

A Correlation Study between Engagement in Learning and Academic Achievement among College Students

Steven Fernando Zahri*, Fiftinova, and Muhammad Yunus
English Education Study Program, Universitas Sriwijaya, Indonesia

Keywords: Students' engagement in learning, academic achievement.

Abstract: This study was carried out to find the correlation between students' engagement in learning and their academic achievement. The sample was selected from the students of the Faculty of Teacher Training and Education, English Education Study Program in one state university in Palembang, South Sumatra year 2015, 2016, and 2017. A total number of two hundred and thirty-one students were selected. This study provided not only the correlation between those variables but also the survey of students' engagement in learning and the academic achievement of the students as well as the contribution of the students' engagement to their academic achievement. The instruments used in this study were questionnaire and documentation. The results of the study highlighted that 90% of the students actively contributed to the learning process while the rest 10% were passive students. Then, the academic achievement of the students fell mostly in middle achiever for 84% which is between $>2.67 - < 3.66$. Moreover, there was a very weak correlation between those two variables and a small contribution of the students' engagement to their academic achievement for about 3%.

1 INTRODUCTION

Students' engagement in learning or also called as classroom participation has been a well-known matter for decades. In general, students are divided into two types, active and passive. Passive students may not interact, share their insight, or communicate and those will influence other participants even the most enthusiastic one (Emelo, 2013). Therefore, teachers need to make passive students become active and active students maintain their activeness. Moreover, in education, students' engagement refers to the degree of attention, curiosity, interest, optimism, and passion that students show when they are learning or being taught, which extends to the level of motivation they have to learn and progress in their education (*Student Engagement*, 2016). The concept of student engagement is predicated on the belief that learning improves when students are inquisitive, interested, or inspired, in other words being active and that learning tends to suffer when students are bored, dispassionate, disaffected, or otherwise disengaged, in other words being passive. Stronger student engagement or improved student engagement are common instructional

objectives expressed by educators (*Student Engagement*, 2016).

Furthermore, Khandai and Illahi (2015) highlight that academic achievement occupies 'a very important place in education as well as in learning process and has become an index of child's future in this highly competitive world' (p.1). Therefore, the act of the students who only come and go is unfavorable because the students' performance (academic achievement) takes a crucial part in producing the best quality graduates who will likely become a great leader and manpower for the development of the country's economic and social (Ali *et al.*, 2009).

Although every type of students, passive or active, in the classroom, can get grades above average or so, Biggs and Tang (2011) further suggests that active learners are able to obtain a further level of engagement and thus a higher level of cognitive learning in their academic work. As it is suggested that a lot of scholars consider class participation as an evidence of active learning or engagement that benefits learning, critical thinking, writing, appreciation of cultural differences, time management and interpersonal, listening and speaking skills (Petress, 2006). Therefore, active

students will highly become the best graduates from the learning outcomes as they are supported with great result both in academic achievement and in academic performance. This is in line with the findings of Biggs and Tang in 2011 who found students' participation in the teaching and learning environment leads to better learning outcomes.

However, there is something to be taken into account that even though it is widely claimed that active students' participation in the college classroom facilitates both acquisitions of knowledge and development of problem-solving skills, the lacking of the actual evidence can either confirm or deny this hypothesis (Hill, 2007; Murray & Lang, 1997). Sometimes it is hard to say if the students are truly actively engaged in the lesson or not considering that, some encouragements cannot be used in a certain situation as Bergquist and Phillips (1975) state that:

'The weakest form of encouragement is to tell the students "I want or I expect you to participate in the class and part of your grade will be based on such participation." The problems this present are: A) What specific on the student's part count as participation? Asking questions, answering questions, giving a report, sharing information? B) How much of the student's grade is affected by participation? And C) What are specific consequences of not participating?' (p.3)

Moreover, if the teacher treats the active students differently, Hill (2007) claims 'the fear of embarrassment or of being labeled a "know-it-all" or "teacher's pet" may very well prevent the types of interactions that most teachers desire' (p.1).

