
The relationship between student engagement and their perception of success in online learning

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ABSTRACT

Online learning during the COVID 19 presents challenges not only for the teachers but also the students. Exploring students' engagement during their online learning is one way of understanding what might contribute to their success although teaching and learning has to be delivered online. This study tries to investigate the correlation between students' engagement and their perception of their success during their online learning. This study applies quantitative approach to answer the hypothesis of this study which asks whether students' engagement is positively correlated to their perception of success in online learning situation. This study uses questionnaire distributed to 473 students in two vocational schools in Central Java. The statistical descriptive analysis of both variables being measured in this study shows that students are in the medium engagement category, with one sub variable indicating a high engagement, which is their engagement to the material. Apart from the student engagement, this study has successfully proved that there is a positive relationship between students' engagement and their perception of success. To conclude, this study provides some recommendations to further examine students' engagement in vocational education.

Keywords: student engagement, perception, student success, online learning, vocational education

Article history

Received:

20 October 2022

Revised:

26 November 2022

Accepted:

30 November 2022

Published:

04 December 2022

Citation (APA Style): Krismiyati, K., & Yulia, H. (2022). The relationship between student engagement and their perception of success in online learning. *Jurnal Pendidikan Teknologi dan Kejuruan*, 29(1). doi:<https://doi.org/10.21831/jptk.v29i1.53966>

INTRODUCTION

When WHO classified COVID 19 as pandemic in March 2020 (WHO, 2020), it affected almost every aspects of human's life around the world including education sector. UNESCO stated that the disruption due to the pandemic situation has affected education system, ranging from no school closure because of lack connectivity and equipment to more than a year closure in some countries (UNESCO, 2022). Indonesia, is one of the countries affected by the COVID 19 pandemic. In response to the situation, Indonesian Ministry of Education and Culture issued a policy regarding the administration of education during the pandemic, which gave the educators the flexibility on the curriculum that suited their situation and condition locally (Kembdikbud, 2020). Schools were advised to conduct their distance learning. The distance learning policy caused a big shift in the teaching learning practices. In a very short period, schools and any related

stakeholders had to change and adapt how they conduct their classroom practices. The traditional face to face meetings were then shifted into the online learning environment.

Distance learning conducted through electronic devices was relatively new to most of the teaching and learning communities (Selvaraj, Radhin, KA, Benson, & Mathew, 2021) including in Indonesia. The new normal online education brings its own education challenge (ibid). their study found out that the teachers had successfully set up their emergency remote learning using online collaborative tools. In addition, they maintained that even without any proper training both students and teachers were able to adapt to the change (Selvaraj et al., 2021). A recent study regarding online learning during COVID 19 has reported that despite all the challenges presented during this pandemic era, students' motivation proved to be the protective aspects of their learning success (Pelikan et al., 2021). Motivation in learning is surely connected to their goal orientation which will impact towards their classroom engagements (Anderman & Patrik, 2012).

To engage students in online learning situation, it needs strategies and resources to support. A recent study has focused on developing strategies for increasing students engagement in online learning situation with low resources (Abou-Khalil et al., 2021). They identified that there are things teachers could do in order to highly engage the students in their online learning. Certainly, how the students engage will vary depending on their access to technology as the learning activities are delivered online. On the other hand, another study has explored strategies to support students' engagement in online learning through learning analytic (Silvola, Näykki, Kaveri, & Muukkonen, 2021). The result of their study indicated that the using of learning analytic indeed supported their engagement serving as information mediation between them and the institution.

Looking at the condition in which students and teachers could adapt to the sudden change; online learning, it could not be separated from students' engagement. Engagement in online learning is surely different from the students' engagement in traditional class or face to face learning (Chiu, 2021). In online learning situation, the teachers use technology to help them delivering the learning activity (Chiu, 2022). Their study indicated that 70% of the students participating their study engage themselves during the online learning. Similarly, the use of digital technology has been proven to be contributing to students engagement as it could enhance their interaction during classroom activity (Heilporn, Lakhali, & Bélisle, 2021; Rizk & Hillier, 2022).

Engagement is defined as active involvement of the students in their learning activity (Reeve, 2012). Further he highlights that this multidimensional construct engagement, has four intercorrelated aspects. They are behavioural, emotional, and cognitive engagements (ibid). Behavioural engagement refers to students' actual participation during classroom. Meanwhile, emotional engagement points to the affective reaction of the students both negative and positive. The last dimension of engagement which is the cognitive engagement. It is the willingness of the

students to make their effort to understand and master the complex phenomena they have during their learning activity (Anderman & Patrik, 2012).

