

Students' Engagement Toward Academic Performance Among Malaysian Distance Education Students in Online Classes During Covid-19 Pandemic

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Abstract: Distance education students have been studied on the impact of institutions' student engagement efforts toward understanding the impact on their student's academic performance during the COVID-19 pandemic. A total online lecture has been done by the distance education institution on their students. This study intends to know the relationship and understand the impact of student engagement efforts on the student's academic performance. Self-administered questionnaires on components of student engagement and academic performance are distributed online to several distance education students. Results indicate that student engagement has a low impact on descriptive mean value toward academic performance. Student engagement has no relationship with academic performance. Furthermore, regression analysis does not support the relationship between student engagement and academic performance. The discussion has been elaborated on student engagement and student academic performance.

Keywords: Academic performance, student engagement, distance education, online classes

1. Introduction

Predicting student academic performance has long been an important research topic in many academic disciplines (Huang & Fang, 2013). Undoubtedly, working adults if allowed to pursue their dream of having tertiary education, then they will not let the golden opportunity just pass by them. For these working adults, this is their second chance of a lifetime in getting their acclaimed dream to be fulfilled. Subsequently, they will apply for a distance education program. Moreover, the challenges among distance education students are vast as they have to balance their work-life and family life. Therefore, the decision for working adults to embark on a distance education program for several years is a huge responsibility. The distance education programs provide these working adults with have second chance to get themselves a tertiary education which they could not obtain during their young age due to various personal reasons. Thus, the dawn of the nation provided various distance education programs to potential adult learners who are eager to obtain their dream baccalaureate degree as adult learners.

The adult learners' journey as tertiary students in distance education programs will put some of them in the life realities between work-life and family; and subsequently the new student life. Thus, they need to juggle their performance at work, family, and study. The real challenges appear if these adult learners must pursue their academic performance throughout the learning

years. Undoubtedly, some adult learners had to forgo their acclaimed dream of having a baccalaureate degree due to their non-performing efforts in distance education. Sadly, this happened just after a year or two as they registered as an adult learner; and were university drop-outs. Therefore, tertiary institutions that offer distance education programs need to have their student engagement programs for them to ensure the drop-out number among adult learners is mitigated. On a similar note, tertiary institutions should not focus on getting their numbers of newly registered adult learners on every program's intake. Instead, they also need to be able to keep their adult learners sustain their academic endeavors until their graduation.

The study was conducted during the post-COVID-19 on distance education students to get their feedback on the institution's student engagement efforts toward their academic performance. This study intends to examine the relationships between student engagement and academic performance among adult learners. Moreover, this study intends to determine the extent to which student engagement explains or predicts academic performance. Therefore, it is expected that through this study, the tertiary institutions can chart and improvise their student engagement programs that are viable toward these adult learners' journey of having their dream baccalaureate degree in their lifetime's second chance through distance education programs. Thus, the objective of this study is to understand the relationship and the impact between student engagement and academic performance among distance education students among adult learners in Malaysia.

2. Literature Review

2.1 Academic Performance

Academic performance has been defined from various perspectives. Marks and Louis (1997) stated that academic performance was measured by their students' performance in a few classes. Moreover, they stated that academic performance was measured on students in the core mathematics and social studies classes based on their study. Applebee, Langer, Nystrand, and Gamoran (2003) stated that to evaluate student performance on these tasks, they used a scoring system that gives credit both for the overall level of difficulty of the task attempted and for the student's success in carrying it out. Interestingly, intellectual strengths (e.g., long-term memory, ability to think abstractly) and nonintellectual strengths (e.g., motivation, self-discipline) surely both contribute to a student's academic performance (Duckworth & Seligman, 2005). Koo, Demps, Farris, Bowman, Panahi, and Boyles (2016) discovered that a flipped classroom design would improve student performance and perceptions of the learning experience compared to traditional lecture course design in a required pharmacotherapy course for second-year pharmacy students. They concluded that a redesigned course improved student test performance and perceptions of the learning experience during the first year of implementation. Jantti and Cox (2010) examined the use of library resources, students can improve academic performance, and students who use the library get better grades. Furthermore, the works of Jumoke, Oloruntoba, and Blessing (2015) examined phone usage and identified the effects internet-enabled mobile phones have on the academic performance of students at the tertiary institutions using the Federal Polytechnic students of Ilaro, Ogun State in Nigeria.