In higher education, students' engagement in learning is becoming increasingly crucial (Handelsman *et al.*, 2005). Moreover, Kuh (2001) states that universities try to use student' engagement in learning as a significant part of higher education assessment. In addition, Murray and Lang (1997) highlight that higher education emphasizes the limitations of the lecturing method of teaching and the need for more engagement from the students in the classroom. Because the traditional lecturing-only is losing its charm in the classroom and students play too passive in lectures. In contrast, students nowadays are being prepared to face mixed delivery methods, which exploit group discussion, dyadic work, and peer review which all of which reduce lecturing (Rocca, 2010). Moreover, the study conducted by Murray and Lang in 1997 shows that at least in certain conditions, active participation in

the college classroom does, in fact, improve student learning of course content and development of problem-solving skill.

Therefore, this present study purposed investigating the sample students' engagement in learning and their academic achievement, finding out the correlation between the two variables, and finding out the contribution of students' engagement in learning to academic achievement.

2 METHOD

This study used percentage analysis to measure both variables. In addition, regarding the correlation and contribution, Pearson-product moment correlation and Regression were used in this study by using SPSS Ver.23.

2.1 Sample

The sample of this study was all of the students of English Education Study Program, Faculty of Teacher Training and Education, Sriwijaya University who enrolled in the first semester year 2017-2018. The purposive sampling method was used in this study, so except for the year of 2014, the total number of sample from all years was 231 students

2.2 Instruments

The following instruments were employed for the purpose of collecting the data from the sample. Students' engagement in learning questionnaire was administered to the sample to measure their engagement in learning. The total items of the questionnaire were 60 items, which were divided into 3 categories (Affective, Behavior, and Cognitive). Moreover, the Likert scale was applied to this questionnaire and it consisted of four options to choose (Strongly Disagree, Disagree, Agree, and Strongly Agree). The questionnaire was tried out to 30 non-sample students to check the validity and reliability. The result showed that 47 items were valid with R-value exceeded r-table 0.2542 and the test was reliable with the reliability value of 0.89. To study the academic achievement, the result of the latest GPA of the sample was requested from the administration staff of English Education Study Program Department. The required data of the GPA of the sample students were acquired by asking the administrative staffs in the Faculty of English Education Study Program. The GPA was broken

down into high achiever (A), middle achiever (B), and low achiever (C and below) where A equals to 3.67-4.00, B equals to 2.67-3.66 and C to below equals to 0-2.66.

3 FINDINGS AND DISCUSSION

3.1 Findings

3.1.1 Students' Engagement in Learning

Table 1: Students' engagement in learning from all years.

Year	Engagement in Learning							
	Affective		Behavior		Cognitive		All Aspects	
	A	P	A	P	A	P	A	P
2015	86	14	66	20	84	10	87	13
2016	82	18	81	15	89	10	92	8
2017	86	14	77	13	92	6	92	8
All Year	85	15	74	16	88	9	90	10

All the data from Table 1 are in percentage and also A stands for Active while P for Passive. From the Table 1, taking the perspective of all years and all aspects, it could be summarized that there were more students that were active rather than passive students for every aspect of students' engagement in learning. Overall, 90% of the students were active while only 10% of them were being passive in learning.

3.1.2 Balance Engagement

Table 2: Balance engagement of students' engagement in learning.

Year	Engagement in Learning							
	Affective		Behavior		Cognitive		All Aspects	
	Balance	Balance	Balance	Balance	Balance	Balance	Balance	
2015	-	14%	6%	-	-	-	-	
2016	-	4%	1%	-	-	-	-	
2017	-	10%	2%	-	-	-	-	
All Years	-	10%	3%	-	-	-	-	

Table 2 explained when the students got 50% in the active category and 50% in the passive category. Since it could not be classified as passive students or active students, it was better to put them in balance category where they were being neither passive nor

active. Thus, from the table above it could be figured out that only two aspects of the engagement in learning that had students who were balanced in the active and passive category. In short, 10% of the samples in the behavior aspect were classified as balance and only 3% in cognitive.

