

## Análisis de la participación en línea de los estudiantes en el aprendizaje en línea de emergencia

### *Analysis of online engagement of students in emergency online learning*

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#### **RESUMEN**

La propagación del virus COVID-19 ha afectado a muchas organizaciones en todo el mundo y las ha obligado a adaptarse y hacer uso de una variedad de tecnologías emergentes de comunicación en línea. Sin embargo, debido al cambio abrupto, el sector de la educación ha experimentado desafíos relacionados con la interacción y el compromiso de los estudiantes con sus compañeros y profesores. Este estudio tuvo como objetivo probar la asociación entre las necesidades sociales de los estudiantes ( $n = 189$ ), la interacción social y la participación de los estudiantes en plataformas de aprendizaje en línea de emergencia. Las estadísticas inferenciales para este estudio correlacional incluyeron análisis de correlación de Pearson, análisis de regresión lineal y análisis de varianza. Los resultados muestran una correlación positiva entre las variables, lo que significa que el compromiso (cognitivo, conductual y emocional) forma un conjunto de indicadores o predictores que pueden influir en las necesidades sociales y la interacción social del estudiante en esta plataforma de aprendizaje en línea de emergencia. Por lo tanto, lograr el compromiso crearía una comunicación sólida y satisfaría las necesidades de los estudiantes, lo que conducirá a un buen rendimiento académico a pesar de los desafíos del aprendizaje en línea de emergencia.

## **PALABRAS CLAVE**

Covid-19; necesidades sociales; interacciones sociales; compromiso cognitivo; compromiso conductual; compromiso emocional.

## **ABSTRACT**

The spread of the COVID-19 virus has affected many organizations across the globe and has forced them to adapt and make use of a variety of emerging online communication technologies. However, because of the abrupt shift, the education sector has experienced challenges such as relative to students' interaction and engagement with their peers and teachers. This study aimed to test the association among students' (n=189) social needs, social interaction, and student engagement in emergency online learning platforms. Inferential statistics for this correlational study included Pearson correlation analysis, linear regression analysis, and analysis of variance. The results show a positive correlation among the variables, which means the engagement (cognitive, behavioral, and emotional) forms a set of indicators or predictors that can influence the student's social needs and social interaction in this emergency online learning platform. Thus, attaining engagement would create strong communication and meet the needs of the students, which will lead to good academic performance despite the challenges of emergency online learning.

## **KEYWORDS**

Covid-19; social needs; social interactions; cognitive engagement; behavioral engagement; emotional engagement.

## **1. INTRODUCTION**

The COVID-19 pandemic drastically changed the lives of people around the globe, including students (Aristovnik et al., 2020). Indeed, due to this crisis, more than 1.5 billion students were required to stay at home due to school shutdowns (UNESCO, 2020). As a result, over 28 million Filipino students at all levels of education are among those who must remain at home and adhere to the administration's quarantine regulations (UNESCO, 2020). This quarantine led to the formulation of Emergency Remote Learning (ERL), the unplanned and sudden change from traditional education to remote education due to the outbreak of COVID-19 across several countries.

According to Martin and Boliger (2018), student engagement is critical to learning and fulfillment amid remote learning. Toth and Sousa (2019) demonstrate that student engagement is vital because it affects students' knowledge and learners' future and social interaction. Lack of appropriate interaction with instructors is another primary concern associated with online learning (Zhong, 2020), student engagement declined, and decreased interaction and communication with educators and peers resulted in frustration and diminished learning. Brown (2018) demonstrated that a warm sense of human connection is critical in maintaining holistic emotional and physical health. A lack of social ties, on the other hand, is linked to depression, later-life decline, and increased mortality.

Kurniawati and Fauzia's (2022) study revealed students' engagement during emergency online learning platforms. It was made up of several factors, including positive behavior (79%), work involvement (78%), and participation (75%), all of which were rated as extremely high engagement. Most students, according to the poll, never skipped class, were highly motivated to complete assignments on time, and listened to, read, and took notes on the subject during the learning process.

Moreover, interaction is one of the most basic human needs. This requirement is also present in online spaces, where students must be socially connected to their peers and instructors to be motivated and engaged in the learning process (Akcaoglu & Lee, 2016). Online learning platforms provide tools for teachers and students to exchange ideas and establish communication. However, social presence may have an impact on communication quality (Chang & Hsu, 2016). Furthermore, Croxton (2014) and Sung and Mayer (2012) stated that social aspects and social interactions play a significant role in influencing and contributing to the effectiveness and centrality of the online learning process.