2.2 Student Engagement

Student engagement is commonly defined as the product of motivation and active learning. It is a product rather than a sum because it will not occur if either element is missing (Barkley, 2010). While most definitions of engagement still include students' investment in learning activities as a key component of engagement, current definitions of student engagement have

expanded to include interrelated cognitive and affective components. Robinson & Hullinger (2008) defined student engagement that pertains to the time and physical energy that students expend on activities in their academic experience (Jacobi, Astin, Ayala, 1987; Kuh, 2003). Moreover, engagement pertains to the efforts of the student to study a subject, practice, obtain feedback, analyze, and solve problems (Kuh, 2003; Robinson & Hullinger (2008). Gunuc (2014) sees student engagement from the perspective of campus engagement and class engagement. He examined the relationships between student engagement and academic achievement in 304 students. The results obtained via the analyses conducted revealed that there were significant relationships between the student's academic achievement and student engagement as well as between their academic achievement and especially the dimensions of cognitive engagement, behavioral engagement, and sense of belonging. In addition, it was found that cognitive, behavioral, and emotional engagements; that is class engagement predicted academic achievement and explained it with a rate of ten percent. Meanwhile, Taylor and Parsons (2011) and Ting, Tan, and Voon (2020) stated student engagement has primarily and historically focused on increasing achievement, positive behaviors, and a sense of belonging in students so they might remain in school. Perhaps one way to define student engagement is to see how it is measured. They further stated that several common measures have been used to identify if students are actively engaged in learning. These measures have predominantly focused on quantitative data such as attendance, standardized test scores, and truancy or graduation rates.

2.3 Relationship between Student Engagement and Academic Performance

Various scholars have studied connecting student engagement with academic achievement. Whereby, Gunuc (2014) examined the relationships between student engagement and academic achievement. Hao Lei, Yunhuo Cui, and Wenye Zhou (2018) argued that student engagement positively predicts academic achievement. Delfino (2019) determined the extent of student engagement at Partido State University and analyzed the factors affecting student engagement. Gerber, Mans-Kemp, and Schlechter (2013) associated student engagement has been identified as a crucial factor in academic success. Orji (2020) stated that engagement in learning activities is an important factor that affects student performance in education. Schreiber Yu (2016) claimed that student engagement patterns are reliable predictors of academic performance. Therefore, this study intends to associate between student engagement and academic performance among adult learners of the School of Distance Education based on the hypothesis that:

H₁: Student engagement has a positive relationship with academic performance among distance education students.

Thus, the study's framework is depicted in Figure 1 associating student engagement and academic performance.

