

SUSTAINING CLASS INTERACTION AND COLLABORATIVE LEARNING IN A VIRTUAL CLASSROOM

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Abstract: The teaching and learning activity must continue even in any situation or time, and most educational settings use online learning to keep it on the path. To achieve specific goals in 21st-century learning skills, improving students' collaborative problem-solving, solution-finding, decision-making, and bargaining skills is crucial. The main focus of the investigation was how to improve students' collaborative learning when learning a language. This research explained the phase applied to progress the class interaction through collaborative learning in a virtual classroom. In the learning process, the students were divided into two groups. The first was the learning group, where the students gained knowledge, then regrouped in the teaching group and presented what they had learned from the learning group. Six open-ended questions assessed the students' knowledge-building and experience in the learning and teaching groups. Research showed that most students agreed and were satisfied with this group collaboration activity in a virtual classroom. The result also indicated that students perceive group work satisfaction positively, with an average mean of 3.7. By utilizing video-conference technologies to their full potential, students can engage in virtual networking interactions and develop close relationships to solve problems with one another. Even if the entire teaching and learning process takes place online, the students can still engage in discussions with each small group which could result in collaborative learning.

Keywords: classroom, collaborative, interaction, virtual

INTRODUCTION

The surprising educational shift from face-to-face to online learning forces educational institutions to conduct lessons flexibly and investigate technologies and alternatives that could help with non-face-to-face instruction delivery. As stated above, the teaching and learning activity must continue even in times of crisis, whether a catastrophe, an emergency, a quarantine, or even war. Online learning is chosen in most educational settings to keep teaching and learning in progress. As a result, the development of appropriate online teaching strategies is required to facilitate the goals of teaching and learning (Wediyantoro et al., 2020). It requires a new revolution in language education, particularly in increasing students' collaboration skills in problem-solving, solution-finding, decision-making, and negotiation to accomplish specific goals in 21st-century learning skills. Virtual learning rooms, such as video-conference platforms, are used to ensure students' engagement and collaboration during the learning process and to create chances for students to engage in active learning using various features (Agustina & Suharya, 2021). A discussion method is typically used method in the classroom. Working in groups and networks is now essential for solving complex problems. As a result, collaborative learning methods have received a lot of attention (Haftador et al., 2021).

Collaborative learning happens when students cooperate in small groups on a shared learning assignment and are actively involved in problem-solving, idea-generating, and creating

products and collaborative work. Collaborative learning is predicated on students negotiating the group's roles, responsibilities, and outcomes. Group composition and selection are critical, and students frequently want assistance with team-building skills to ensure that all learners engage, negotiate, and contribute to shared work.

However, one issue that online learning may be able to address is a lack of interaction between the learners. (Sirajuddin et al., 2022). McBrien et al., (2009) argued that the lack of interaction and effective student engagement in online courses is because many educators need to gain the necessary skills and experience for online teaching. In addition to the difficulties that educators face, online learning may not be appropriate for certain groups of students. That is why the teacher hesitates to carry out collaborative activities in the online classroom for fear of failing the course objectives. This impacts the achievement of learning objectives, without a doubt. As a result, collaborative learning is critical in developing students' interpersonal skills in the educational world. The inquiry was carried out under the critical question of how to increase students' collaborative skills in language learning using the online face-to-face application in the classroom with vis-à-vis features often used in online learning. Teachers and students are assisted by using free web applications in online learning when using specific programs for this purpose (Sirajuddin et al., 2022). One of the advantages of this application is the feature that allows you to divide participants into groups using the Breakout Room feature. In addition, using the upgraded premium facilities allows more discussion time. Thus, being able to maximize learning, especially in discussion activities, the video-teleconference platform meeting application is seen as one of the effective online learning media. In addition, using the upgraded premium facilities allows a longer discussion time. Thus, being able to maximize learning, especially in discussion activities. Therefore, the video-teleconference platform meeting application is seen as one of the effective online learning media. Effective programming of the video-teleconference platform application will support the application of the collaborative learning model.

