

The Role of Socio-Cultural on Online Learning Performance: The Role of Students' Experience

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Abstrak

This research investigates how socio-cultural learning process influences students' experience during and after the COVID-19 pandemic which subsequently influencing their E-Learning performance. 320 valid respondents were recruited for an online survey study. Structural Equation Modeling (SEM) was used to test the research hypotheses. This study found that socio-cultural learning has a crucial role in students' experience. However, social-cultural Learning has a greater effect on students' experience. Furthermore, mediator variables, students' experience, partially mediate the relationship between socio-cultural learning and E-Learning performance. The result of the current study contributes to extend literature education field toward socio-cultural and E-Learning simultaneously. It also develops a new view into the determinants factor to influence students' experience.

keyword: e-learning, socio cultural, students' experience, students' interaction, SEM.

Introduction

The lack of technology development and access inequality among students in developing countries makes the information and technology transformation is still scanty. Hence, the application of the education goals in the world is almost similar, namely craving students who are superior. E-Learning system possibly to shift leaning process to technology approach from conventional system. Easier, cheaper and faster toward variety of platforms have become the main reason to adopt E-Learning

approach. During and after the COVID-19 pandemic, universities and educational institutes has run to implement and integrate the present distance-learning platforms. Nowadays, E-Learning is very popular, almost in all over the world, especially in the field of Education which adopts E-Learning as media in learning process [Patra & Mahapatra, 2021; Yassin et al., 2021]. Social-cultural plays important role to influence students' experience and interaction which subsequently influence students' E-Learning performance [Nikou & Maslov, 2021]. Socio-cultural also plays a vital role in advancing education. Hence, it must be applied in learning, such as getting to know the students' culture considering that they have a variety of cultures—for example, Indonesia, a country with different religions, languages, ethnicities, and races. Socio-culture differences among students are best applied in online learning. Although the transformation in online learning is not entirely new in education, the current conditions somehow force teachers and students to use online learning completely. E-Learning is not considered new, but the COVID-19 outbreak has made its existence even more important as a solution in education [Salvador & Cortinas-Rovira, 2022]. The students' education must be further improved, considering that their condition must remain stable in participating in the learning process during the COVID-19 pandemic. Students' situational pressures need to be determined, especially in E-Learning, such as sharing experiences in social/socio-cultural environments, challenges, and learning outcomes [Yassin et al., 2021].

Socio-cultural explains the differences between groups of people concerning the social and culture classes in which they live [Lupplicini & Walabe, 2021]. Socio-cultural influences are fascinating to discuss at elementary, junior high, senior high school, and even the university level [Al-Kahtani et al., 2006]. Online learning has great potential on adopting cultural values in Indonesia and all over the world. Distance education or distance learning, such as online learning, poses challenges for teachers in terms of socio-cultural implementations (such as the application of different cultural aspects: language, religion, and ethnicity), which, however, still needs to be carried out to avoid pressure on students in the form of monotonous online learning. Although it is quite interesting to discuss for students in countries that prioritize socio-cultural importance, it is considered new challenges for teachers globally [Alahmari & Amirault, 2017]. In each country, it emphasizes the importance of a theoretical framework to distinguish socio-cultural significance from the trajectory of the current technological context socially and culturally relevant learning processes [Remtulla, 2008].

This research is worth studying since has several variables, such as socio-cultural point of views, and students' experiences, which have a positive impact on students' E-Learning performances. Therefore, comprehensive research is needed to address the readiness of teachers in implementing socio-cultural into the learning process, especially in E-Learning media, not only during the COVID-19 pandemic but also for future learning. Based on these objectives, this study attempted to answer the following research questions:

- 1) Does sociocultural have a significant effect on students' experiences?
- 2) Do students' experience have a significant effect on E-Learning Performance?