Findings of a study (Baber, 2022) revealed that social interaction has a significant positive impact on the effectiveness of online learning. However, in the presence of social distance norms, this effect is diminished because people prioritize continuous learning and saving lives over online socializing. Likewise, because of physical separation or isolation and lack of synchronicity in communication, current learning environments have disadvantaged students. When online courses are entirely asynchronous, interaction between teachers and students may be limited (Sung & Mayer, 2012; Peterson, 2016). Furthermore, asynchronous online learning may lack the immediacy required for effective social interaction. Students may suffer from feelings of isolation as a result of the lack of instant feedback, live collaboration, and personal or virtual interaction.

In the Philippines, because of their constant isolation and lack of interaction with fellow students and lecturers, college students may have psychological problems due to the abrupt move to online classrooms (Lim et al., 2022; Toquero, 2021). A survey of 1,879 people was conducted to assess the psychological consequences of COVID-19 in 2020. One in six of the respondents said they had mild anxiety, and one-sixth said they had severe psychological distress (Tee et al., 2020). Barrot et al. (2021) revealed that out of 200, most students indicated that worry, boredom, melancholy, and loneliness had negatively impacted their ability to learn, complete tasks/activities, and their motivation to continue studying.

Librero (2021) investigated the connection between online students' engagement and sense of community in Philippine online universities. According to his findings, understanding students' engagement and learning how to improve it is critical to fostering a stronger sense of community. It discovered that there is a link between student engagement and a sense of community.

Moreover, due to various issues with internet connectivity in developing countries such as the Philippines, synchronous e-learning has become less appealing to teachers and students (Lagat, 2020; Alvarez, 2020). Despite these challenges, Toquero (2020) argued that the global pandemic has provided opportunities for the country to improve its educational delivery and shift its focus to emerging technologies (2020). In response, educators understand that the best way to become an effective teacher is to interact with students, learn about their interests, and listen to questions, stories, and ideas (DeWilde, 2020).

Despite these studies, the literature presents limitations and gaps. In the context of the pandemic, there are few studies (Baber, 2022; Zheng et al., 2020) on social interaction while some focused on social support (Guo et al., 2021; Mai et al., 2021) for mental health but not necessarily social needs in online learning. Most studies focused on engagement (Ali et al., 2020; Chiu, 2022; Quiamco et al., 2022; Wester et al., 2021) during the pandemic. To bridge this gap, this research study aimed to measure the association among social needs, social interaction, and students' engagement in emergency online learning platforms.

## 1.1 Conceptual Framework

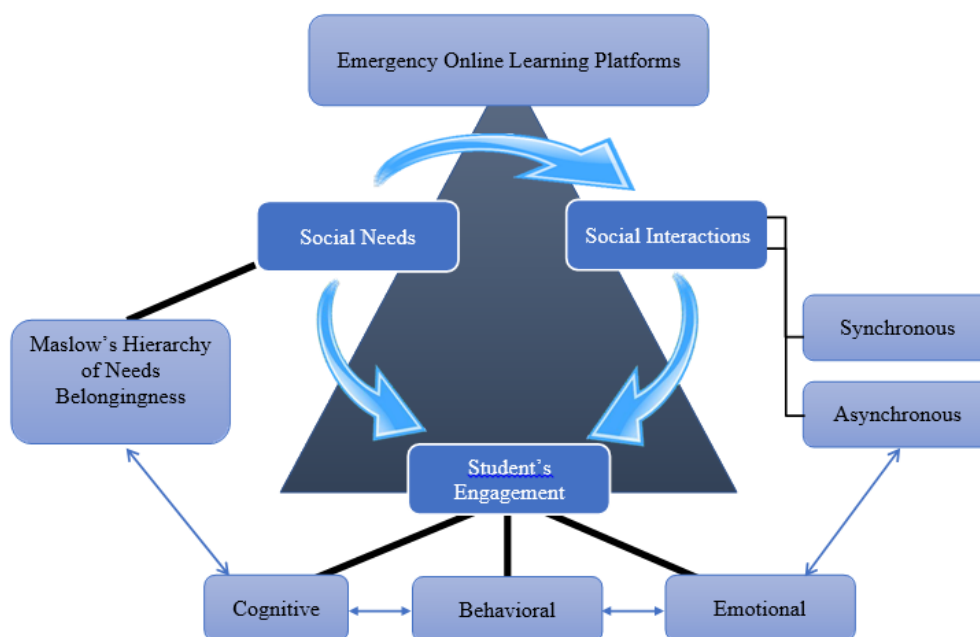
This study is anchored on the Communicate Bond Belong Theory by Hall & Davis (2016). Communicate Bond Belong Theory (CBB) is an evolutionary and motivational explanation of human communication's role in the relational functions of social interaction (Hall & Davis, 2016). Bonding with others is fundamental in human activities and necessary for nearly all of life's essential tasks: survival and reproduction, attachment and affection, work and play, and teaching and learning.