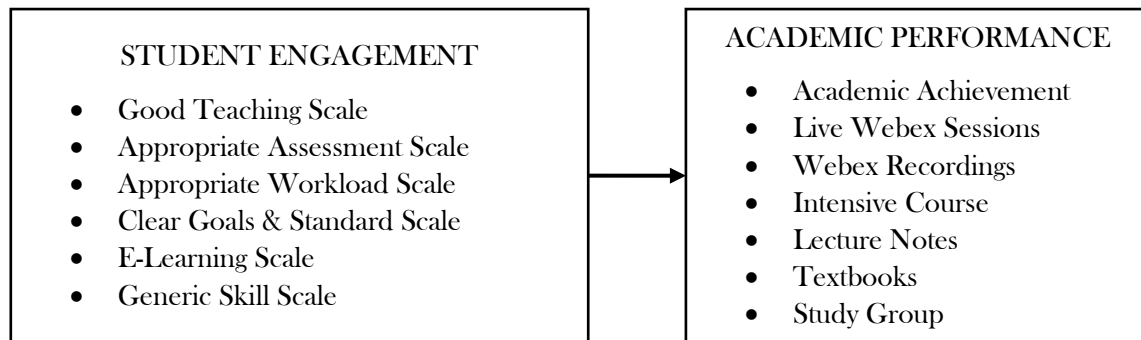


Figure 1: Study's Framework

3. Methodology

The population of adult learners in this study was obtained from the database of a renowned public university in Malaysia. The public university provides 4 programs. Firstly, there are four programs in pure sciences, namely biology, chemistry, physics, and mathematics. Secondly, there are three programs in social sciences, namely political sciences, anthropology-sociology, and economics. Thirdly, there are three programs in humanities, namely geography, history, and literature. Finally, there is a management program with three distinct majors, namely organization, finance, and marketing. The public university had more than 5,000 registered students in their distance education programs. Presently, the said public university has graduated more than 20,000 students since 1978.

A self-administered questionnaires were distributed among adult learners that inquired about their experience in the public university's student engagement about their academic performance. A total of 1,000 self-administered questionnaires were distributed among adult learners in 4 programs. The study adapted and adopted the research tools of Bryne and Flood (2003) that consisted of 6 components, namely good teaching scale, clear goals and standard scale, three questions on appropriate assessment scale, three questions on appropriate workload scale, e-learning scale, and generic skill scale. Meanwhile, the academic performance consisted of seven items, namely academic achievement, live Webex sessions, Webex recordings, intensive courses, lecture notes, textbooks, and study groups. The components were established based on the students' inputs.

4. Data Analysis

The study managed to collect a total of 256 responses from distance education students from the public university. This gave a response rate of 25.6 percent.

4.1 Reliability Analysis

Reliability analysis was conducted to determine the goodness of the measurement used. Table 1 depicts the reliability analysis of the variables. The student engagement formed of 28 items had a Cronbach alpha of 0.95. Moreover, the academic performance formed by 8 items had a Cronbach alpha of 0.89. Thus, both variables were reliable.

Table 1: Reliability Analysis

Variables	Questions	CA
Student Engagement	28	0.946
Academic Performance	8	0.891

4.2 Demographic Analysis

Table 2 depicts the respondents' gender. This study discovered that 52% (n=132) are female students as compared to 48% (n=124) are male students.

Table 2: Gender

Gender	n	%
Male	123	51.6
Female	124	48.4

Table 3 depicts the ethnicity of respondents. The majority of the students are Malays (n=197, 77%) against Chinese students (n=8, 3%) and Indian students (n=27, 9%). Meanwhile, 27 students were Sabahan, Sarawakian, and Sikh (n=27, 11%).

Table 3: Ethnicity

Ethnicity	n	%
Malay	197	77.3
Chinese	8	3.1
Indian	23	9.0
Others	27	10.6

Table 4 depicts the respondents' marital status. Before the student's enrollment into the distance education programs, they indicated that they were single (n=123, 48%), married (n=128, 50%), and divorced (n=6, 2%). Meanwhile, during studying, they indicated that single students indicated their marital status as married with an increase to 165 (64%). Unfortunately, some students had indicated their marital status had changed to divorce from 2% to 4% with an increase of 4 students.

Table 4: Marital Status

Marital Status	Prior		Present		Changes	
	n	%	n	%	n	%
Single	123	47.9	8	31.9	-41	-16.0
Married	128	49.8	165	64.2	+37	+14.4
Others	6	2.3	10	3.9	+4	+1.6

Table 5 depicts the respondents' employment sector. Before respondents' enrollment into the program, respondents working in the public sector were 67.2% (n=172), respondents in the private sector were 29.3% (n=75), and those having own business and others were 3.6% (n=9). On the other hand, as respondents enrolled in the program, respondents in the public sector were 73.3% (n=187) with an increase of 6.5%, respondents in the private sector were 22.4% (n=57) with a decrease of 6.9%, and respondents who owned a business and others were 4.3% (n=11) with a decrease of 0.7%. This indicates that respondents who were enrolled in the program had a better chance to work in the public sector.

