

**Use of computer-mediated communication
in online discussion forum**

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Abstract

The online discussion forum is the medium for student-lecturer to have two ways of communication to build a comprehensive understanding of online learning. The changes in the mode of learning, from face-to-face to online learning, have impacted students' interaction with lecturers and classmates. This study aims to explore the usage of computer-mediated communication in the online discussion forum as long as COVID-19 pandemic. This study focuses on how Universitas Multimedia Nusantara lecturers and students (UMN) build interaction for online learning. The research methodology used qualitative methods with six informants; data generation was using in-depth interviews. The results indicated that most students positively perceive the online discussion forum as computer-mediated communication (CMC) in online learning. The students' perception was considered negative about lecturers' responses in the discussion forum due to lecturers being late in replying to the student's questions. Students are satisfied with using computer-mediated communication in E-learning UMN, which has given many benefits in supporting online learning activities. The students need and expect the lecturers that they would have an enthusiastic attitude, provide immediate feedback, select the appropriate topic, and regularly participate in the online discussion forum.

Keywords: computer-mediated communication; covid-19 pandemic; online discussion forum; online learning; students; perception

INTRODUCTION

Since the virus COVID-19 started to spread out all over the world, almost every country shifted from face-to-face learning mode into online learning. The COVID-19 pandemic has put to the test how ready academics and students are to adopt and use these technologies in their online learning activities, regardless of their prior experience with e-learning platforms or ability to use these cutting-edge information technologies in their educational journey (Al-Kumaim et al., 2021). Even though some universities, particularly those in the higher education sector, had prepared their online courses in

advance of the epidemic, others had not. Online learning must be implemented in higher education to safeguard pupils against viral exposure. The government has created urgent initiatives to teach students and lecturers how to use the online learning environment.

Only a few other impacted nations, including China, closed their schools at the beginning of February 2020 due to the spreading contamination. However, by the middle of March, approximately 75 countries—including Indonesia—had executed or announced the shutdown of educational institutions. One in five pupils were not enrolled as of March 10 because of worldwide COVID-19-related school and university closures. By April 2020, 186 nations will have enacted nationwide closures, affecting roughly 73.8% of all enrolled students. Even though the COVID-19 outbreak can only be stopped by social isolation and lockdowns that break the chain of transmission, many students have been negatively impacted by the closure of educational institutions (Muthuprasad et al., 2021).

Online learning seems to have lots of benefits for everyone involved. While online learning has a positive impact, problems must be brought to light. Such drawbacks will be considerable obstacles if fully understood, expected, and planned. Most study participants viewed online courses as individualizing learning and limiting interaction with others. Students described feeling isolated from their teachers, the system's content, and their classmates. Participants in these courses explained how their online interactions were text-based lectures and completed several reading and writing assignments (Alawamleh et al., 2020).

Computer-mediated communication (CMC) is exchanging meaning among two or more humans through digital channels (Carr, 2021: 4). CMC provides interaction during online events, whether synchronous or asynchronous. The lecturer-to-student and student-to-student exchange in CMC offers students an environment that closely replicates face-to-face interaction with which they may be more comfortable. Communication between lecturer and student as a form of interaction is highly expected to ensure the successful implementation of online learning. Communicating electronically through computer mediation has several advantages compared to face-to-face communication. In computer-mediated communication (CMC), students can work in convenient places with highly flexible schedules. The main focus of CMC theories is on how people establish a strategic use of CMC to design their messages and forge relationships while adhering to the limitations imposed by the features of the person, relational context, and medium (Carr: 2021).

According to Lee & Wella (2018), Universitas Multimedia Nusantara (UMN) is one of the private universities in Indonesia which has implemented the online Learning Management System (LMS) since 2007. UMN is a flourishing university to provide online learning activities where every lecturer must join in the internal training that E-learning Department conducts. The E-learning includes training about how to operate the e-learning UMN for lecturers. So, lecturers can perform classroom in conventional, online, and hybrid learning.

One of the key factors in conducting online learning is the communication between lecturer and student to discuss the topics to give a

comprehensive understanding. Communication between lecturer and student as a form of interaction is highly expected to ensure the successful implementation of online learning. Electronically computer mediated communication, there are some advantages compared to face-to-face communication. In computer-mediated communication (CMC), the students can work in convenient places, have flexible schedules, provides more time to analyze and reflect on the content, compose thoughtful responses, and enables students to take control of their learning and build knowledge.