This study investigates students' socio-cultural, experience, and E-Learning performance student experience as a mediator) to answer these questions. This research is expected to contribute to implementing in different counties culture in the E-Learning learning process and to become a unique learning model that adapts to the diversity of cultural values of each region to provide a quality learning experience [Lupplicini & Walabe, 2021]. In addition, students will be interested and use E-Learning

easily and can share experiences through learning activities at school. Furthermore, the resulting learning process will vary with the application of different types of culture and can have an impact on students' E-Learning performance.



Figure 1. Proposed research model

Literature Review and Hypotheses

The Correlation between Socio-Cultural and Students' Experience

Studies consider that the government's lack of attention to cultural diversity issues (such as student diversity) will result in the alienation of many groups of learners [DeRouin et al., 2005]. Despite the increasingly complex educational needs profiles, relatively little attention has been paid to students' different socio-cultural learning needs globally [Salas et al., 2002]. The application of socio-culture is to respect elders/fellow human beings and differences in religion, language, and ethnicity [Basahel & Basahel, 2018]. The government, engaged in education, is obliged to encourage teachers to apply socio-cultural values, such as mutual respect (teachers respecting students, listening to students' experiences, and exchanging opinions). This research employed a more socio-culturally-minded view of E-Learning from the perspective of social theory for learning, such as student experience and interaction. Socio-cultural affects student activities (experiences in the community, habits at home, and performance at school). The socio-cultural dimension has a prominent role, namely providing guidelines for student success in the community, one of which is in the school environment [Basahel & Basahel, 2018]. Previous studies have also revealed that socio-cultural influenced student experience [Hofstede, 2001]. Therefore, the present study proposed the following hypothesis:

H1. Socio-cultural has a significant and positive impact on student experience.

The Correlation between Student Experience and E-Learning Performance

The student experience referred to in this study was how students openly share their experiences, such as habits in the community and at home. The student experience is considered a proactive agent to understand information from society, such as socio-cultural, and use it to improve effective strategies and interactions in the classroom. Each teacher will instruct students to share experiences and relate them to learning. Experiences in the community, for example, are cooperation, caring for each other, playing traditional games (as in Indonesia; playing *wayang*, rubber, marbles, hide and seek, etc.), participating in social activities, protecting nature, participating in cultural rituals, and worshiping together [Chong, 2020; Sari et al., 2023]. The researchers argued that the E-Learning process as construction should not be under the concept of ignoring its role. The cultural diversity of experiential codes and conventions can result in students' E-Learning performance and sustain socio-culture in education (Elementary

School, Junior High School, Senior High School, and University). Preliminary studies found a significant correlation between socio-cultural and student experience, which subsequently impacted students' E-Learning performance [Luppisini & Walabe, 2021; Basahel & Basahel, 2018]. Therefore, this study proposed the following hypothesis:

H2. Student experience has a significant and positive impact on student E-Learning performance.

The Correlation between Socio-Culture and E-Learning Performance

Research conducted by Abdelhai [Abdelhai et al., 2012] suggested that universities adopt E-Learning and provide facilities for its implementation. In addition, to achieve good performance, colleges must provide a computer room with an internet connection, either at school or home. The use of information technology directs attention and learning methods to the application of online learning, which is widely known as E-Learning. With the introduction of the internet and the World Wide Web, E-Learning has shown great potential to provide more flexible access to excellent content and interaction. It will also encourage students to be confident in improving their performance [Gecer & Bagci, 2022; Shamad et al., 2023]. Research conducted by Kinuthia [Kinuthia, 2012] found that socio-cultural was successfully implemented, could improve student learning performance in the USA, and could be designed to fit into the curriculum. In addition, socio-cultural was also concluded to correlate with E-Learning [Rao, 2011; Sari & Chou-Liu, 2023]. Hence, this study proposed the following hypothesis: H3. Students' experience has positive and significant effect on mediates the relationship between Socio-cultural and students' E-Learning performance.