3.1.3 Academic Achievement

Table 3: Academic achievement for all.

Year	Academic Achievement (GPA)		
	High (≥ 3.67)	Middle ($\geq 2.67 - \leq 3.66$)	Low (≤ 2.66)
2015	8%	91%	1%
2016	14%	78%	8%
2017	20%	80%	0%
All Years	13%	84%	3%

It was quite surprising that only 13% of the students in English Education Study Program for all years categorized as high achiever while 84% of the students classified as Middle Achiever. The rest of the students for only 3% were seen as Low Achiever.

Table 4: Academic achievement and students' engagement in learning.

Students' Engagement in learning	Academic Achievement		
	High Achiever	Mid Achiever	Low Achiever
Active (90%)	12%	76%	2%
Passive (10%)	1%	8%	1%

Table 4 showed how many active and passive students classified as High Achiever, Mid Achiever, and Low Achiever in the academic achievement. It could be seen that there were 2% of active students who still got in the rank of Low Achiever and 1% of passive students were categorized as High Achiever. Overall, Mid Achiever still dominated both in active and passive students.

3.1.4 Correlation between Students' Engagement in Learning and Academic Achievement

From the table 5, it could be concluded that the results of Pearson-product moment correlation showed that r-obtained was 0.190 and the p-value is 0.004. Because the p-value (0.004) was lower than 0.05, then H0 was rejected and H1 was accepted. It means that there was a significant correlation

between students' engagement and academic achievement.

Table 5: Correlation between the two variables.

Correlations		GPA	Questionnaire
GPA	Pearson Correlation	1	.190**
	Sig. (2-tailed)		.004
	N	231	231
Questionnaire	Pearson Correlation	.190**	1
	Sig. (2-tailed)	.004	
	N	231	231

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

Table 6: Correlation among three aspects of engagement in learning and academic achievement.

		Correlations		
		Affective	Behavior	Cognitive
GPA	Pearson Correlation	.214**	.098	.192**
	Sig. (2-tailed)	.001	.139	.003
	N	231	231	231

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

Table 6 showed the correlation between academic achievement and the three aspects of engagement in learning. The results of Pearson-product moment correlation showed that the r-obtained for affective, behavior and cognitive aspects were 0.214, 0.98, 0.192 and the p-value for those aspects was 0.001, 0.139, and 0.003. Because the p-value for affective and cognitive engagement was, lower than 0.05, and then it meant that only affective and cognitive engagement had a significant correlation with academic achievement while behavior engagement did not have.

3.1.5 Contribution of Students' Engagement in Learning to Academic Achievement

Considering the Table 7 above as a reference, it could be explained that the results of the regression analysis showed that $r^2 = 0.036$ and adjusted $r^2 = 0.032$. It means that the contribution of the students' engagement to academic achievement is 3.2%.

Table 7: The Contribution of engagement in learning to academic achievement.

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.190 ^a	.036	.032	.31255

a. Predictors: (Constant), Total

3.2 Discussion

3.2.1 Students' Engagement in Learning

In the first part of the questionnaire, the results of affective engagement showed that 85% of the students were being active in affective aspect while only 15% of them were passive. This was also in line with the study conducted by Jimerson, Campos, and Grief (2003) who found that the students have positive feelings toward his teacher. Affective engagement refers to the students' feeling towards his school, learning, teacher, and peers and also focusing on the extent and nature of positive and negative reactions to teachers, classmates, academics, and school (Appleton, Christenson & Furlong, 2008). Moreover, affective learning was supported by students who like to work with others, focus outward and be interdependent that eventually helps them to stimulate emotions, motivation and attitudes such as encouraging themselves to learn (Apriani, Vianty, & Fiftinova, 2017).

The second part of the questionnaire discussed the behavior engagement. In behavior aspect, the students mostly were active as the total percentage of the students who were active was 74% while passive 16% and the rest in balance category. Behavior engagement includes the students' action or contribution at school and is investigated through students' positive conduct, effort, or participation. One kind of the questions expressed the participation in extracurricular activities, attendance and work habits (Fredricks, Blummenfeld & Paris, 2008).