In the educational process, the communication between lecturer and student could be directly in face-to-face communication or mediated communication. As Griffin et al. (2019: 6) stated, communication is the relational process of creating and interpreting messages that elicit a response. The communication process in an educational context could be categorized as the interactional model of communication, which emphasizes the two-way communication process between communicators. Interactional communication means that a person can perform the role of either sender or receiver during an interaction, but not both functions simultaneously. The essential element of this model is feedback, which takes place after a message is received, not during the message itself (West & Turner, 2018)

Online discussion forums provide a platform for debates on assignments or course material. It is possible to extract information from various sources and contacts, and different viewpoints and information may be utilized to complete class assignments and as a technique to spark ideas and brainstorm for writing tasks. The challenges for the lecturer are how to clearly explain course material, communicate with students and encourage them. The communication between lecturer and students will determine the effectiveness and quality of education. The lecturer will explain, students will ask, and questions and answers will occur simultaneously in the form of a discussion. All of these activities are part of the communication process in the educational context. It is also important to prepare the appropriate communication aspects in delivering learning that will support a better learning achievement, such as media, methods, facilities, infrastructures, contents of courses, and others that will ensure students can fulfill the learning goals. To get the best achievement for learning activities, it needed, high endeavors from institutions and students' commitment in supporting to gain success.

The learning process equals a communication process. It shows a lecturer as a sender, face-to-face or computer-mediated as a channel, subject material as the messages, and a student as a receiver. To utilize the communication process between sender (lecturer) and the recipient (student), the sender should encode the messages that should be delivered to be a signal through communication media (channel). A channel usually has noise, and sometimes it creates a disorder meaning, then this signal will be decoded into the messages. After the recipient (students) accept a message, a student will give a response as feedback.

Compared to previous research on the computer mediated communication (CMC) by Aloni & Harrington (2018), more focus on implementing asynchronous online discussion boards as a way of fostering critical thinking and writing skills in psychology courses. Meanwhile, this

study is more bring the perspective on the usage the discussion forum in online classroom. Hopefully, it will give an insight on how to maintain the focus of student to keep it will more running well. So, the purpose of this study is to explore the usage of computer mediated communication (CMC) in online discussion forum as long as COVID-19 pandemic.

METHOD

The study uses the post-positivist paradigm and qualitative descriptive research method. The post-positivist researchers view inquiry as a series of logically related steps, believe in multiple perspectives from participants rather than a single reality, and espouse rigorous methods of qualitative data collection and analysis. Researcher uses multiple levels of data analysis for rigor, employ computer programs to assist in analysis, encourage the use of validity approaches, and write qualitative studies in the form of scientific reports, with a structure resembling quantitative articles e.g., problem, questions, data collection, results, conclusions (Creswell & Poth, 2018: p. 59).

The qualitative research method usually uses the "cases and contexts" language. It emphasizes conducting detailed examinations of cases that arise in the natural flow of social life. Researchers typically try to present authentic interpretations sensitive to specific social-historical contexts. A qualitative researcher will likely collect, analyze, and interpret data simultaneously. This is a fluid process with much going back and forth among the steps multiple times (Neuman, 2014). Qualitative descriptive research is purely data-derived in that codes are generated from data collection. Thus, the researcher has to collect the data from informants from in-depth-interview.

The study was conducted from February to March 2022. Six students in the 3rd year of the Undergraduate Program of Communication Science Batch 2019 are the informants in this research. The researcher argues for selecting the students of communication as the informants due to their ability to conduct the discussion more actively in the discussion forum per the course's requirements. Then, the students in batch 2019 had the experience before the Covid-19 pandemic. So, they can compare online and offline learning situations in the classroom. Table 1 shows the informants' name and initials.

Table 1. The List of Informants

No	Initial Name	Sex	Age (years)
1	DBA	Female	21
2	ESH	Female	21
3	GRZ	Female	21
4	DAS	Male	21
5	KAP	Female	21
6	NVS	Male	21

Source: (Research Data, 2022)

Data collection was obtained through in-depth interviews with informants by virtual Zoom Meeting. The data analysis procedure was started from transcribe interviews with informants, data analysis, and interpretation.

RESULT AND DISCUSSION

The following result of in-depth interviews with informants which have been presented, analyzed and interpreted the data which have a connection to the research questions.

Students' Perception of the Discussion Forum

The first task is to ascertain students' perception of using the discussion forum as the application of computer-mediated communication (CMC) in online learning. As stated by Daft and Lengel, people prefer to use face-to-face communication as the 'richest' communication medium to enable the most efficient means of understanding each other. On the other hand, CMC demonstrates how connections may be established and maintained, how you can feel close to someone you email or chat with, and how what was formerly thought of as a slim collection of media can now enable us to send socioemotionally rich communications (Carr, 2021: 57).

The E-learning UMN provides some learning facilities, and features include an online discussion forum. Students can get the course material by downloading to the E-learning UMN. Then, they can upload their assignment to lecturers with the same features. They can access E-learning UMN and join the online discussion forum to discuss a subject with lecturers or fellows pertaining to the topic. The researcher will explore students' perception of using online discussion forums as an asynchronous computer-mediated communication (CMC) between lectures and students.