Methodology

Questionnaire Design, Pretest, and Pilot Study

This study adopts scales with high reliability and validity. It uses multi-item scales for all of the constructs from prior studies in the proposed model about conducting a pretest and pilot test to validate the measurement items' wordings of constructs for the students' socio cultural, students' experiences, students' interactions and E-Learning performance in Indonesia. It was used to ascertain whether the students understood each of the questions and revised wordings to prevent single-source bias [Podsakoff et al., 2003].

Sample and Data Collection

The Indonesian students are asked to fill out an online survey; besides, a cash prize of 2,000 Indonesian rupiahs (IDR) must complete each study to increase their response rate. This online survey was conducted using Google Forms and runs from April 10 to Mei 25, 2022. The sample was collected from random sampling involving 332 students in Indonesia. However, 320 samples were valid, and this represented a 99.00% completion rate. Table I shows the demographics of the respondents. Indonesia was selected for the data. This study validates the relationship between sosio cultural, students' experiences, students' interactions, and E-Learning performance of students.

Data Analysis

The data were analyzed using two statistical programs, namely SPSS 22 and AMOS 22 software. Furthermore, hypothesis testing was carried out by applying the structural equation model (SEM). According to [Byrne, 2016], SEM provides two essential aspects of the procedure. First, it is used to determine the causal effects of the

observed variables. Second, the structural relations among variables enable a clear description of the theory examined in this study.

Research Result

Structural Equation Modeling (SEM) was used to test the proposed model and the research hypotheses. This study employed the two-stage approach suggested by Anderson and Gerbing [Anderson & Gerbing, 1988]. First, the measurement model was estimated with confirmatory factor analysis (CFA) to test reliabilities and validities of the research constructs, and then, the structural model was used to test the strength and direction of the proposed relationships among them.

Table 1

Respondent demographics

Demographic Items	Frequency	Percentile (%)
Gender		
Male	158	49.1
Female	162	50.9
Age		
18-26 years old	153	40.9
26~40 years old	126	37.7
Over 40 years old	41	21.4

Measurement Model

Table 2 shows the composite reliabilities (CR) and an average of variance extracted (AVE) for all construct are above 0.700 and 0.500, thereby demonstrating a reasonable degree of internal consistency between measurement items and their corresponding constructs. Furthermore, the Cronbach's α for all constructs is larger than 0.7. This indicates a good convergent validity for all measurement items and constructs. The evidence of discriminant validity exists when the square root of AVE for each construct exceeds its correlation coefficient with other constructs [Byrne, 2016]. Table 3 indicates the adequate discriminant validity of this study.

Table 2

Correlation matrix for measurement scales

Constructs	Mean	SD	SC	SE	SI	EP
SC	5.18	1.20	0.815			
SE	5.37	1.15	0.415**	0.812		
EP	5.17	1.21	0.226**	0.275**	0.298**	0.825

Note: SC: Socio culture, SE: Students' experience, EP: E-Learning performance. SD: standard Deviation. Diagonal elements are the square roots of the AVE for each construct. Pearson correlations are shown below the diagonal. Significant at *: $p < 0.05$, **: $p < 0.01$, ***: $p < 0.001$

Table 3
Measurement results

Constructs	MLE estimates factor loading/ measurement error	Squared multiple correlation (SMC)	Composite reliability (CR)	Average of variance extracted (AVE)	Cronbach's α
Socio-Cultural			0.640	0.412	0.723
SC1	0.712	0.493	0.406		
SC2	0.780	0.392	0.504		
SC3	0.775	0.399	0.502		
SC4	0.730	0.467	0.423		
SC5	0.815	0.336	0.551		
SC6	0.847	0.283	0.621		
SC7	0.722	0.479	0.420		
Students' experience experience			0.705	0.415	0.727
SE1	0.803	0.355	0.543		
SE2	0.837	0.299	0.627		
SE3	0.732	0.464	0.432		
SE4	0.782	0.388	0.523		
SE5	0.810	0.344	0.525		
E-Learning performance			0.725	0.522	0.728
ELP1	0.735	0.460	0.430		
ELP2	0.820	0.328	0.562		
ELP3	0.840	0.294	0.605		
ELP4	0.785	0.384	0.515		
ELP5	0.739	0.454	0.424		

