

## Impact of Online Learning during the Covid-19 Pandemic on Learning Activities



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**ABSTRACT:** This research describes whether the social presence can be obtained from online learning of distance education setting. Data in this study employed questionnaire adapted from Rovai (2002) which identified 3 aspects of social presence, namely connectedness aspect, learning aspect, and socio-emotional aspect. Data was taken from 70 students who participated in an 8-weeks online learning. The results showed that all aspects have positive attitudes from students' point of views. The students experienced connectedness aspect, learning aspect, and socio-emotional aspect in online learning regardless the learning situation which was mostly text-based setting.

**KEYWORDS:** COI Framework, community of inquiry, online learning,

### INTRODUCTION

The world health organization has declared Covid-19 a pandemic (Sohrabi et al., 2020). The COVID19 pandemic in Indonesia began in March 2020, starting with positive victims in the city of Depok.

After that, an increase in cases occurred in all regions in Indonesia so that it became a red zone area. The National Disaster Management Agency (BNPB) issued decree number 13 A regarding the determination of the emergency period due to the corona virus. Based on this determination, the Ministry of Education and Culture (Kemendikbud) issued a Circular from the Minister of Education and Culture Number: 36962/MPK.A/HK/2020 dated March 17, 2020 concerning Online Learning and Working from Home in the context of Preventing the Spread of Corona Virus Disease ( COVID-19). Learning is the core of the educational process. The quality of education describes the quality of learning. Improving the quality of education can be done through improving the quality of learning. Online learning and working from home for educators are changes that must be made by lecturers to continue teaching to students.

Online lectures are one form of using the internet that can increase the role of students in the learning process (Saifuddin, 2018). The challenge that arises related to online lectures is to determine the right platform for the development of the online learning system so that it can achieve learning objectives as well as face-to-face lectures. Based on the author's observations during lectures using the Zoom webinar, some students made efforts to overcome the constraints of limited internet access and quotas, among others, by visiting free wifi hot spots, visiting locations outside their homes with affordable internet access or meeting with other students to share the internet network (tethering).

This condition results in the potential for crowds and is not in accordance with the call to implement physical distancing in an effort to prevent the transmission of COVID 19. For this reason, it is necessary to carry out learning using a platform that can be accessed by all students who use a small internet quota and can be accessed even in locations with limited internet access. WhatsApp can be described as a tool for interacting with friends and teachers on certain topics, where most of the chat and information sharing takes place in Whatsapp groups created by administrators (Najafi & Tridane, 2015). Whatsapp groups are used by some educators because they save on quota and save money. well known by students (Wijaya Kusuma & Hamidah, 2020) The Community of Inquiry (CoI) framework developed (Garrison et al., 1999), provides specific guidelines for creating interactive and engaging learning systems in online environments.

Research on online learning that adapts the concept of Community of Inquiry compared to face-to-face learning, indicates that learners feel a stronger social and teacher presence in online learning than face-to-face. Strong social presence and teaching attendance are considered quality indicators for online learning and are critical to student engagement, success and retention. Careful instructional design and effective course facilitation techniques can help develop a strong social presence and teaching in online learning even when the teacher is not physically visible (Bowers & Kumar, 2015). In addition, online discussions that apply the COI framework are much easier to understand and short and make participants feel comfortable speaking in online conversations (Warner, 2016).

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### FORMULATION OF THE PROBLEM

Based on the problem phenomenon in the background above, the research focus is as follows: "How to measure social presence in online learning is seen from 3 aspects, namely the connectedness aspect, the learning aspect, and the social-emotional aspect.

### WRITING PURPOSE

Based on the formulation of the problem, the author's purpose in conducting the research is as follows: to identify the extent to which social presence in online learning has been carried out by the author. Social presence is seen from 3 aspects, namely the connectedness aspect, the learning aspect, and the social-emotional aspect.

