitted expecting themselves to read course materials. However, some students admitted they did not have time to study by themselves. An interviewee stated that her house condition makes studying at home impossible. Also, she felt burdensome with loads of assignments.

Interviewer: What stops you from preparing yourself?
Interviewee E: There are never-ending assignments that sometimes take my time to study by myself during blended learning.

If most of them are willing to study, only 60.4% of students want to answer questions before attending the course. The rest of them prefer to answer questions during the course.

Interviewer: Why don’t you want to answer questions in the coursebook before attending class?
Interviewee O: I wait for the teacher to explain because it’s clearer.
Exploration

The exploration phase contains five (5) question items. This aspect is related to how students want to process learning information from various activities.

Table 7. Students’ expectations of how information is processed

<table>
<thead>
<tr>
<th>Question items</th>
<th>1 (Disagree)</th>
<th>2 (Neutral)</th>
<th>3 (Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want to explore more relevant learning materials and topics in every course.</td>
<td>1 (1.0%)</td>
<td>14 (13.9%)</td>
<td>86 (85.1%)</td>
</tr>
<tr>
<td>I want to have discussions whenever needed.</td>
<td>3 (3.0%)</td>
<td>8 (7.9%)</td>
<td>90 (89.0%)</td>
</tr>
<tr>
<td>I want to get better results when I work collaboratively.</td>
<td>1 (1.0%)</td>
<td>3 (3.0%)</td>
<td>97 (96.0%)</td>
</tr>
<tr>
<td>I want to process more information to answer questions.</td>
<td>2 (2.0%)</td>
<td>10 (9.9%)</td>
<td>89 (88.1%)</td>
</tr>
<tr>
<td>I want to make group discussion results as learning sources.</td>
<td>5 (5.0%)</td>
<td>21 (20.8%)</td>
<td>75 (74.3%)</td>
</tr>
</tbody>
</table>

As shown in Table 7, more than half of the students (85.1%) want to search for more information that is relevant to the course topic. Searching for information can be done by themselves or by having a discussion.

Interviewer: What do you expect yourself to do to gain more information for your learning source?
Interviewee H: I search for related reference materials that I have learned in class.
Interviewer: What do you do to

Interviewee

Additionally, most students (89.1%) preferred discussion whenever possible because exchanging information adds to their knowledge. In line with the statement from one of the interviewees about his expectation of blended learning activity with classmates, he said that he wanted discussion in small groups.

Interviewer: What kind of activities do you expect in blended learning?
Interviewee R: Small group discussion and presentation related to the learning materials.

Moreover, students’ expectation of working collaboratively is high. As shown in Table 6, almost all of them (96.0%) expect working with a group could give them a better learning outcome. Then, some of them (74.3%) want to use the discussion results as a learning source. After getting information by searching and discussing, they (88.1%) want to answer questions related to the topic. Thus, the exploration phase is in accordance with a student’s interview response.

Interviewer: What do you expect from the discussion?
Interviewee R: I sometimes feel confused and lost when I must learn all by myself. Exchanging ideas and opinions with friends is what I need.

Integration

The integration phase covers the students’ expectations of how activities in blended learning can solve their problems related to the courses. It consists of three (3) question items.

Table 8. Students’ expectation of processing materials to solve learning problems

<table>
<thead>
<tr>
<th>Question items</th>
<th>1 (Disagree)</th>
<th>2 (Neutral)</th>
<th>3 (Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want BL activities can be my source of information that improves my learning</td>
<td>2 (2.0%)</td>
<td>9 (8.9%)</td>
<td>90 (89.1%)</td>
</tr>
<tr>
<td>I want BL activities to support me in making conclusions.</td>
<td>2 (2.0%)</td>
<td>8 (7.9%)</td>
<td>91 (90.1%)</td>
</tr>
<tr>
<td>I want activities in BL can be my learning problem-solution.</td>
<td>4 (4.0%)</td>
<td>17 (16.8%)</td>
<td>80 (79.2%)</td>
</tr>
</tbody>
</table>
Similar to the previous aspects, most students (89.1%) want activities in blended learning to add more knowledge about materials. They want to have more time to search for information and conduct discussions in an online or face-to-face setting. After gathering information from various activities, almost all students (90.1%) expect themselves to be able to make conclusions about what they have learned. Furthermore, students (79.2%) want blended learning activities to be a solution to their learning problems. However, in contrast with other responses, a respondent admitted that blended learning is not a solution.

Interviewer: What is your expectation to solve your learning problem?
Interviewee K: Sometimes, I wish there was blended learning again. Maybe for one or two courses, and occasionally. I am tired, especially if we have a tight schedule in one day, and non-stop classes from morning to evening.
Interviewee F: It is better to choose one whether it is an online or offline class and not combine them. If it is mixed, it's better to have clear instructions so the class can run well.