Students engagement encompasses their everyday tasks they need for their learning. This includes “attending school and classes, following teachers’ directions, completing in-class and out-of-class assignments, and holding positive attitudes about particular subject areas and about school in general” (Finn & Zimmer, 2012, p. 97). Students’ engagement in general is situated in the social context embedded in their classroom activity. They participate in their classroom by engaging themselves with the material, teachers, peers or even with any platform they are using when the learning activity is delivered online.

Understanding students’ engagement is essential for educators in searching any strategy to reduce the likelihood of students’ failure in their learning (Finn & Zimmer, 2012). It implies that student’ engagement plays an important role in their success. Research has proved that students’ engagement affects their academic performance (ibid). Further they affirm that students who are actively exhibit their academic engagement behavior perform and achieve better than their disengaged peers. Similarly, a study involving university students has proved that students engagement influence their learning performance in a blended learning situation (Baragash & Al-Samarracie, 2018). Another study investigating students’ engagement in online learning at university level was conducted during the pandemic (Sayad, Hasliza, & Ramayah, 2021). The result of their study showed that academic self-efficacy had direct relationship towards students’ engagement; behavioural, emotional, and cognitive engagement (ibid).

Previous studies investigating students’ engagement have been largely focused on junior or high schools setting concerning motivation, interest, and attention of the students in a specific subject involving Indonesian students (Mukaromah, Sugiyo, & Mulawarman, 2018; Nasution, Adlika, & Tampubolon, 2022; Suryadin & Hidayat, 2022). A recent study on how students need academic support and their engagement for vocational school students showed that students have low engagement behavior (Zariayufa, Cahyadi, & Witriani, 2021). Further, they explain that the teachers have actually provided support during their distance learning. However, their study shows that the students have also tried to be actively engaged in the learning process although they have low motivation.

Few studies have focused on the engagement behavior performed by vocational students and how it correlates to their perception of success in online learning environments. Some previous studies on engagement focuses on higher education level (Commissiong, 2020; Dunn & Kennedy, 2019; Reguera & Lopez, 2021; Xie, Heddy, & Greene, 2019). Consecutively, their study discover that students’ engagement was predictive to students’ grade and the later study explores affordances in using mobile technology to examine students’ engagement. Likewise, a study had also showed that students’ behavioural and emotional engagement proven to be key

factors for students' academic achievement (Olivier, Archambault, De Clercq, & Galand, 2019). Student engagement is also said to be crucial for students' learning experience and performance (Afzal & Crawford, 2022).

Dunn & Kennedy (2019) have investigated that students' engagement was indeed predictive of their higher education grades. Therefore, this study intends to extend similar studies in the field with different contexts and settings to see if students' engagement contributes to their perceived success. By so doing, investigating the correlation between students' engagement and their perception of success in an online learning of vocational school students then becomes essential. This study will add to the literature on students' engagement in offering a different context and setting involving vocational high school students with limited supports and resources.

METHOD

This study employed a quantitative approach to explain the correlation between the two variables being investigated in this research (Creswell, 2012). The design of this study was correlational study; which aimed to describe how one variable affects the other (Bungin, 2021; Creswell, 2012). Meanwhile the type of correlational design implemented in this study was survey design. Correlation design was employed because it is non-experimental in nature so it does not need to manipulate the variable in testing the hypothesis (Bungin, 2021). It sought to assess whether the two variables in this study; students' engagement and perceived student success were correlated.

As this was a correlational study with a survey design, it used survey instrument to collect its data. The two variables investigated in this study were students' engagement and perceived students' success. The subjects of this study were students in two vocational high schools in Central Java. The survey for this study was administered during the pandemic situation in which the schools delivered the learning instruction. The students in both schools have similar economic background. They also have limited facilities regarding internet access to participate in the online learning. According to the teachers in those schools, the parents could not give full support for their children's learning since they have to work. Some of the students do not have good access to technology for their online learning.