This method is illustrated when the teacher assigns group tasks and establishes ground rules for group operation, and explicitly teaches students to work in teams by assigning different roles within groups so that students take responsibility for specific aspects of tasks. As well as differentiates learning by assigning group content according to student readiness. Furthermore, it designs tasks that require sharing expertise and ensuring that other students value each student's contribution. The objective is to encourage interaction among students and teachers and students through the use of the Web. Some study results indicate that implementing collaborative learning will enhance subject study and learning, raise students' interest in the subject, and increase positive attitudes and social interaction (Ibrahim et al., 2015).

However, collaborative learning will force students to rely on one another to achieve the goal. Classes are divided into groups that individually complete a section of an assignment and then synthesize their findings when they are completed. These structures can function well online when used carefully and purposefully inside a synchronous course. This is critical to keep in mind that applying these structures will need some effort on the instructor's part, particularly in terms of pre-class grouping assignments and effective use of the video-conference platform's breakout rooms. When it comes to fostering conditions that encourage student participation, teachers are crucial. In reality, creating engaging learning environments highly depends on the kind of learning activities teachers use (Youngren, 2021).

METHOD

The current study focuses on uncovering the existing phenomena of the utilization of video-conference platforms as an effort to accomplish student engagement and confidence in the students' collaborative skills in language learning, as well as its relevance to the current research's objectives. The study will adopt a mixed methods research design, combining both quantitative and qualitative approaches. This comprehensive approach will allow for a more thorough exploration and understanding of the innovative and captivating ways in which video-conference platforms are employed to enhance student engagement and confidence in collaborative language learning skills. The participants for this research will be drawn from the sixth semester of the diploma three English programs. The study was conducted on 35 out of 40 students in the sixth semester of diploma 3 in English programs who did the collaborative learning activity in a virtual classroom, presenting 25 (62.5%) females and 15 males (37.5%) prior experience with virtual classrooms and video-conference platforms.

Two questionnaires were thoughtfully constructed and administered to capture a multifaceted view of the students' engagement and perceptions. The first set of questionnaires focused on the student's experiences within the Learning Group, delving into their interactions, group dynamics, and overall engagement during collaborative learning activities. Through carefully constructed questions, participants were prompted to reflect on their experiences, providing valuable insights into how they perceived the collaborative learning environment and the efficacy of their interactions with their peers. The second set of questionnaires delved into the students' experiences in the Teaching Group, which played a pivotal role in shaping the overall learning experience within the virtual classroom. This set consisted of three sections, each targeting specific student learning journey dimensions.

The first section focused on students' knowledge building, offering a comprehensive assessment of how effectively the virtual classroom strategy facilitated their knowledge acquisition and retention. Derived from a reputable source (Weidman & Bishop, 2009), the six

questions in this section enabled students to rate their perceived levels of knowledge development on a scale ranging from 1 to 4, enabling the researchers to gauge the effectiveness of the learning process.

The second section of this set concentrated on student-student interaction, a crucial aspect of collaborative learning. Five carefully selected questions, drawn from established research by Johnson et al., (2000), allowed students to express their views on the frequency and quality of their interactions with their fellow learners. This section's insights were instrumental in understanding how the virtual classroom fostered meaningful student-student exchanges and promoted a sense of collaborative camaraderie. The final section of the second set centered on students' learning satisfaction. Comprising six items adapted from Arbaugh (2000), this section inquired about the student's overall level of contentment with the virtual classroom approach and how it met their learning needs. By responding to a scale from 1 to 4, students offered nuanced feedback on the strategy's effectiveness and the extent to which it catered to their learning preferences. The researchers conducted in-depth interviews with selected participants to augment and enrich the quantitative data gathered through the questionnaires. These interviews offered a platform for students to share their opinions, experiences, and personal insights regarding the virtual classroom strategy. The interviews added a qualitative dimension to the research by delving deeper into their individual perspectives, providing a more holistic understanding of the student's thoughts and emotions toward the topic. The data analysis outcomes were interpreted and discussed in the context of the research objectives and the existing literature. Integrating quantitative data from the questionnaires and qualitative data from the interviews ensured a comprehensive analysis. Triangulating the findings allowed for cross-validation, ensuring the credibility and reliability of the research outcomes.