Resolution

Expectation of the resolution aspect focuses only on two (2) item indicators. The first is students’ expectation of blended learning to help the students in defending their opinions.

Table 9. Students' expectation to be able to defend and apply knowledge.

<table>
<thead>
<tr>
<th>Question items</th>
<th>1 (Disagree)</th>
<th>2 (Neutral)</th>
<th>3 (Agree)</th>
</tr>
</thead>
<tbody>
<tr>
<td>I want BL activities to support me in defending my opinion</td>
<td>5 (.0%)</td>
<td>21 (20.8%)</td>
<td>75 (74.3%)</td>
</tr>
<tr>
<td>I want my knowledge in one BL course to help me learn in other courses</td>
<td>3 (3.0%)</td>
<td>9 (8.9%)</td>
<td>89 (88.1%)</td>
</tr>
</tbody>
</table>

Resulting in some students (74.3%) expecting to be able to stand on their opinion because they have followed blended learning activities. Then, the second indicator is related to how blended learning could help students to learn from one course to another. With the dynamic learning process, many students (88.1%) want the knowledge gained to be applied to any course.

Discussion

Perceptions and Expectations of Cognitive Presence

An investigation was conducted to determine language students’ perceptions based on their experience and expectations of cognitive presence during blended learning. It focuses on four phases of cognitive presence (triggering event, exploration, integration, and resolution) that describe the steps of critical thinking.

Based on the findings, most of the students always do their best for assignments during blended learning. However, only a few of them prepared questions for the course and read more information related to the course. It indicates that students may not fully comprehend how to prepare effectively despite acknowledging its significance. Garrison & Arbaugh (2007) implicitly stated in their research that determining to achieve learning goals and doing their best for assignments are forms of self-regulation of students in successful learning. Furthermore, although most students understand the value of setting learning goals, only a minority of them establish such objectives. It shows a discrepancy between perceptions and expectations, suggesting that students may not fully grasp the advantages of establishing specific and measurable learning
goals. However, they still expect to prepare themselves and set their own learning plans and goals.

Moreover, students depend solely on the teachers for course explanations. This is supported by the statement of an interviewee when they were asked about the teacher's presence, "Asking the teacher in class if I do not understand the materials explain". However, this study found that most of the students still expect to have preparation before the class. Students also want to do the assignments for good results. It indicates that some students do not only depend on the teacher's explanation but also find information by themselves as preparation and effort to produce an excellent task optimally. However, the burden of workload during blended learning affects their learning regulation. The result is in line with Maqableh & Alia's (2021) which students feel psychological strain while studying at home. Thus, some students prefer to learn in class by paying attention to the teacher's explanation and taking notes.

According to Boelens et al. (2015), students who prepare for class by re-reading their notes, and coming up with questions do better academically compared to those who do not. Students need to know that getting prepared for class can be helpful. Also, by asking more insightful questions, students can start important debates that improve both their own and their peers' learning experiences (Joo et al., 2011). This study found that some students expect to answer questions before attending class. This way, they will be better prepared to receive lessons and be able to achieve better learning outcomes.

In Garrison & Arbaugh's (2007) study, it can also be understood that self-regulation is crucial in determining the success and effectiveness of learning. To ensure effective learning, students cannot rely solely on their teachers to provide them with the necessary materials. They need to explore and gather information themselves. Therefore, the exploration phase of the study asks students about their perceptions of learning sources and working collaboratively.

There are many learning sources available for students to acquire knowledge, especially during blended learning. Zhang et al. (2020) stated that blended learning provides students with access to a variety of multimedia resources, such as videos, simulations, or interactive learning activities, which can enhance their understanding and retention of course materials. This study shows that students understand that browsing the internet for relevant information is crucial to completing assignments with ease. Students can search for additional materials that were not provided by teachers online. Moreover, they can directly search for answers to queries during online learning sessions. Students have the expectation of being able to search for more relevant information online in blended learning. Searching for information can be done individually or through discussions. This is supported by a statement from an interviewee, "Usually, after the lesson, I want to look for references related to the material that I have learned."

Another way to obtain information for learning is by having discussions. Garrison & Vaughan (2008) found that blended learning is more engaging towards discussions as it covers two types of learning, online and face-to-face learning at the same time. The findings of this current study see discussions as an important step in doing assignments. However, only a few students think that blended learning provides enough opportunity for discussion. They think that not all learning methods support discussions and exchanging information and ideas with classmates. Students want to have discussions whenever it is needed during the learning process.