### LITERATURE REVIEW

#### *Community of Inquiry*

According to Dewey, in education the questioning process is a process of investigating a problem and the issues that arise, not just remembering the solutions obtained. The process of asking questions in an educational community focuses on learning goals and outcomes. This process is a systematic process for defining relevant questions, conducting investigations for pertinent information, seeking alternative solutions and implementing these solutions. A successful Community of Inquiry depends on purposeful and respectful relationships that encourage both faculty and students to be free to express opinions so that open communication occurs



*Community of inquiry model (Garrison et al., 1999).*

#### *Social Presence*

Social presence in the blended learning model has the same basic understanding, if a lecturer wants to maintain good relations and communication with students, a conducive situation must first be created, a positive response, personal connection and affective communication. Lecturers have a responsibility to be able to create a conducive atmosphere and be able to build good relationships with students, as well as relationships that exist between students.

#### *Achievement of the level of understanding (cognitive presence).*

As part of the teaching and learning process, whatever media is used it must support the transformation of knowledge, skills, and attitudes. In paying great attention to the transformation of increasing understanding, the process of asking (inquiry) is closely related, starting from being triggered by critical and probing questions to reaching conclusions for several alternative solutions.

#### *Method of delivering material (teaching presence).*

As it is known that both during face-to-face sessions and online sessions, lecturers are still required to implement good and correct learning methods, so teaching presence is an important element to make the previous two elements productive. Learning activities that were originally only designed for learning during face-to-face sessions have now also begun to be planned for online sessions. In this element, lecturers are expected and asked to design, facilitate and direct so that the learning process can occur.

Another important aspect of the teaching presence element is the leadership spirit of a lecturer. Because by doing so, lecturers can lead students to goals, namely students can increase their level of understanding of the material and learn from the learning process itself (metacognitive). Adopting the ideas of Garrison and Vaughan (2008), metacognitive is the process of forming an understanding, through which students can assess what must be done and manage themselves for independent learning; so he can complete the tasks at hand.

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## Social Presence

Social presence in online learning is the ability of participants in a community of inquiry to project themselves socially and emotionally as "real" individuals (Garrison, Anderson, and Archer, 2000:94). This is developed in 3 phases, namely the phase of getting a social identity, the phase of having meaningful communication, and the phase of building a relationship. Thus, so that participants wish to express their opinion in a discussion group in online learning, a safe, trusting and comfortable environment must be built that identifies the social presence that is well manifested in the learning. (Kosasih & Iqbal, 2013; Kreijns, Acker, Vermeulen, & Buuren, 2014).

## RESEARCH METHODOLOGY

### Research design

The form of research that will be used in this research uses statistical quantitative data analysis and survey approach. The survey approach is research that takes a sample from one population and uses a questionnaire as a basic data collection tool (Singarimbun and Effendi, 1989). Statistical quantitative data analysis was used to examine the relationship between research variables by giving questionnaires to users of the e-Learning system selected by purposive sampling technique from several users of the eLearning system who had benefited indirectly from the implementation of the e-Learning system. Questionnaires will be given to respondents using a Likert scale, namely each question will be measured with a scale interval of 1 to 5, namely:

- a. Strongly disagree (STS): Score 1
- b. Disagree (TS): Score 2
- c. Neutral (N): Value 3
- d. Agree (S): Value 4
- e. Strongly agree (SS): Value 5

### Variable Identification

#### Free Variable (Independent Variable) (X)

This study uses the Independent Variable or Free Variable (X) as follows:

- 1. Aspects of Connectedness/Social Presence (X1)  
Encouraging collegial relationships
- 2. The achievement of the level of understanding (cognitive presence).(X2) Knowledge that involves critical and creative thinking skills
- 3. Submission of material (teaching presence).(X3) The role of instruction in the learning environment.

#### Dependent Variable (Y)

This study uses Social Presence as the dependent variable or dependent variable (Y). Social Presence” (Social Presence Theory) is a person's closeness to other people depending on what media is used to interact. The higher the quality of interaction obtained from the selection of media, the better the interpersonal closeness.