FINDING AND DISCUSSION

In the traditional implementation of this collaborative learning activity, the teacher plays a pivotal role in orchestrating the process. The teacher begins by carefully dividing the academic content into manageable sub-topics, ensuring that each sub-topic is appropriately assigned to the first-round group members, who are collectively known as the Teaching Group. Concurrently, the members of the Teaching Group are provided with the same material that they will later present to the Learning Group.

As the collaborative learning activity progresses, each Learning Group, comprising an ideal size of 4 to 6 students, takes on the responsibility of examining the content that has been assigned to them. These Learning Groups are intentionally formed to be heterogeneous, encouraging diverse perspectives, insights, and expertise within each group. The heterogeneity

of the groups enriches the learning experience, fostering a collaborative environment where students can learn from one another and leverage their unique strengths.

Drawing inspiration from the guidelines proposed by Kordaki & Siempos (2010), implementing the collaborative method involves several well-defined steps. Firstly, the teacher subdivides the topic into its constituent sub-topics, ensuring that each sub-topic is manageable and focused. Secondly, heterogeneous groups are formed, considering factors such as student's academic abilities, interests, and learning preferences.

Next, each student within the Learning Group is assigned a specific role and given a piece of sub-material to explore and master. This allocation of roles and sub-materials ensures that students engage deeply with the content, promoting a sense of individual accountability and expertise. Additionally, this structured approach empowers students to take ownership of their learning as they recognize the significance of their contribution to the collaborative process.

Following these initial preparations, the Learning Groups embark on their journey of learning and preparation. They are given dedicated time to delve into the sub-material, understand its nuances, and strategize how best to teach their peers within the Teaching Group. This phase encourages critical thinking, planning, and creative approaches to presenting the content effectively to their peers.

After this preparation period, the members of each Learning Group return to their respective Teaching Groups to carry out their interactive presentations. Through these presentations, students have the opportunity to articulate their understanding of the material, share insights, and facilitate discussions. This dynamic process encourages active participation and collaborative exchange within the Teaching Group as students engage in constructive dialogues, seek clarifications, and offer valuable feedback to their peers.

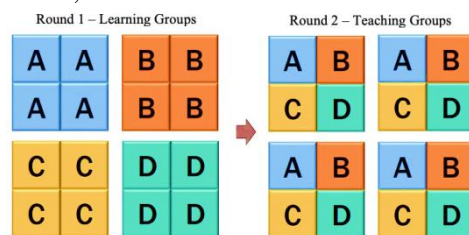


Figure 1. The Concept Graph of The Traditional Collaborative Learning Method

The Figure 1 shows how the learning group looked in the first round by adapting the traditional collaborative learning method. Each member of the same Learning Group will talk about and become more knowledgeable about the same thing. After gaining the information in the Learning Group, the students have to go to each Teaching Group, where they will be able to show the skills and present the ideas they learned from the Learning Group. As for the virtual setting, the teacher introduces the collaborative learning method's purpose, procedure, and

anticipated outcomes before beginning the class. Afterward, the students were invited to join a collaborative learning group in breakout rooms with a copy of the material to be discussed. The collaborative Learning Group was then divided based on the topics. Next, the student reorganized the breakout room based on the number they got in the collaborative Learning group, whereas they will be joined in the Teaching group. Students who examined part one will join group 1, students who examined part two will join group 2, etc. The students continue to work on developing a more in-depth comprehension of the topic within their respective learning groups. The goal is for the experts to return to their puzzle groups with a more in-depth comprehension of their respective pieces after exploring them with the Learning Group.