The questionnaires were distributed to 473 students in two vocational high schools in Central Java. The questionnaire uses google form for its easiness in collecting the data. The instruments are developed for both variables; 13 items for students' engagement and 14 items for perception of students' success (see Table 1). The questionnaire used 5-point agreement scale from strongly disagree to strongly agree, performing as ordinal variable (Bryman & Cramer, 2012). The instrument used for data collection was using the one administered in a study investigating students engagement in an online learning situation (Commissiong, 2020)

Table 1. Aspects of variable used in the Questionnaire

Variable	Aspect of the variable	Number of items
Students engagement	Engagement with the material	4 items
	Engagement with the teacher	5 items
	Engagement with their peers	4 items
	Engagement with the online space	1 item
Perception of Student success	Performance -related (academically)	2 items
	Course goal -related	3 items
	Peers or community- related	4 items
	Course activity - related	45 items

After the data collection stage, statistical analysis was applied in order to see the correlation between the two variables. Cronbach alpha was used to measure the internal validity. Besides, descriptive statistical analysis was done to get the picture of the participants of this study such as the mean and standard deviation. In order to test the hypothesis in this study Pearson Correlation (r) was used. This correlation study tested the following hypotheses

- H₀ There is no relationship between students' engagement and students' perception of success in online learning
- H₁ There is relationship between students' engagement and students' perception of success in online learning

Once the Pearson Correlation coefficient was calculated, it will be able to determine whether students' engagement significantly influenced their perception of success.

RESULTS AND DISCUSSION

This section describes the result of the data analysis done after the data collection. Firstly, it discusses the statistical descriptive analysis of this study. Secondly, it reports the internal consistency reliability of all the items for the variables. Then it describes the result of both variables; students' engagement and students' perception of their success. From 473 respondents, here is Table 2.

Table 2. Demography data of the respondents

Male students	206
Female students	267
Age range	15-19 years old

The demography shows that there is only 12% difference between the female and male respondents. Meanwhile the result from the statistical descriptive analysis is shown in the following table

Table 3. Students' engagement and perception of students success variables

Variable	N	Max	Min	Mean	Standard Deviation	Mode	Sample Variance
Students Engagement	473	5.00	1.54	3.77	0.65	3.57	0.42
Perception of Students Success	473	5.00	1.64	3.80	0.59	3.77	0.35

Both variables have similar mean, it showed that the average of the respondents chose similar answer. In other words, they were in the same range between 3-3.99 from 5 scale points. The student's engagement of students in this study was 3.77. It reflected that the students engaged themselves in their online teaching and learning activity with medium category based on the calculated value range. Likewise, the students in this study showed that they had similar level of perception towards their success, with a mean score of 3.80. The mode value for student engagement was 3.57. It informed that most of the respondents had high engagement in their learning activity. Meanwhile the mode value of students' perception of their success was 3.77. It was slightly higher than their engagement's value. The mode value indicated how most of the respondents in this study showed high engagement and their perception of their success was at medium level. It was in the range of 2.995 – 3.995 (See table 4 for the category of the value range used in this study)

Table 4. Range Value for determining the category

Value Range	Category
0.995 - 1.995	Very low
1.995 - 2.995	Low
2.995 - 3.995	Medium
3.995 - 4.995	High
4.995 - 5.995	Very high

The students' perception of success variable in this study comprised of three sub variables; they were perception in the following area; performance-related, course goal -related, and course activity-related. The statistical descriptive of those sub variable could be seen in Table 5.

Table 5. Statistical Descriptive of the students' perception of their success sub variables

Sub variable	Mean	Mode	Median	Standard Deviation
Performance -related success	3,65	3,67	3,65	0,10
Course goal -related success	3,90	3,94	3,90	0,07
Course activity -related success	4,15	4,19	4,16	0.06

The table showed that the mean value of perception of their course activity-related success was 4,15. It revealed that the respondents in this study had high perception in their course

activity. It was higher than the mean value of the other two sub variables; course goal – related and performance- related success. It belonged to high category based on value range table (see table 4). However, for the course-goal related success sub variable, it was slightly lower leaning to the medium category with 0.09 difference. The mode value for the three sub variables corresponded to the mean value. The mode value for the course activity -related success was 4.19 which pointed out that most of the students highly perceived to be success in their course activities. Likewise, the mode values for both sub variables were in the 3.995 – 4.995 range. It indicated that the respondents also showed high perception in the course -goal related and performance-related activities. Regarding the variable of students’ engagement, there were four sub variables; they were engagement with the material, engagement with the teachers, engagement with their friends or peers and engagement with platform used for the online learning activity. The statistical descriptive results for these sub variables showed in Table 6.