Table 5: Employment Sector

Employment Sector	Prior		Present		Changes	
	n	%	n	%	n	%
Public	172	67.2	187	73.3	+15	+6.1
Private	75	29.3	57	22.4	-18	-6.9
Own Business	5	2.0	7	2.7	-2	-0.7
Others	4	1.6	4	1.6	-	-

Table 6 depicts the respondents' employment position. Before their enrollment into the program, the majority of them were a clerk (57.8%, n=144) as compared to officers (38.2%, n=95). On the other hand, as they enrolled in the program, 13 respondents had been promoted or obtained an officer position with an increase of 5.2% (n=13). This indicates that the program has an impact on the respondents' work life in terms of internal promotion or getting a better job position in other organizations.

Table 6: Employment Position

Employment Position	Prior		Present		Changes	
	n	%	n	%	n	%
Clerical	144	57.8	131	52.6	-13	-5.2
Officer	95	38.2	108	43.4	+13	+5.2
Others	10	4.0	10	4.0	-	-

Table 7 depicts the respondents' enrollment based on sections and programs. The majority of the respondents were in management (70.2%, n=177) as compared to humanities (5.2%, n=13), social sciences (16.7%, n=42), and pure sciences (7.9%, n=20). Meanwhile, humanities consisted of geography majors (1.2%, n=3), literature (0.8%, n=2), and history (3.2%, n=8); social sciences consisted of majors in anthropology-sociology (7.5%, n=19), economics (1.2%, n=3), and political science (7.9%, n=20); and pure sciences consisted of majors in mathematics (0.8%, n=2), biology (4.0%, n=10), chemistry (0.8%, n=2), and physic (2.4%, n=6).

Table 7: Sections and Programs

Sections	n	%	Programs	n	%
Management	177	70.2	Management	177	70.2
Humanities	13	5.2	Geography	3	1.2
			Literature	2	0.8
			History	8	3.2
			Anthropology-Sociology	19	7.5
Social Sciences	42	16.7	Economics	3	1.2
			Political Sciences	20	7.9
			Mathematics	2	0.8
Pure Sciences	20	7.9	Biology	10	4.0
			Chemistry	2	0.8
			Physics	6	2.4

Table 8 depicts the respondents' achievement after graduation. The majority of the respondents stated that they still similar position (41.9%, n=104) as compared to those who had an internal promotion (20.6%, n=51) and change to a new organization (16.1%, n=40).

Table 8: Achievement after Graduation

Achievement	n	%
Internal Promotion	51	20.6
Change New Organization	40	16.1
Similar Position	104	41.9
Others	53	21.4

Table 9 depicts the respondents' allocation of study time to their program. The majority of the respondents stated that they allocated 1 to 5 hours per week (63.4%, n=161) as compared to respondents allocated 6 to 10 hours (29.9%, n=76), 11 to 15 hours (3.5%, n=9), and 16 hours and more (3.1%, n=8).

Table 9: Allocation of Study Time

Hours per Week	n	%
1-5	161	63.4
6-10	76	29.9
11-15	9	3.5
Above 15	8	3.1

Table 10 depicts the respondents' academic achievement of their cumulative grade point average (CGPA). Majority of the respondents had a CGPA between 2.51 to 2.99 (47.5%, n=120). This was followed by respondents with a CGPA between 3.00 to 3.50 (31.2%, 79), GCPA between 2.00 to 2.50 (17.7%, n=45), CGPA between 3.51 to 4.00 (2.8%, n=7), and CGPA below 1.99 (0.8%, n=2).

Table 10: CGPA Academic Achievement

Student's Academic Performance	n	%
Poor Student (Below 2.00)	2	0.8
Average Student (2.00-2.50)	45	17.4
Good Student (2.51-2.99)	120	46.5
Outstanding Student (3.00-3.5)	80	31.0
Excellent Student (Above 3.5)	7	2.7

4.3 Descriptive Analysis

Table 11 depicts the descriptive analysis of the variables. The student engagement indicated a mean of 2.49 which was considered above disagree on the Likert scale of 5. On the other hand, academic performance indicated a mean of 4.34 which was above agree on the Likert scale of 5. Moreover, both variables indicated that their standard deviation was high toward one.