After the insightful and engaging discussions in the Learning Group, the students will transition to the next phase of the collaborative learning activity, which involves moving into breakout rooms. Here, they will reunite with fellow group members from the Learning Group, creating an atmosphere of familiarity and camaraderie. In these breakout rooms, the students will embark on a dynamic knowledge-sharing session, where each individual takes turns to explain and presenting their respective assigned topic to the other members of the Teaching Group. This knowledge-sharing exercise is a pivotal moment in the collaborative learning process, enabling students to articulate and convey their understanding of the subject matter to their peers. Through this interactive presentation, students not only consolidate their own knowledge but also contribute to the collective learning experience of the entire Teaching Group. This approach cultivates a sense of responsibility and accountability among the students, as they can showcase their expertise and engage in meaningful discussions with their fellow learners. Furthermore, this knowledge-sharing activity aligns with the objectives proposed by Kordaki & Siempos (2010). It fosters the development of interpersonal and interactive skills as students actively engage in meaningful dialogues, providing constructive feedback and fostering a supportive learning environment. Peer interaction remains a central aspect of the learning process, as the students' presentations invite active engagement from their peers, encouraging them to ask questions, seek clarifications, and exchange valuable insights.

Upon completing the breakout room presentations, the students reconvene in the main virtual classroom for further assessment. To gauge their comprehension and assimilation of the topics, the students participate in a well-designed quiz. This quiz serves as a formative assessment, providing valuable feedback to students and educators about the effectiveness of the collaborative learning process. By assessing their own understanding and performance through the quiz, students gain a deeper awareness of their strengths and areas for improvement.

The current study's first purpose was to determine the students' engagement perception in the Learning Group. Most students discussed the assignment with their learning group

outside the regular class (n=35, 87.5%), and most claimed that all the group members contributed to completing the assignment (n=21, 52.5%). While 35 students (87.5%) conducted the online discussion, the rest had blended discussions (n=5, 12.5%). Given the questions about the platform they used for the discussion, 12 students (30%) used a text messenger application, 11 students (27.5%) used a synchronous meeting application, and 17 students (42.5%) used a combination of the two platforms.

Table 1. Summary of student responses to open-ended questions about student satisfaction in group collaboration

No	Responds	Total references (n=35)	Students' viewpoint
1	Negative	2	"The group discussion did not work as how it is supposed to. One student started distributing the work, and we did not have proper discussion session before submitting the project"
2	Positive	28	"The group project facilitates each of us to state our opinion more briefly. Also, this activity makes us more active and willing to express our opinion. And the process doesn't caused problem"
3	Neutral	2	"The discussion run well and quite helpful, but only to some extent. Because sometimes there is a lot of distraction that occurs during the discussion"
4	Unrelated	3	"The purpose of the project is to collaborate in solving problems in small group. This learning experiences is designed to create and foster a sense of responsibility for students in an assigned subject"

Based on the result of the student's answers to the open-ended questionnaire in the Learning Group coded by the NVivo software, Table 1 summarizes students' satisfaction with group collaboration in preparing the project. Most students agreed they were satisfied with the group collaboration (n=28, 80%). These students agreed that the group collaboration activity allows them to express themselves more concisely. This activity also makes them more active and willing to express themselves. Furthermore, the procedure did not cause any issues. The engagement will result in a good learning process (Ginting & Putri, 2022) which can be seen from the student's attitude toward their online collaborative group work. However, in responding to the question on the obstacle experienced by the students, 19 participants (47.5%) mentioned that they faced some problems. The group discussion did not proceed as planned since they did not have a proper discussion session before submitting the project.