According to the informants' comments, four of six students (DBA, ESH, GRZ, Michael) positively perceive the online discussion forum as a support tool for online learning activities. The first student, Ina, said, "The discussion forum supports my online learning activity". The second is ESH, who felt that a discussion forum is a complementary tool for learning activities. The third is GRZ, who said the discussion forum was beneficial if she thought there was unclear information regarding her course. Then the fourth is DAS, which said, "the discussion forum is a good online learning application among other universities". This reflection could be recognized that the discussion forum provided by UMN is much better than other universities.

Nevertheless, two students negatively perceive and talk about why they are reluctant to access the E-learning UMN. KAP said that she rarely accesses the E-learning UMN Discussion Forum, and NVS said the discussion forum is not very beneficial for him. These comments clearly identify the reluctance of students to discuss through discussion forums because some lecturers did not give response to their questions.

The researcher argues that a discussion forum is helpful as a communication medium to disseminate information, knowledge, and skill among students' learning communities since four of six informants agreed with positive opinions. Kurek & Müller-Hartmann (2018) said that learning communities are made up of people who help one another reach their learning goals, collaborate on projects, learn from one another and their surroundings, and participate in shared sociocultural experiences that change participation into a new experience or new learning.

Students' Perception of Lecturers' Response in Discussion Forums

To conduct a discussion between lecturer and student, or peer to peer, both parties should be involved reciprocally. The students will not be attracted if there is no further response from the lecturer. Creating a discussion forum is an objective to make a good conversation about a learning topic. To get more information, the researcher will try to show findings about the perception of students regarding the lecturer's response in the discussion forum.

Four out of six statements of resource persons above indicate that lecturers rarely reply to the students' questions directly on the same day. DBA stated, "I feel reluctant to post questions to lecturer in the discussion forum, due to the tardiness of lecturers reply her question". ESH said, "I rarely get a direct answer from the lecturers; nevertheless, most of them answer the off-class session has passed one week after". The answer from GRZ said, "Generally, I feel most lecturers do not reply to my question directly on the same day, and sometime it could be replied in a week". And the last from DAS said that "The ridiculous lecturer who never opens the discussion forum until the end of the semester".

The role of the lecturer is highly expected to stimulate the liveliness of the discussion forum. The students will actively discuss with other students if the lecturers participate also. Most students agree that discussion becomes more alive if the lecturers respond to the topic of the student's post. This finding is supported by Wolfson, an expert on classroom communication, "One factor that will help establish a supportive classroom climate, such as providing immediate and specific feedback to the student's response" (Kachani, 2016).

The researcher indicates that students negatively perceive the lecturers' responses because the lecturers rarely reply to students' questions on the same day. Sometimes students did not receive an answer from the lecturer until the end of the respective semester. How can a student be active in a discussion forum if the lecturer does not give feedback?

The researcher has determined that discussion forums as computer-mediated communication, which is a helpful facility to support students in online learning activities. However, some students are still reluctant to use it because of a lack of response from lecturers. The utilization of a discussion forum between lecturers and students should bind interaction between lecturers as a communicator and students as recipients. Lecturers are expected to respond to students' questions to utilize the discussion forum as a communication medium for online learning activities and support students' learning processes.

Computer-Mediated Communication in Online Learning

The discussion between lecturer and students or peer-to-peer use the online learning platform via E-learning facilities. Thus, the researcher emphasizes that students are perceived as satisfied or frustrated in CMC through online learning. Carr (2021) said the goal of online discussion is to maximize interactions between and among lecturers, students, contents, and interface and facilitate constructive thinking. The interaction between lecturer, student, and content should be bound to reach the learning goal.

The student's response would impact their achievement that, was satisfactory or frustrating in the computer-mediated communication.

The researcher argues that students are satisfied with using computer-mediated communication in E-learning UMN. However, one student, GRZ, said, "I disagree the E-learning UMN has been giving many benefits for me". In addition, ESH noted, "However the discussion forum is helpful for the student in the online learning where they could discuss topics which will help them to understand the such subject". I can feel the benefit of this facility when the lecturer gives an assignment that could be downloaded at the E-learning UMN site. Students usually will confuse if there are no apparent clues to tasks. In this case, the existence of a discussion forum is important for students. Some lecturers do not respond directly, but at least students could understand the assignment they have to do".

Moreover, based on findings in interviews with informants said that a discussion forum is preferred mainly because it saves time and effort to comprehend the course (DBA). It also allows for a flexible learning schedule, is highly collaborative, and sees the diversity of ideas in writing (Jessica). Thus, the student's satisfaction indicates that they are willing to use discussion forums as the communication media in online learning activities.