### Data Analysis Model

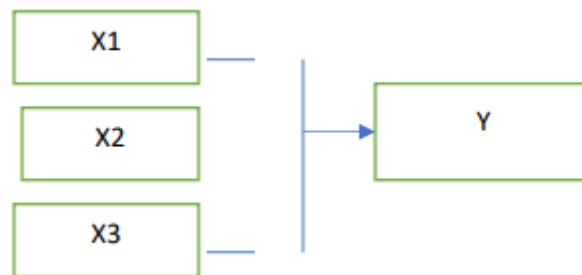


Figure 1. Conceptual framework

Description:

X1 = Social Presence

X2 = Cognitive Presence

X3 = Teaching Presence

### Data analysis technique

This study uses the SPSS (Statistical Product and Service Solutions) program. So in this study the equation formula is as follows:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + e \quad \alpha = \text{constant}$$

$\beta_1, \beta_2, \beta_3,$  = Coefficient of variable X (independent variable)

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X1, X2, X3 = Independent Variable

### Operational Definition and Variable Definition

**Table 1. Operational Definitions and Variable Definitions.**

Variabel	Indicator
X1 Social Presence = encourage collegial relationships	X1.1 = Online media in the learning system makes me feel comfortable learning. X1.2= i feel comfortable participating in discussions. X1.3= I feel comfortable interacting with other students in the class. X1.4= I feel that my opinion is recognized by others in the class. X1.5= Discussion helps me develop a sense of collaboration.
X2 Cognitive Presence= Knowledge that involves critical and creative thinking skills	X2.1 = The case examples discussed increased my interest in class problems. X2.2 = I feel motivated to explore the material discussed in class. X2.3 = Brainstorming and finding relevant information helps me solve questions related to the material. X2.4 = Combining the information obtained from each student turned out to help me answer the questions posed in the class activities. X2.5 = This learning activity helps me to build explanations/solutions for certain cases. X2.6 = Reflections and discussions help me understand the basic concepts in this class. X2.7 = I can apply this knowledge in my daily life and in my future work
X3 = Teaching Presence The role of instruction in the learning environment.	X3.1 = Lecturer clearly communicates learning objectives. X3.2 = Lecturer gives clear instructions on how to participate in learning activities. X3.3 = Lecturer clearly communicates important due dates/timeframes for learning activities. X3.4 = Lecturers help me stay engaged and participate in productive dialogue. X3.5 =The lecturer strengthens the development of taste togetherness in class X3.6 = My lecturer provides illustrations to help me make the lesson easier to understand for me. X3.7 = My lecturer provides clarification explanations or feedback to clarify the material.
Y = Social Presence a person's closeness to other people depending on what media is used to interact. The higher the quality of interaction obtained from the selection of media, the better the interpersonal closeness	Y1 = cohesion in groups (group cohesion), Y2 = openness in communication, and Y3 = affective expression (Garrison, Anderson, and Archer, 2000).

### Population, Sample, and Data Collection Techniques

#### Population

The population in this study were students who took courses in Bank Management and Introduction to Management, totaling 70 students.

#### Sample

The sampling technique used in this research is non-probability, more precisely the researcher uses purposive sampling technique.,

#### Data Collection Techniques

Data collection techniques in this study were carried out by observing and distributing questionnaires.

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## RESEARCH RESULT

### Hypothesis testing

**Table 2. Hypothesis Test**

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1.514	1.733		-.874	.386
	Sosial Presence	.077	.062	.106	1.241	.220
	Cognitif Presence	.237	.070	.640	3.401	.001
	Teaching Presence	.663	.092		7.213	.000

a. Dependent Variable: Sosial Presence

Source: Data processed by the author, 2021

1. Social Presence Variable Hypothesis Test (X1)

It can be seen from the Social Presence variable (X<sub>1</sub>) that the sig value is 0.220. The sig value is greater than the probability value of 0.05 or the value of 0.220 > 0.05. Variable X<sub>1</sub> has t<sub>count</sub> which is 1.241 < t<sub>table</sub> 1.534. So it can be concluded that Ho is accepted Ha is rejected so that the Social Presence variable (X<sub>1</sub>) does not have a significant effect on Social Attendance

2. Cognitive Presence variable hypothesis test (X2) It can be seen from the Cognitive Presence variable (X<sub>2</sub>) that it shows a sig value of 0.001. The sig value is smaller than the probability value of 0.05 or the value of 0.001 < 0.05. Variable X<sub>2</sub> has t<sub>count</sub> which is 3.401 > t<sub>table</sub> 1.534. So it can be concluded that Ho is rejected and Ha is accepted so that the Cognitive Presence variable (X<sub>2</sub>) has a significant influence on Social Attendance (Y).