Online and face-to-face classes implemented together in blended learning enable students to have more opportunities to interact and clarify doubts with their classmates.
They agreed that they could do better while learning collaboratively in blended learning. Although students also consider discussions in blended learning to be not much different from other approaches, they hope that working in groups in blended learning can give them better learning outcomes. This is further supported by the statement of students who expect better results when working in groups. This is further supported by students' statements, "Not only in blended learning but also for other educational methods, discussions are important," another interviewee also stated further, "The presence of classmates makes it easier to have discussions and communication to exchange ideas", then continued "With classmates, we can discuss while learning in class, that's what is needed. From here, we can get more insight." Collaborative learning that they do through discussions in blended learning makes them exchange ideas and perform critical thinking and problem-solving skills, so their insight develops. The results of this study also indicate that they want to be able to use every discussion output in blended learning as a learning source, and they also want the information that comes from discussions to help them answer questions or things that they do not understand yet.

Garrison, Anderson, & Archer (2000) explained that cognitive presence involves the ability of students to engage in inquiry, exploration, and reflection, and to demonstrate their understanding of course content through interactions with others. After students gather information through various activities such as browsing, asking questions, and discussing, they need to process and engage in inquiry towards the material to prepare themselves for the next course. To do so, they need to be able to explain the course content in their own words. Therefore, an exploration of how students process information in blended learning is conducted with the following result.

According to Zang et al. (2020), students who do not have access to meaningful learning experiences may find it difficult to memorize learning material and use it in practical situations. The results indicate that even after processing information, some students still struggle to describe course material in their own language. As only a little over half of students state they can express what they have learned in their own words, this trend indicates that students struggle to apply their knowledge in real-world settings. However, students still expect blended learning to provide more learning material for them. Despite following all the learning activities, only half of the students are able to do so. Therefore, they need to create their own conclusions to enhance their understanding of the course materials. These conclusions help them to develop solutions to any difficulties they may face in the course.

However, the inability of more than half of the students to create solutions for their course problems despite setting learning goals, completing assignments, and working in groups, highlights the difficulty in doing so. It is shown by the data, respondents could develop solutions for their own problems. This is also evident from the fact that only half of the respondents are able to complete the integration phase which involves explaining, drawing conclusions, and developing learning solutions. Therefore, students rely on searching for additional learning materials and seeking assistance from their peers to overcome their learning difficulties. In this regard, students expect blended learning to facilitate their learning so that they can make conclusions and be able to determine solutions for their own learning problems. Collaborative learning in blended learning can enhance students’ critical thinking and problem-solving skills, as suggested by Garrison & Arbaugh (2007), after completing all the activities before and during learning, students should be better prepared to defend their answers.
Garrison & Vaughan (2008) explained that cognitive presence in blended learning allows students to develop a deeper understanding of course materials and to apply their knowledge in real-world contexts. Therefore, the presence of cognitive presence should be able and confident in maintaining and expressing their opinions. The results showed that only about half of the students were confident enough to defend their opinions. An interviewer revealed that they would hesitate to express their thoughts if their classmates had already shared the same or more meaningful opinions. They believed that it would be inefficient to repeat their ideas. Students should also use the material they learned in one course in other courses to make it useful for their overall learning experience. This study found that lot of students could accomplish this, meaning that they had improved critical thinking abilities as a result of the blended learning experience. Overall, the resolution stage highlights the need for students to develop the ability to defend their opinions and apply knowledge in various courses. In the resolution stage, students have the willingness to be able to defend their opinions and apply new knowledge they gained to other courses.

Conclusion

Based on the investigation conducted to determine language students' perceptions and expectations of cognitive presence in blended learning, it can be concluded that while most students recognize the importance of preparing for class and performing well on assignments, only a small number of them take the initiative to prepare by generating questions related to the learning materials beforehand, reading more information related to the course, or establishing learning goals. Students who do not see the act of preparing for the class as important tend to depend solely on their teachers for course explanations. To ensure effective learning, students cannot solely rely on their teachers to provide them with the necessary materials. They need to explore and gather information themselves, as self-regulation is crucial in determining the success and effectiveness of learning. Blended learning provides students with access to a variety of multimedia resources, such as videos, simulations, or interactive learning activities, which can enhance their understanding and retention of course materials. Students expect to be able to search for more relevant information online in blended learning and participate in discussions to initiate critical thinking and a more enriching learning experience.

One limitation of this study is that it only investigated language learners' expectations of cognitive presence in blended learning from one institution, which may limit the generalizability of the findings. Future research could expand the scope to include learners from different institutions and cultural backgrounds. Another limitation is that the study only focused on learners' expectations and did not measure actual cognitive presence or learning outcomes. Future research could include assessments of learners' cognitive presence and its impact on learning outcomes. Based on the findings, it is recommended that teachers provide adequate support and guidance to help learners develop effective learning regulation strategies, such as time management skills and goal-setting techniques. Additionally, teachers should provide appropriate guidance and support to ensure that all learners can benefit from collaborative learning activities, as some learners may not have the necessary skills or confidence to engage in group discussions effectively. It is also recommended that teachers consider the potential benefits of blended learning for promoting transferable skills and knowledge across different courses and domains. Finally, future research could investigate the
effectiveness of specific strategies or interventions to improve learners’ cognitive presence in blended learning.

References