To explore students' perception of the satisfaction in using discussion forums in online learning, most students feel satisfactory that CMC helps them with flexible time and places for online learning activities. This finding is also supported accordingly by Arbaugh (2018) that stated the flexibility of the course is made possible by the medium's independence from place and time, which enables dialogues to go on throughout interruptions because CMC gives students the chance to be more reflective and thoughtful in their discussion rather than competing to be acknowledged, as is the case in physical classrooms, communication may be enhanced rather than hindered by low media richness and social cues. The flexibility of the medium and the ability to develop an interactive course environment play a more significant role in determining student satisfaction than the ease or frequency with which the medium can be used. In CMC, students can see the diverse ideas of other students as long as discussion occurs. The discussion forum can promote student-centered learning, and students can comprehend skills and knowledge by themselves.

Needs and Expectations of Students toward CMC in the Future

The discussion forum in E-learning UMN is used as communication media between lecturers, students, and peer-to-peer. Lecturers use this media to assess students' understanding levels and disseminate information. According to informants' comments about their needs and expectation about CMC in online learning in the future? Their comments are related to lecturers' roles that appear to be the most important in improving and supporting the discussion forum. To achieve the learning outcome in the discussion forum, informants need and expect that lecturers would:

1. Have an enthusiastic attitude toward discussion (DBA)
2. Provide immediate feedback (DBA)
3. Select the appropriate topic (ESH)
4. Participate regularly in the discussion forum (ESH)

5. Participate actively, providing guidance and discussion structure (GRZ).

Another informant, DAS mentioned that he needed the existence of a discussion forum to get more experience. However, the lecturer did not encourage him to be actively involved and get an additional grade for participating in the online discussion. It was supported by Gillis & Krull (2020) said, "In an online learning environment, faculty must regularly access the course page, respond consistently to student inquiries, and grade in a timely manner".

These findings related to how to maintain students' engagement with discussion forums as online learning activities. According to Robert M. Gagne, "There are nine events of instruction as learning condition to support internal process as follows: 1. Gaining attention; 2. Informing the learner of the objective; 3. Stimulating recall of prior learning; 4. Presenting the stimulus; 5. Providing learning guidance; 6. Eliciting performance; 7. Providing feedback; 8. Assessing performance; and 9. Enhancing retention and transfer" (Zhu & St.Amant, 2010). Thus, lecturers expect those students to be more active and learn seriously, categorized as gaining attention and presenting the stimulus. Both of these points supported students in getting the best online learning in computer-mediated communication.

Optimizing discussion forums can be enhanced through lecturer and student or peer-to-peer collaboration. The researcher argues that collaborative learning emphasizes tacit knowledge (the knowledge gained through experience and insight) by giving people the means to express and share their knowledge further supports this claim. They contend that for collaborative learning to be successful, there must be tools that make it simple, leaders who support the time needed for collaboration, facilitators who support and manage collaboration, and incentives that stimulate knowledge sharing (Ngussa, 2018).

The last two points, to enhance the student's ability to have good habit in writing; to discuss topics which are more valuable and important, are categorized as enhancing the retention and transfer which is an activities that prompt the learner to go beyond the immediate context of instruction, as stated by Robert M. Gagne in nine events of instruction that supports learning activities (Kurt, 2021).

The lecturers' comments about the stimulus for students will discuss more actively in the discussion forum. It indicates that all lecturers should remind students to participate actively. The lecturers also give grade stimuli to encourage students' participation. If students discuss actively in the discussion forum, it is recorded automatically by E-learning UMN as evidence of students' activities.

CONCLUSION

The conclusion of the use of computer-mediated communication in online learning is that most students have a positive perception of the online discussion forum as the computer-mediated communication (CMC) in online learning during COVID-19 pandemic. The discussion forum is a helpful

facility to build interactive communication between lecturer and students to support online learning activities.

The students' perception is considered negative about lecturers' responses in the discussion forum. They feel lecturers usually be late in replying to the student's questions. Moreover, sometimes students do not receive an answer from the lecturer until the end of the semester. It is implied that some lecturers do not reply to the students' questions immediately.

Students are satisfied with using computer-mediated communication in E-learning UMN, which has given many benefits in supporting online learning activities. They feel that computer-mediated discussion is beneficial for their learning process. In CMC, students can see the diverse ideas of other students as long as discussion occurs. The discussion forum can promote student-centered learning and students can comprehend skills and knowledge by themselves.

The lecturers should emphasize their participation in the discussion forum due to students believe CMC will be more effective if lecturers participate and give feedback to students. To learn the most from the discussion forum, students needs and expectations that lecturers would: have an enthusiastic attitude toward discussion; provide immediate feedback; select the appropriate topic and participate regularly in the discussion forums, be active in participating. Provide guidance and structure for discussion.

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