The framework (Figure 1) shows the relationship among social needs, social interaction, and students' engagement in emergency online learning platforms and how they influence each other in the learning process. It proposes that the engagement of each individual in communicative behaviors is the one that forms or strengthens relationships. Engagement, according to Wong and Chong (2015), is a unique combination of active and collaborative learning, participation in enriched learning activities, communication with teachers and among learners, participation in educational experiences, and feeling accepted. Student engagement can be classified into three types: emotional, cognitive, and behavioral. Emotional (how they feel), cognitive (how they think), and behavioral (how they act) (Moreira et al., 2020). These domains emphasize the dynamics of student participation during emergency online learning. Thus, in this online learning platforms, students need to improve their relationships with their peers and their teachers by establishing social interaction with each other.

However, social interaction takes various forms, and not all are equally capable of satiating the need to belong or strengthening relationships. CBB theory further contends that all social interaction expends social energy. Given human limits on social significance and the number of connections a person can possess, time and energy spent developing and maintaining any given relationship are opportunity costs for engaging in other ways with alternative relational partners.

Social needs focus on the need of belongingness of the students, which the researchers limited only to the third stage of Maslow's Hierarchy of Needs because social need is perceived as a sense of personal denotation, achieved through a perceived sense of social belonging and social contribution (McLeod, 2018). Maslow's hierarchy of needs classified social needs that include love, acceptance, and belonging. Friendships, romantic attachments, family, social groups, community groups, churches, and religious organizations fulfill this social need (Cherry, 2021). On the other hand, loneliness, depression, and anxiety can all be avoided by feeling loved and accepted by others. Considering social interaction, there are two types that are demonstrated during emergency online learning. It includes synchronous and asynchronous online interaction or virtual and non-virtual online interactions that students experience in these online learning platforms.

To illustrate how social interaction relates to social needs and student engagement in this emergency online learning platform, a conceptual framework depicts the relationship among these variables: social needs, social interaction, and student engagement. It also includes the three sub-variables for students' engagement (cognitive, behavioral, and emotional) that might form significant predictors of the needs and quality of interactions among students and teachers in this online learning platform. The framework shows the three variables—social needs, social interaction, and student engagement—in the center of the framework with an arrow pointing in a circular motion. This also indicates possible correlation among these three variables. Lastly, students' engagement is divided into three sub-variables, which are cognitive, behavioral, and emotional. Each primary variable's sub-contents are linked with an arrow because it indicates the predictors that affect the relationship among social needs, social interaction, and students' engagement.

**Figure 1. Conceptual Framework that shows the relationships among the variables**

## 1.2 Research Questions

- Are there significant relationships among the social needs, social interaction, and engagement of students in emergency online learning platforms?
- Do the social needs and social interaction of students significantly influence their engagement during the emergency online learning platforms?

## 1.3 Tested Hypothesis (Ho)

- There were no significant relationships among social needs, social interactions, and students' engagement in emergency online learning platforms.
- Students' social needs and social interaction had no significant influence on their engagement during emergency online learning platforms.

## 2. METHODOLOGY

This study aimed to examine the relationships among social needs, social interactions, and students' engagement (cognitively, behaviorally, and emotionally) in emergency online learning platforms. Data was collected through survey questionnaires and supported by a focused group discussion to fill this hole. This section outlines the study's research design and methods (i.e., background and participants, instruments of the construct implementation process, data collecting, and data analysis).