Table 11: Descriptive Analysis

Variables	Mean	SD
Student Engagement	2.494	0.849
Academic Performance	4.336	0.662

4.4 Correlations Analysis

Table 12 depicts the correlation analysis shows a negative relationship between student engagement toward student performance. The relationship value was -0.28 which is considered low.

Table 12: Correlations Analysis

Variables	1	2
1. Student Engagement	1	-0.284**
2. Academic Performance		1

** . Correlation is significant at the 0.01 level (2-tailed).

4.5 Regression Analysis

Table 13 depicts the simple regression analysis between student engagement and academic performance. In the simple regression analysis, the students indicated that their R^2 was 8% on academic performance which was explained by student engagement ($\beta=-0.28$, $p<0.001$). The simple regression analysis indicated that 92% of the variance for academic performance was explained by other unknown additional variables that have not been explored. Furthermore, the regression model ($F=21.20$, $p<0.001$) was proven to be a significant model due to the F ratio being significant in predicting student engagement among students. In conclusion, student engagement was significant in predicting academic performance among students. Thus,

hypothesis H₁ was supported in explaining the students on their student engagement toward academic performance.

Table 13: Simple Regression Analysis

Variables	Academic Performance	
	B	Sig
Student Engagement	-0.284	<.001
R	0.284	
R ²	0.081	
Adj. R ²	0.077	
F-Change	21.122	
Sig. F-Change	<.001	

5. Discussions and Conclusion

Interestingly, distance education students indicate that student engagement has no relationship with their academic performance. This is translated from the correlations analysis where both variables are negatively correlated. On the other hand, Gunuc (2014) studied Turkish students and found a significant relationship between students' academic achievement and student engagement. A similar context was discovered by Hao Lei et al. (2018) based on their study on the relationship between student engagement and academic achievement. They discovered a strong and positive correlation with students' academic achievement. Gerber et al. (2013) purported that student engagement has been identified as a crucial factor in academic success.

The distance education students indicate their academic performance is not influenced by the student engagement provided by the School of Distance Education. Thus, the students indicate their level of independence and mature students on the context of their independent and self-study on distance learning. Moreover, the distance education students state their student engagement has negatively impacted their academic performance based on the regression analysis. This shows that student engagement has an impact on their academic performance. This is in accord with Delfino (2019) discovered a correlation between factors such as teacher and family toward student engagement. Moreover, Delfino suggested that the teacher, the school, and the parents should have a strong collaboration in encouraging students' engagement.

Subsequently, the descriptive analysis also states that the students show a low mean on their involvement in student engagement provided by the school as compared to their academic performance which is considered high. This can be interpreted that distance education students are motivated on their own to achieve academic excellence. Thus, this can be concluded that the academic performance of distance education has no connection with the institution's student engagement efforts. Interestingly, Northey, Govind, Bucic, Chylinski, Dolan, and van Esch (2018) purported the use of Facebook as a medium to facilitate collaboration outside the classroom with the students to promote student engagement in their learning.

Although overall students stated that the school's student engagement has not impacted their academic performance, they indicate that the distance education program has improved their family life and work life. This is clearly stated that more than one-third of the students had an internal promotion and advancement in other organizations. Some students indicate that they had been promoted from a clerical to an officer as they graduate from the distance education program. Thus, the promotion has clearly stated that they are benefited from their academic

performance. Interestingly, some students had public sector employees as compared to those joining the private sector. In conclusion, distance education students do not require student engagement efforts from the School of Distance Education toward their academic performance. This also can be said that distance education students are working adults who know their responsibility toward their academic performance.

For future research, it is suggested that a longitudinal study be conducted on a group of distance education students to understand further the contribution of student engagement toward their academic performance. Furthermore, in the context of future research in the area of student engagement and academic performance, interested researchers need to explore the online platform being used and employed by distance learning institutions. The methodology needs to include research tools on the usage of online platforms provided to distance education students, such as MOODLE and Self-Instructional Materials (SIM). A comparison between gender and ethnicity would be a positive contribution to future studies. Moreover, a mediator or moderator should be considered between student engagement and their academic performance.

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