The last part of the questionnaire was about cognitive aspect. In this aspect, 88% of the students were considered as active students whereas only 9% could be classified as passive and the rest was in balance category. As cognitive engagement includes the students' perception and beliefs regarding the school and learning also focusing on the level of investment in learning, it refers to the cognitive processing a student brings to academic tasks as well as the amount and type of strategies a student utilizes (Walker, Greene, & Mansell, 2006).

3.2.2 Academic Achievement

The students were divided into three categories. The students were classified as high achiever was 13%, middle achiever 84% and low achiever 3%. Academic achievement is divided into three categories, high achiever for students who got higher than 3.67, middle achiever for them who got between 2.67 and 3.66, and low achiever for students who got lower than 2.66 (Park, Endo & Goodwin, 2006). Based on Reschly & Christenson (2006), they propose the notion of academic engagement as a fourth indicator of students' engagement. In addition to this Jimerson, Renshaw, Stewart, Hart, and O'Malley (2011) contend that academic achievement has been defined as time spent in academic learning and can be better explained as an outcome of the student's engagement (e.g. Grade Point Average [GPA]). According to that, the question occurred whether there was a correlation between students' engagement and their academic achievement, which is seen as the outcome of the engagement itself.

3.2.3 Correlation between Students' Engagement in Learning and Academic Achievement

It can be concluded that there was a significant correlation for as p-value (0.004) is lower than 0.05 and the correlation found was about 0.190 and according to Evans (1996) r-obtained that falls in 0.00 – 0.19 has a very weak correlation. This was in line with the findings of Okafor (1993), Emah (1998), Ogunkola (1999), and Domike (2002) cited in Fakeye and Amao (2013) study who all found a significant relationship between classroom participation and students' level of academic achievement.

The result above was for the whole questionnaire not for each aspect. For each aspect, the affective and cognitive engagement were the two aspects that had a correlation with academic achievement as both of them has the p-value lower than 0.05. Furthermore, affective engagement, which had r-obtained 0.214, had a weak correlation while for cognitive engagement, which had 0.192 r-obtained, the correlation was a very weak correlation.

The reason why behavior did not have a significant correlation was probably due to the characteristics of the student itself. Bergquist and Philips (1975) had stated six styles, which were Avoidant, Competitive, Dependent, Collaborative, Participant, and Independent. As it is already known

that every student has its own personality so it was kind of hard to measure. It can also be seen from the diverse results of the behavior engagement in learning of the students.

3.2.4 Contribution of Students' Engagement in Learning to Academic Achievement

Lastly, it was found that the contribution was 3.2% from the engagement in learning to the academic achievement. Even though it can be categorized as a small contribution but it is still counted as a contribution.

Overall, the students who were disengaged and be passive were probably caused by some factors that were highlighted by Bergquist and Philips (1975). The passive students in the affective category might be caused by frustration and fear, while apathy could be the main reason why students become passive in the behavior aspect. Then the problem of the passive students in the cognitive area was perhaps the "dependence" factor. Moreover, they also stated that classroom atmosphere could determine whether the students can actively contribute in the learning process. Furthermore, based on Liu (2001), 90% of active students in English Education Study Program, Faculty of Teacher Training and Education, Sriwijaya University were either in full-participation or participation in the circumstances, while for 10% of the passive students was either in marginal interaction or silence observation.

4 CONCLUSIONS

From all the things that had been discussed started from the explanation until the interpretation, a conclusion can be made that sample of the study can be classified as active in every aspect of engagement in learning and there was a significant correlation between the two variables. In other words, the students' engagement in learning influenced the academic achievement of the students even though the influence of the contribution can be said as a small contribution.