### 2.1 Research Design

A quantitative approach through a correlational design was employed to test the relationship among variables taken from a similar group of subjects that undergo several computations and figure out the relationships among the variables (Asamoah, 2014). Moreover, it aimed to find out whether there was either a positive correlation, a negative correlation, or a zero correlation (McCombes, 2019). The researcher used correlation design to expose the students' relationships

to social needs, social interactions, and engagement in cognitive, behavioral, and emotional aspects. That was supported by the students' responses to a qualitatively designed question. In this way, the results showed a positive correlation, a negative correlation, and a zero correlation among the variables.

## 2.2 Research Locale

This study was conducted at Mindanao State University, General Santos City, Philippines. MSU is a multicultural school that highly prioritizes harmony and integration of distinct socio-cultural interests (Valdez & Paca, 2018). In addition, it is a leading higher-education institution dedicated to providing economic and high-quality education to students from throughout SOCCSKSARGEN and the nearby region. This university has the vision to be a globally competitive university in the southern Philippines. Its mission is to provide competent human resources for the development of Southern Mindanao and improve the living conditions of Muslims and Indigenous people.

## 2.3 Sampling Design

The respondents of this study were the randomly selected 189 first and second-year students from the Bachelor of Elementary Education Major in General Education, College of Education at Mindanao State University-General Santos. These students experience emergency online learning (EOL) during the pandemic. The researchers applied a simple random sampling technique to gather the data needed for this research. The said technique is one of the probability sampling methods in which McCombes (2019) states that every member of the population has a chance of being selected to represent the whole population.

## 2.4 Research Instruments

The researchers used quantitative instruments to gather data and relevant information. The researchers used the self-made Google form questionnaires to determine the extent and relationships among students' social needs, social interactions, and engagement during emergency online learning platforms. The researcher-made questionnaire consisted of 35 items using 5-point Likert scales ranging from Strongly Agree to Strongly Disagree. The research instruments used in this study underwent validation by three master teachers. It also underwent a reliability test to ensure that the research instruments were reliable prior to the actual conduct of the study.

## 2.5 Data Analysis

According to Bhat (2020), data analysis is a process used by researchers to reduce data to a story and interpret it to derive insights. Also, the data analysis process helps in reducing a large chunk of data into smaller fragments. In this study, the data treatment utilized by the researchers included both descriptive and inferential statistics.

To determine the relationships among the social needs, social interaction, and engagement of students in emergency online learning platforms, the Pearson-R Moment of Correlation was utilized. Hence, the Pearson-r Moment of correlation, denoted by  $r$ , measures the strength of a linear relationship of the variables. A Pearson product-moment correlation attempts to draw a line of best fit through the data of two variables, and thus the Pearson correlation coefficient,  $r$ , implies how far these data sets are from this line of best fit. Correlation coefficient formulas are used to determine the strength of a relationship between data points. The algorithms provide a value ranging from -1 to 1, with 1 representing a strong positive association. A significant negative association is indicated by a matter of -1. A result of 0 shows no link at all. James et al. (2021) defines Pearson's Product-Moment Correlation as a statistical tool for determining how much one variable changes due to the change in the other. A high correlation indicates a strong association between the two variables, whereas a weak relationship indicates a poor correlation between different variables.

Moreover, the dataset was subjected to linear regression analysis to determine the extent to which the students' engagement influenced their social needs and social interaction. Linear regression, as defined by Bevans (2020), is used to estimate the relationship between two quantitative variables. In addition, linear regression was performed to determine the strength of the link between two variables and the dependent variable's value at a given independent variable's value.

Lastly, the analysis of variance (ANOVA) was employed to determine the significant relationships between engagement and social needs; and engagement and social interactions. The cognitive, behavioral, and emotional engagement served as a set of predictors of the students' social needs and social interaction. The statistical approach of analysis of variance, or ANOVA, divides observed variance data into multiple components to be used in additional tests. Also, for three or even more sets of data, a one-way ANOVA is utilized to learn more about the relationship between the dependent and independent variables. As a result, if there is no real variation between the groups, the F-ratio of the ANOVA should be near (Kenton, 2021).