Note: Fit statistics (N = 504)

$\chi^2/df = 2.375$, Goodness-of-Fit Index (GFI) = 0.810, Nonnormed fit index (NFI) = 0.822, Comparative Fit Index (CFI) = 0.820, Incremental fit index (IFI) = 0.830, and Root Mean Square Error of Approximation (RMSEA) = 0.027

Structural Model

Table 3 indicates that all the research hypotheses are supported. This study confirms that socio cultural has a significant effect on students' experience ($\gamma_{11} = 0.425$, $p < 0.001$) supporting H1 and H2. Furthermore, students' experience also has positive and significant effect on E-Learning performance ($\beta_{21} = 0.115$, $p < 0.05$) to support H3.



Figure 2. Proposed research result

Discussion

This study validated the relationships between students' experience as mediators between students' socio cultural and E-Learning performance on education and learning process. Information and technology have provided tool to support E-Learning process toward enhance their connections and interaction with others. This study validates students' socio-cultural role with learning activities such as discussing with friends and teachers. It has strong correlation to their attitude and behavior with regard to experience. It also possibly strengthening relationships directly influence E-Learning performance. It means that the learning collaboration toward online and offline interaction by students' personal and social activities, including local festival celebration, charity and sport events, painting competitions, debates and speeches and also exhibition and workshop. These activities not only within their school but across school and regions. It has a crucial role in their daily lives and positively affects their desire to enhance capacity and knowledge. However, few of studies regarding the relationships between the domains of socio culture and the dimensions of students' school activities on learning process.

First, the recent study shown that communal and transcendental activity have distinct associations with students' individual and social responsibility on society and others. This supports the view that attitude and behavior toward social activities can be strength inter-relationship among students. Students' experience and psychology can better influenced by social activities. In some countries, religion also recognized to address their lives and belief. Second, the results with regard to care to others, the schools must consider students' psychology and enhance to develop a clear rule of socio activities and recognized it as one of the part learning process and curriculum. It proved a student with high collective and individual well-being might have a heightened sense of belonging and focus on humanity's consequences, including higher orientation ethical standard on their activities. This implies the positive image of students' socio cultural (e.g., empathic, altruistic concerns rather than personal concerns) has a positive effect on students' activities on social interaction. Furthermore, the findings support preliminary studies that revealed socio culture strongly correlates with students' experiences [Chong, 2020; Gravett, 2020] as a mediator variable. Students' experience also positively affect students' E-Learning performance [Sumida & Kawata, 2021].

Conclusion

The current study contributes to some aspects of the literature. *First*, it provides a better knowledge of specific concepts of students' socio cultural, experience and

interaction on influence E-Learning performance on education context. This study discloses that socio cultural has an essential role in developing students' ethics and sense of belonging on community. Interestingly, students' socio cultural has positive effect to their personal experience and interaction. This process designates the strong correlation between students' attitude and habit. Students' who are highly aware of the social and human being are more likely to be committed and have a sense of belonging, friendly interaction, as well as the students' donation to social activities. *Second*, it was reported that students' experience and interaction play a mediating role in the relationship between students' socio culture and E-Learning activities on education field. Although previous studies have reported the role of socio cultural, which serves as an antecedent of students' experience and interaction. There were examined separately, and it was indicated that students' ethics and social responsibility are considered the most important mediators between socio culture and E-Learning performance. The strength of the mediating role shows that students are willing to develop ethics standards, a sense of belonging and recommendation to others. This is as a significance of social actions, knowledge, and experiences scholars attain from dealing with ethics and social responsibility. It proved socio culture provides relevant and timely information to education field. Hence, our findings provide a theoretical ground for future study

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