REFERENCES

- Ali, N., Jusof, K., Ali, S., Mokhtar, N. and Salamat, A.S.A. 2009. The Factors Influencing Students' performance at Universiti Teknologi Mara

- Kedah, Malaysia. *Management Science and Engineering*, 3(4), pp.81-90.
- Appleton, J., Christenson, S. and Furlong, M. 2008. Student engagement with school: Critical conceptual and methodological issues of the construct. *Psychology in the Schools*, 45(5), pp.369-386.
- Apriani, F., Vianty, M. and Fiftinova, F., 2017. Students' thinking Styles and Its Relation to Their Language Learning Strategies. *The Journal of English Literacy Education (The Teaching and Learning of English as A Foreign Language*, 4(1), pp.59-70.
- Bergquist, W. and Phillips, S. 1975. *A Handbook for Faculty Development*. Washington: Council for the Advancement of Small Colleges.
- Biggs, J. and Tang, C. 2011. *Teaching for quality learning at university*. Maidenhead: McGraw-Hill/Society for Research into Higher Education/Open University Press.
- Edglossary.org. 2016. *Student Engagement*. [Online] Available at <https://www.edglossary.org/student-engagement/> [Accessed 20 July. 2018].
- Emelo, R. 2013. Engage Passive Learners. *Chief Learning Officer*, 12(1), 30-33.
- Evans, J.D. 1996. *Straightforward statistics for the behavioral sciences*. Pacific Grove: Brooks/Cole Pub.Co.
- Fakeye, D.O. and Amao, T.A. 2013. Classroom participation and study habit as predictors of achievement in literature-in-English. *Cross-Cultural Communication*, 9(3), pp.18-25.
- Fredricks, J., Blumenfeld, P. and Paris, A. 2004. School Engagement: Potential of the Concept, State of the Evidence. *Review of Educational Research*, 74(1), pp.59-109.
- Handelsman, M.M., Briggs, W.L., Sullivan, N. and Towler, A., 2005. A measure of college student course engagement. *The Journal of Educational Research*, 98(3), pp.184-192.
- Hill, T. 2007. *Classroom Participation*. [online] Available at http://www.usma.edu/cfe/Literature/Hill_07.pdf [Accessed 20 July. 2018].
- Illahi, B.Y. and Khandai, H., 2015. Academic Achievements and Study Habits of College Students of District Pulwama. *Journal of Education and Practice*, 6(31), pp.1-6.
- Jimerson, S., Campos, E. and Greif, J. 2003. Toward an Understanding of Definitions and Measures of School Engagement and Related Terms. *The California School Psychologist*, 8(1), pp.7-27.
- Jimerson, S.R., Renshaw, T.L., Stewart, K., Hart, S. and O'Malley, M., 2009. Promoting school completion through understanding school failure: A multi-factorial model of dropping out as a developmental process. *Romanian Journal of School Psychology*, 2, pp.12-29.
- Kuh, G. D., 2001. Assessing What Really Matters to Student Learning: inside The National Survey Of Student Engagement. *Change: The Magazine of Higher Learning*, 33(3), 10-17.
- Liu, J. 2001. *Asian students' classroom communication patterns in U.S. universities*. Westport, Conn.: Ablex.
- Murray, H. and Lang, M., 1997. Does classroom participation improve student learning. *Teaching and Learning in Higher Education*, 20(1), pp.7-9.
- Park, C., Endo, R. and Goodwin, A. 2006. *Asian and Pacific American education*. Greenwich, Conn.: Information Age Pub.
- Petress, K. 2006. An operational definition of class participation. *College Student Journal*, 40(4), pp. 821-823.
- Reschly, A. and Christenson, S. 2006. Prediction of Dropout Among Students With Mild Disabilities. *Remedial and Special Education*, 27(5), pp.276-292.
- Rocca, K. 2010. Student Participation in the College Classroom: An Extended Multidisciplinary Literature Review. *Communication Education*, 59(2), pp.185-213.
- Walker, C., Greene, B. and Mansell, R. 2006. Identification with academics, intrinsic/extrinsic motivation, and self-efficacy as predictors of cognitive engagement. *Learning and Individual Differences*, 16(1), pp.1-12.