### 3. RESULTS AND DISCUSSION

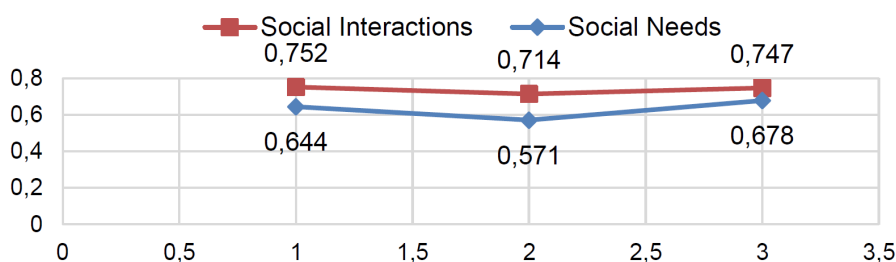
Instructor presence in the online learning platform, student involvement with peers, teachers, and content, and the connection between traditional and digital activities have a beneficial impact on students' engagement in remote learning (Nortvig et al., 2018). It supports the studies of Martin et al. (2018) and Dwivedi et al. (2019), which have confirmed the importance of teachers' presence in the online learning platform. Convergenly to Hews et al.'s (2022) research, students indicated that they felt more engaged when interacting with instructors synchronously. Their study revealed that students who exclusively utilized asynchronous learning experienced greater difficulty comprehending the material and obtaining feedback on their progress. Hence, in this study, Pearson-R Moment of Correlation was performed to determine the relationship among the social needs, social interaction, and engagement of students in emergency online learning platforms (Table 1). The analysis revealed that all three sub-variables of student engagement in emergency online environment platforms correlate positively and significantly to the students' social needs. This was shown by the obtained coefficients of  $r = .644$  for the cognitive;  $r = .571$  for the behavioral; and  $r = .678$  for the emotional. This implies that the higher the engagement of students, the greater their social needs. Conversely, the lower the engagement of the students, the lower their social needs.

**Table 1. Correlation Matrix between the Social Needs, Social Interaction, and Engagement of Students in Emergency Online Learning Platforms**

Variables		Social Needs	Social Interaction	Remarks
Cognitive Engagement	Pearson Correlation Sig. (2-tailed) N	.644 .000 189	.752 .000 189	Reject Ho
Behavioral Engagement	Pearson Correlation Sig. (2-tailed) N	.571 .000 189	.714 .000 189	Reject Ho
Emotional Engagement	Pearson Correlation Sig. (2-tailed) N	.678 .000 189	.747 .000 189	Reject Ho
Overall Total		0.631	0.737	Reject Ho

Table 1 also shows that the three engagements also correlated positively and significantly to the social interaction of the students. This assumption is based on the following coefficient results  $r=.752$  for cognitive;  $r=.714$  for behavioral; and  $r=.747$  for emotional engagement. The result means that the higher the engagement of the students, the higher the social interaction. On the other hand, the lower level of engagement of the students, the lower the social interaction.

**Figure 2. Relationship of social needs, social interaction, and engagement of students**



Overall, the correlation among social needs, social interaction, and students' engagement in emergency online learning platforms revealed that all three were positively and significantly correlated with each other, with overall coefficients of  $r=.631$  for social needs and  $r=.737$  for social interaction. This relationship is illustrated in Figure 2. This implies that the greater the social needs and social interaction, the greater the engagement of the students. However, the lower the social needs and social interaction, the lower the engagement (cognitive, behavioral, and emotional) of the students' emergency online learning platforms.

The result connects to the study of Le and Truong (2021), where it has been stated that the organic nature of human beings is a sense of belonging that interrelates to socio-emotional feelings. As such, learners need to see themselves as part of a specific learning community. School settings are not merely physical spaces but a social hub of human interactions and connections essential to learning and development. This also correlates to the study of Bali and Liu (2018) that learning requires social connection, which is very important for success. It promotes and supports meaningful and productive learning. Subsequently, Baloran et al. (2021) reported that students express high levels of satisfaction with the fulfillment of their educational needs in an online learning setting, which they attribute to educators who establish online communication and provide consistent feedback on student performance. Furthermore, Hews et al. (2022) explained that students have access to a range of resources, including educators, peers, and support, which help them make progress in their learning. Moreover, social connection improves learning engagement, positively impacting learning.

A linear regression analysis was performed on the data to determine the extent to which the students' social needs influenced their engagement (Table 2). The result of the analysis revealed that cognitive engagement and emotional engagement recorded B coefficients of .318 and .363 respectively, with associated probability values lower than the .05 alpha significance level. The study has found that cognitive and emotional engagement are significant predictors of social needs among students. Behavioral engagement was also correlated positively with the social needs of the students, but not to a significant extent.