Table 6. Statistical Descriptive of Students’ Engagement Sub Variables

Sub variables	Mean	Median	Mode	Standard Deviation	Sample Variance
Engagement with the material	4,04	4,05	4	0,04	0,00
Engagement with the teacher	3,71	3,73	3.75	0,06	0,00
Engagement with friends or peers	3,61	3,61	3.55	0,07	0,00
Engagement with the online learning platform	3,67	4,00	3,00	0,99	0,97

The engagement with the material sub variable had the mean value of 4.04. It illustrated that the respondents demonstrated high engagement with the material during their online learning. The engagement with friends or peers had the mean value of 3.61 which was the lowest amongst all the four sub variables. However, their mean values were still in the range of 2.995 -3.995 which indicated that they lied in the medium category. Although the teaching learning activities were delivered online, students were still engaged with the material, the teacher, friends and the online learning platform. The mean values also pointed out that the delivery mode did not lower the respondents’ engagement. Interestingly, the mean value for the engagement of the material (4.04) seemed to be the highest among other sub variables; it was in high category. It was probably due to the pandemic situation in which the respondents were not coming to their school. The easiest aspect to engage with was the material. In line with that, the data reported that the respondents slightly less engaged to their peers compared to their engagement with the teachers. It might be due to the frequency of meeting their friends face to face, an activity that they used to do before the pandemic era. The internal validity of the instruments used to collect the data was obtained by calculating the Cronbach Alpha coefficient. Two ways ANOVA without replication was done and resulted as follows.

Table 7 Two ways ANOVA without replication for students' engagement variable

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Rows	2370.91	420	5.64	8.92	0	1.12
Columns	452.78	12	37.73	59.64	1.21	1.75
Error	3188.44	5040	0.63			
Total	6012.15	5472				
Cronbach Alpha	0.89					

The value of Cronbach Alpha was 0.89 which informed that all the items for students' engagement were reliable. The minimum of 0.70 for Cronbach Alpha coefficient to be categorized as good. In other words, the items had a better reliability. The Cronbach Alpha coefficient for the variable of the students' perception of their success was also obtained from two ways ANOVA without replication in Table 7.

Table 8. Two ways ANOVA without replication for perception of students' success variable

<i>Source of Variation</i>	<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>P-value</i>	<i>F crit</i>
Rows	2133.33	420.00	5.08	6.88	0.00	1.12
Columns	677.13	13.00	52.09	70.55	0.00	1.72
Error	4031.29	5460.00	0.74			
Total	6841.76	5893.00				
Cronbach Alpha	0.99					

The calculation of Cronbach Alpha coefficient gave value of 0.99. It illustrated that the items comprising the variable of students' perception of their success was very reliable. It passed the good standard for the coefficient which was 0.70. If the coefficient was higher than 0.90, it meant that the items had the best reliability. From the data shown (Tables 7 & 8), it could be concluded that both variables in this study were reliable, the items used to collect the data did measure what they wanted to measure. Both variables had reliability coefficient of 0.88 and 0.99; meaning that they exceeded the good standard of 0.70. Having looked at the reliability of the variables, the correlation coefficient was then calculated. The calculation could be seen in Table 8.

Table 8. Correlation between both variables

	Perception of students' Success	Students Engagement
Perception of students Success	1	
Students Engagement	0,75	1

The table showed that the correlation coefficient between the two variables investigated in this study was 0.75, indicating a high correlation between students'

engagement and their perception of their success. Therefore, this study has proved the hypothesis that there was a positive correlation between the variables; students' engagement and students' perception of their success. In other words, hypothesis 1 saying that "there is relationship between students' engagement and students' perception of success in online learning" was accepted. This supported Dunn & Kennedy (2019) and Olivier, Archambault, De Clercq, & Galand (2019), that there was a correlation between students' engagement and their grades. This particular study investigated to a wider scope of success. It did not only take the grades as one indicator of students' success but also other related activities concerning their performance in their online course including goal related-activities and course related activities.

CONCLUSION

To sum up with, this study has investigated that there is a positive correlation between students' engagement and students' perception of their success. Interestingly from the exploration of the engagement, it turns out that students in this study are highly engaged with the material during their online learning activity. The study also shows that students are engaged with the teacher and online learning platform in medium category. The direct relationship between students' engagement and their perception of success is positive meaning that the higher the students engage themselves in an online learning situation the higher they perceive their success to be. However, this study only portrays the condition of students' engagement from two vocational schools. It will be beneficial if future studies could broaden the context of the study by involving a larger number of populations so that it could depict the real situation especially in vocational education level. Besides, a depth exploration of each dimension of engagement will provide a more vivid description of how students engage in their learning activity.

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