The second goal of this study was to investigate student interaction in the Teaching Group. To gain the data, three sets of questionnaires were distributed. Table 2 depicts a brief description of the mean and standard deviation of each category. From the data, the highest positive attitude was students' satisfaction (M = 3.7). In addition, the responses were homogenous concerning the satisfaction of the group work.

Table 2. Mean and standard deviation of each category

Aspect	Mean	Std
Students' Knowledge building	3	.50
Student-student interaction	2.85	.42
Students' satisfaction	3.7	.72

According to the survey results of students' engagement in the Learning Group, the average perception of group work satisfaction is positive. The majority of the students have used the platform effectively. The group project allows them to express themselves more concisely and actively. Conversely, when asked about the obstacles they faced, the students mentioned some issues during the discussion. For example, there was no proper discussion session within the group before submitting the project. Meanwhile, in the Teaching Group, the student also responded positively with the highest Mean among the students' knowledge-building and student-student interaction aspects.

In the Teaching Group, an essential aspect of the learning process involves students sharing the knowledge they have acquired through active participation in experiments conducted in the Learning Group. This knowledge-sharing activity serves multiple purposes, as proposed by Kordaki & Siempos (2010), which include: 1) the development of interpersonal and interactive skills, enabling students to communicate and collaborate with their peers effectively; 2) ensuring that peer interaction remains a central and integral aspect of the learning experience, promoting a sense of collective knowledge-building and shared responsibility within the virtual classroom; 3) holding students accountable for their contributions in front of their peers, fostering a sense of ownership and active engagement in the learning process; and 4) encouraging and promoting active student participation, thereby cultivating a dynamic and vibrant virtual classroom environment.

Students' attitudes and ideas about the learning process are pivotal in influencing their motivation to participate, learn, and contribute effectively within the virtual classroom. As highlighted by Mustakim et al., (2020), positive attitudes toward learning correlate with increased engagement levels and better academic performance. Recognizing the significance of this relationship, educators and facilitators of virtual classrooms need to cultivate a positive learning environment that nurtures students' enthusiasm and fosters a strong sense of academic agency. While virtual classrooms represent a relatively novel teaching and learning method in some regions, such as Indonesia, certain students may encounter challenges collaborating effectively within an online group platform. However, these difficulties can be mitigated through various strategies. Firstly, providing clear and explicit instructions helps students set clear expectations, enabling them to comprehend their roles and responsibilities better. Secondly, effective time management and judicious group distribution are critical in sustaining group collaboration in online classrooms (Ibrahim et al., 2015; Mahmud & Wong, 2021). Students will likely engage actively when adequately organized and allocated tasks, which leads to a deeper and more comprehensive understanding of the subject matter.

Moreover, communication among the group members should be involved to effectively collaborate. It ensures the continuity of collaborative learning between students, even in a virtual classroom setting. Facilitating platforms for meaningful exchanges and discussions enhances students' understanding and cultivates a sense of camaraderie and mutual support within the learning community (Lailiyah et al., (2021).

Through this comprehensive learning journey, students experience the benefits of collaborative learning within the virtual classroom setting. Integrating group discussions, interactive presentations, and formative assessment nurtures a dynamic and inclusive learning environment, fostering a sense of belonging and collective responsibility among the students. As they actively participate in knowledge sharing and peer-to-peer interactions, students develop critical thinking skills, enhance their communication abilities, and strengthen their collaborative competencies.

CONCLUSION

The recent study focuses on the application procedure of how to sustain the students' class interaction and collaborative learning in an online classroom setting. During the learning process, students can participate, and teachers can serve as facilitators. Students can have online social interactions and form close relationships using video-teleconference platforms. Even though the entire teaching and learning process is virtual, still, the students can have discussions with each small group that might lead to collaborative learning. Teachers can allow students to collaborate in small groups to research knowledge, organize resources, share roles, talk, ask questions, solve difficulties, and come to agreements. In the future, class interaction and collaborative learning can be sustained in any educational setting and time.

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