Result implies that the most significant need of the students on these emergency online learning is in terms of their cognitive and socio-emotional aspects. Students need a sense of belonging, a positive relationship, and a stronger need for love and support for them to fully engage themselves in the teaching and learning process through online platforms.



**Table 2. Linear Regression between outcomes Social Needs and Engagement of Students**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remarks
	B	Std. Error	Beta			
1 (Constant)	.681	.226		3.017	.003	
Cognitive	.318	.060	.344	5.325	.000	Significant
Behavioral	.098	.070	.100	1.408	.161	Insignificant
Emotional	.363	.067	.398	5.374	.000	Significant

This was supported by Communicate Bond Belong theory proposed by Hall and Davis (2017) which emphasizes the role of communication in the relational functions of social interaction. It means that these actions fill the need to belong. Also, the third stage of Maslow's hierarchy of needs is social and relates to a sense of belonging that includes intimacy and strong connection with friends and families. The necessity of intimate relationships inspires behavior (Maslow, 1958). The results also showed that behavioral engagement also accounts for social needs but not to the extent that it affects students' needs. This is aligned with the study of Pilotti et al. (2017) which revealed that emotional engagement between students and instructors was positively correlated with cognitive engagement. Reeve and Tseng (2021) revealed that educators' ability to recognize and respond to students' behavioral, emotional, and cognitive involvement has a significant impact on their learning. Additionally, El Sayad et al. (2021) found that emotional engagement is the most crucial factor in students' engagement with online learning. Students who have a positive attitude toward online instruction and participate actively in it are more likely to report higher levels of satisfaction. However, there was a negative correlation between the emotional connotation of students' posts and the instructors' behavioral engagement.

The results of the Analysis of Variance (ANOVA) show the findings of the linear regression (Table 3) which indicated that the three sub variables of students' engagement (cognitive, emotional engagement) formed a very significant set of predictors for the students' social needs. The result of the analysis of variance revealed an *F*-value of 74.825 with a significance level lower than the .05 alpha significance level.

**Table 3. Results of Analysis of Variance between Social Needs and Engagement of Students**

Model	Sum of Squares	Df	Mean Square	F-Value	Sig.	Remarks
Regression	37.503	3	12.501			
Residual	30.908	185	0.167	74.825	.000	Significant
Total	68.410	188				

This result means that, taken jointly, the students' engagement, namely cognitive, behavioral, and emotional, formed a very significant set of predictors in influencing the social needs of the students in emergency online environment platforms (Librero, 2021). This implies that the level of social needs of the students varies depending on how they engage in the teaching and learning process (Wilms, 2000).

As a result, course delivery in online platforms necessitates pedagogical strategies that maximize learning and engagement opportunities. Looking beyond cognitive skills learned or mastered, engagement focuses on individuals' dispositions or attitudes about classroom experiences and life-long learning (Mandernach et al., 2011).

A linear regression analysis was performed on the data to determine the extent to which student social interaction influences engagement (Table 4). The result of the regression analysis revealed that all of the three engagement sub-variables, namely, cognitive, behavioral, and emotional engagement recorded B coefficients of .346, .239, and .256 respectively, with associated probability values lower than the .05 alpha significance level.

**Table 4. Linear Regression between Social interaction and Engagement of Students**

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Remarks
	B	Std. Error	Beta			
1 (Constant)	.585	.159		3.686	.000	
Cognitive	.346	.042	.411	8.252	.000	Significant
Behavioral	.239	.049	.267	4.876	.000	Significant
Emotional	.256	.047	.309	5.402	.000	Significant

This means that cognitive, behavioral, and emotional engagement are significant predictors of social interaction among students. The interactions of the students significantly correlated with their cognitive, behavioral, and emotional engagement. This implies that students' social interactions are highly affected by their engagements (cognitive, behavioral, and emotional) in emergency online learning platforms.

Social interaction offers students the opportunity to engage in in-class discussion. It demands that students participate in making meaning out of content, forcing them to contextualize that meaning within the social group. Realistically speaking, they were obliged to take online lessons throughout the pandemic, which lead to cognitive overload (Nadeen & Blumenstein, 2021), and harmed their social interactions and relationships with classmates and teachers (Khlaif et al., 2021). However, student engagement is associated with higher accomplishment, perseverance, and retention (Nair & Sreekumar, 2021). Hence, communication between instructors and students is vital because it improves and provides better learning experiences for students and can create a positive emergency learning environment (Alwamleh et al., 2020).