3. Teaching Presence Variable Hypothesis Testing (X3) It can be seen from the Teaching Presence variable (X<sub>3</sub>) which shows a sig value of 0.000. The sig value is less than the probability value of 0.05 or the value of 0.000 < 0.05. Variable X<sub>3</sub> has t<sub>count</sub> which is 7.213 > t<sub>table</sub> 1.534. So it can be concluded that Ho is rejected Ha is accepted so that the Teaching Presence variable (X<sub>3</sub>) has a significant influence on Social Attendance.

**Table 3. Multiple Linear Regression Analysis**

Coefficients<sup>a</sup>

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	-1.514	1.733		-.874	.386
	Sosial Presence	.077	.062	.106	1.241	.220
	Cognitif Presence	.237	.070	.640	3.401	.001
	Teaching Presence	.663	.092		7.213	.000

a. Dependent Variable: Kehadiran Sosial

Multiple Linear Regression Model  $Y = \alpha + \beta_1x_1 + \beta_2x_2 + \beta_3x_3 + \dots + e$

Description : Y = Social Presence α= Constant

$\beta_1\beta_2\beta_3$  = Regression Coefficient

X1 = Social Presence X2 = Cognitive Presence X3 = Teaching Presence e = Confounding

Variable outside the independent variable

Based on the table above, the regression equation model is as follows:

$$Y = -1.514 + 0.077 (SP) + 0.237 (CP) + 0.663 (TP)$$

Description :

α= Number constant

The constant value (α) of -1.514 means that it implies that if all the independent variables consisting of Social Presence (X1), Cognitive Presence (X2), and Teaching Presence (X3) are equal to 0 (zero), then the magnitude of the change in social presence (Y)

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is -1.514.  $\beta_1$  = Regression coefficient of Social Presence variable (X1) The coefficient value of Social Presence variable (X1) of 0.077 means that it implies that if there is an increase in Social Presence variable (X1) by 1 (one) unit, it will have an impact on Social Presence (Y) of 0.077. The positive sign on the regression coefficient indicates a unidirectional effect between X1 and Y.

$\beta_2$  = Regression coefficient of the Cognitive Presence variable (X<sub>2</sub>)

The coefficient value of the Cognitive Presence variable (X<sub>2</sub>) of 0.237 means that it implies that if there is an increase in the Cognitive Presence variable (X<sub>2</sub>) by 1 (one) unit, it will have an impact on increasing Social Attendance (Y) of 0.237. The positive sign on the regression coefficient indicates a unidirectional effect between X2 and Y.

$\beta_3$  = Regression coefficient of Teaching Presence variable (X3)

The coefficient value of the Teaching Presence variable (X<sub>3</sub>) of 0.663 means that it implies that if there is an increase in the Teaching Presence (X3) variable of 1 (one) unit, it will have an impact on increasing Social Attendance (Y) of 0.663. The positive sign on the regression coefficient indicates a unidirectional effect between X3 and Y.

### Table 4. The Result of the Coefficient of Determination Analysis (R<sup>2</sup>)

The coefficient of determination test (R<sup>2</sup>) is to measure how far the model's ability to explain the variation of the dependent variable. Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.866 <sup>a</sup>	.749	.735	1.065

a. Predictors: (Constant), Sosial Presence, Cognitif Presence, Teaching Presence

From the table above shows that the coefficient of determination (R<sup>2</sup>) of 0.735 or 73.5% means that the simultaneous contribution of independent variables, namely Social Presence, Cognitive Presence, Teaching Presence is 73.5% of the Social Attendance variable, while the remaining 26.5% is influenced by by other variables not included in the multiple linear regression model.

ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.746	3	57.582	50.808	.000 <sup>a</sup>
	Residual	57.800	51	1.133		
	Total	230.546	54			

a. Predictors: (Constant), Sosial Presence, Cognitif Presence, Teaching Presence ,

b. Dependent Variable: Kehadiran Sosial

Based on table 4. the F<sub>count</sub> value is 50,808 with a probability value (sig) = 0.000. The value of F<sub>count</sub> (50,808) > F<sub>table</sub> (2,971), and the value of sig. smaller than the probability value of 0.05 or the value of 0.000 < 0.05, then Ho is rejected and Ha is accepted, which means that there is an influence of Social Presence, Cognitive Presence, Teaching Presence together (simultaneously) on Social Presence.