The result of the Analysis of Variance shows the findings of the linear regression which indicates that all three variables (cognitive, behavioral, and emotional engagement) formed a very significant set of predictors for the students' social interaction (Table 10). The ANOVA result revealed an  $F$ -value of 167.205 with a significance level lower than the .05 alpha significance level. This result means that, taken jointly, the students' engagement (cognitive, behavioral, and emotional) formed a very significant set of predictors in influencing the students' social interactions in emergency online environment platforms. Moreover, Tables 5 shows the influence of engagement on social interaction. The results revealed that all three variables under engagement (cognitive, behavioral, and emotional) significantly influence social interaction.

**Table 5. Results of Analysis of Variance between Social interaction and Engagement of Students**

Model	Sum of Squares	Df	Mean Square	F-Value	Sig.	Remarks
Regression	41.403	3	13.801			
Residual	15.270	185	0.083	167.205	.000	Significant
Total	56.672	188				

Peer-to-peer interaction can lead to a sense of belongingness and boost students' engagement (Abou-Khalil et al., 2021). Moreover, according to Liu and Zhang (2020), social contact between students and teachers as well as between students themselves significantly affects how engaged students are in the online learning environment. Meanwhile, Nguyen (2018) stated that students' behavior and engagement change as the environment changes, and interactions between students and teachers can significantly enhance students' learning outcomes. The research on active learning variables shows how important social connection is. Congruent to Chiu's (2022) findings, relatedness needs are identified as an important factor in the success of online learning. The interactions between students are not only more eager to learn but also more attentive, engaged, and eager to discuss ideas with others (Molinillo et al., 2018).

However, the results of Nair and Sreekumar (2021) showed that most students occasionally display social interaction anxiety. According to the analysis of the impact of social interaction anxiety on student engagement, the dread of COVID-19 has raised social interaction anxiety, which has decreased student learning engagement. Moreover, at Indiana University, a survey of almost 6000 students and faculty conducted after the first round of remote learning revealed that few online courses could deliver such interactive learning opportunities. Less interaction between students and faculty made completing their coursework harder, and they felt like a minor part of the university community (Motz et al., 2022).

#### 4. CONCLUSION

This study tested whether engagement is a predictor that can influence the social needs and social interactions of the students. Results revealed that there is an average extent to which students met their social needs. Students in the online learning platforms need a stronger relationship with their loved ones and relatives to motivate them and accomplish their assigned tasks. They also need motivation and encouragement from their teachers to boost their participation and academic performance, and they preferred having series of group activities in which they can join. Likewise, it is clear that students are more likely to experience social interaction when they communicate, collaborate, or brainstorm with their classmates for their online activities, rather than asking questions or inquiries about the online discussion with the entire class. They are more likely to engage in group activities and synchronous and asynchronous discussions to communicate and collaborate with their peers or classmates. It can be concluded that behavioral engagement is likely to take place in emergency online learning platforms.

Based on correlation results, all three variables (social needs, social interaction, and engagement) positively correlate with each other. The higher the engagement of students, the higher their social need and social interaction. Conversely, the lower the engagement level of students, the lower their social need and social interaction. Only the behavioral and emotional engagement form a significant predictor to significantly influence the students' social needs. However, cognitive, behavioral, and emotional engagement of students have formed a significant predictor that influences social interaction of students. In conclusion, the social needs and the social

interaction of students are highly influenced by how students engage cognitively, behaviorally and emotionally in the emergency online learning platforms.

Findings indicate that showing an empathy of care and a human-centered pedagogy is fundamental to address the needs of the students for socialization, interaction, and engagement during their emergency online classes. The teachers should apply the principles pedagogy of care and empathy-based pedagogy to support students need for socialization and engagement during complex emergencies. Likewise, the University officials could include in its student support system regular counseling and health services that can cater to the psychosocial needs to help students cope with educational pressures. To attain a sense of belongingness and stronger socio-emotional connections with peers and instructors, students should contribute to an inclusive classroom that reflects respect, trust, communication, and active participation.

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