## DISCUSSION

### Multiple Linear Regression Analysis

Based on the output of multiple linear regression analysis, it is known that there is an influence of Social Presence (X1), Cognitive Presence (X2), Teaching Presence (X3), and Social Presence (Y). This is known by looking at the equation of the linear regression line obtained that is equal to  $Y = -1.514 + 0.077 (SP) + 0.237 (CP) + 0.663 (TP)$ . With this constant value of -1.514, which states that Social Presence, Cognitive Presence, Teaching Presence are equal to "0", then the magnitude of the change in Social Presence is -1.514.

### F Test (Simultaneous)

Based on the results of the tests that the researchers did, the results showed that the variables Social Presence (X1), Cognitive Presence (X2), Teaching Presence (X3) had a simultaneous influence on the Social Attendance Dependent variable (Y). The output obtained using SPSS software is the F<sub>count</sub> value of 50.808 with a probability value (Sig) = 0.000, or it can be read that

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the F.count value (50,808) > F\_table (2,971), and the Sig value. is smaller than the probability value of 0.05 or 0.000 value <0.05, then Ho is rejected and Ha is accepted, which means that the influence of Social Presence (X1), Cognitive Presence (X2), Teaching Presence (X3), has a joint influence the same (simultaneous) on the Social Attendance variable (Y).

### *t test (Partial Test)*

#### ***Social Presence Variable (X1)***

Based on the t-test, the Social Presence variable (X1) has a partial effect on the Social Presence variable. Variable X1 shows the value of sig. 0.220 where the value of sig. greater than the probability value of 0.05 or the value of 0.220 > 0.05. Variable X<sub>1</sub> has F.count which is 1.241 < F\_table 1.534. So it can be concluded that Ho is accepted Ha is rejected so that the Social Presence variable (X1) has a significant effect on Social Presence (Y) partially.

#### ***Cognitive Presence Variable (X2)***

Based on the t-test, the Cognitive Presence variable (X2) has a partial effect on the Social Attendance variable. The variable X2 indicates the value of sig. 0.001 where the value of sig. smaller than the probability value of 0.05 or the value of 0.001 > 0.05. Variable X2 has F\_count which is 3.401 > F\_table 1.534. So it can be concluded that Ho is rejected Ha is accepted so that the Cognitive Presence variable (X<sub>2</sub>) has a significant effect on Social Presence (Y) partially. .

#### ***Teaching Presence Variable (X3)***

Based on the t-test, the Teaching Presence variable (X3) has a partial effect on the Social Attendance variable. The variable X3 represents the value of sig. 0.000 where the value of sig. smaller than the probability value of 0.05 or the value of 0.000 > 0.05. Variable X3 has F\_count which is 7.213 < F\_table 1.534. So it can be concluded that H<sub>o</sub> is rejected H<sub>a</sub> is accepted so that the Teaching Presence variable (X3) has a significant effect on Social Attendance (Y) partially.

## CONCLUSION

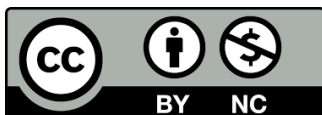
Social presence in online learning is strongly associated with one of the elements to achieve meaningful learning success. In addition, social presence in online learning is considered very important to avoid large drop outs for students because the learning environment is dominated by text-based models and the lack of non-verbal communication symbols and socio-emotional information such as in face-to-face classes. From the research that has been done, social relations can be presented in online classroom learning through the point of view of learners who have experienced the learning. Social presence is seen from 3 aspects, namely the connectedness aspect, the learning aspect, and the social aspect. As for what can be presented from the connectedness aspect, there is good interaction between students, having the same expectations of learning outcomes, mutual trust, caring, a sense of kinship, a sense of cooperation, and no sense of alienation in discussion activities. Regarding the learning aspect in social presence, students feel comfortable interacting with fellow students, feel encouraged to ask questions, have good learning interactions, feel they have sufficient learning time, receive timely feedback, differences of opinion, openness in opinion, receive study assistance. from other learners, the suitability of the material with scientific needs, and encouragement of the desire to learn. Meanwhile, the social aspect that emerges during online learning is that students are able to capture different impressions from other online learning participants, even though only with communication media, discussion forums and other text-based features.

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