

English as a foreign language students' mindfulness, academic motivation, and academic performance

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Article Info

Article history:

Received Jun 15, 2021

Revised May 13, 2022

Accepted Jun 26, 2022

Keywords:

Academic motivation
Academic performance
Mindfulness
Student engagement

ABSTRACT

Previous studies found that academic motivation has a role in affecting academic performance. Along with that, the experts lately investigate mindfulness as one of the cognitive aspects related to student's performance. This study aimed to find out the correlations among mindfulness, academic motivation, and academic performance in the context of English as a foreign language (EFL) student in Indonesia. Using a quantitative correlation design, this study involved 170 students from English education study program in a university in Indonesia. Five Facets Mindfulness Questionnaire (FFMQ), Academic Motivation Scale (AMS), and grade point average (GPA) official data were used as data collection instruments. Furthermore, to measure the correlation and contribution between the variables, Pearson product-moment correlation coefficient and regression analyses were conducted. The result of this study showed that most students had low mindfulness scale, high AMS with a dominant extrinsic motivation type, and very satisfactory GPA. However, there was no correlation among mindfulness, academic motivation, and academic performance. Moreover, it was found that only amotivation subscale has negative significant correlation with academic performance.

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1. INTRODUCTION

English has become a compulsory subject taught in Indonesia. The use of this language in Indonesia is in the context of a foreign language. English as a foreign language (EFL) student is commonly referred to the students whose first language is not English and learning English while living in their own country. The aim of EFL students learning English is to interact with people all over the world, in which the majority of EFL students study English in their own country [1].

However, there are many barriers to English teaching in Indonesia including language exposure, class size, students' motivation, and teaching focus [2], [3]. Learning English as a compulsory subject in school makes students have various presences and motivation towards this language subject. Alberth [4] illustrated that Indonesian high school students have a range of motives and approaches to learning English as a foreign language. Some of them include their potential career as well as the need to pass an examination or their school obligations.

Lately, the viewpoint of learning is considered to be the cognitive process and related to students' motivation in the learning process [5]. Motivation is a critical topic that experts have debated for decades as one of the factors that determine a task's performance. Academic motivation is needed for someone to take action in order to obtain his/her objectives. Even today, the learning outlook is related not only to the

cognitive process but also to the students' interest in the learning process as academic motivation has an important effect on students' learning processes [6] that takes important role to make students being engaged during the learning process [7].

Academic motivation is categorized into three different kinds: motivation, extrinsic motivation, and amotivation [8]. Ryan and Deci [9] defined intrinsic motivation as doing an activity for its inherent satisfactions rather than for some separable consequence and is believed to be the strongest predictor of academic performance [10]. While extrinsic motivation, which contrasts with intrinsic motivation, refers to doing an activity simply to enjoy the activity itself, rather than its instrumental value, and amotivation is a situation when an individual lacks intention to do an activity. Moreover, this aspect was categorized into seven different types including intrinsic motivation-to know (IM-TK), intrinsic motivation-toward accomplishments (IM-TA), intrinsic motivation-to experience stimulation (IM-TES), extrinsic motivation-external regulation (EM-ER), extrinsic motivation-introjected regulation (EM-It), extrinsic motivation-identified regulation (EM-Id), and amotivation (AM) [11].

The lack of motivation in English learning process is one of the obstacles faced by EFL students in Indonesia. Thus, experts conducted many investigations in order to investigate the strategy to increase students' academic motivation. Furthermore, it was found that mindfulness intervention is an effective strategy to enhance students' academic motivation. McCloskey [12] stated that mindfulness is able to increase some essential factors to improve students motivation namely intentional control and cognitive.

Meanwhile, the term mindfulness nowadays is used in a wider scientific perspective, especially in psychological field. The term 'mindfulness' originally came from the Pali word 'sati' which means awareness, attention, and remembering [13]. This term has been explained in various definitions based on the different perspectives of the experts. Morgan and Katz [14] defined mindfulness as moment by moment awareness, while Martin [15] explained that mindfulness is a state of physical freedom. Mindfulness can also refer to a process to notice things, draw distinctive idea, pay attention, and stay in the present moment [16]. It can be gained by paying attention to one's everyday activities like gardening, eating, walking, listening, and school based such as class work [17]. Mindfulness is specifically constructed into five different facets including observing, describing, acting with awareness, non-judging, and non-reacting [18].

In the field of education, introducing mindfulness is believed to enhance the character education of the pre-service teacher and job retention [19]. Emotion regulation skill that refers to the process of reviewing, evaluating, and modifying the emotional reactions [20] can also be gained by cultivating mindfulness [21]. It is not only important for cultivating one's awareness, but it gives deeper positive impact for students and pre-service teachers to maintain their skill of emotion regulation and increase their cognitive achievement [22]. Previous researchers [21], [23], [24] also believed that mindfulness as a class intervention brings some beneficial effects to promote students' improvement in the learning process.

The previous expert investigations found that mindfulness does not only affect students' motivation but also have benefit for their academic performance. For example, Docksa [25] found that students who have been asked to practice mindfulness got better score compared to previous scores before the intervention. McCloskey [12] further explains that self-regulating and perceptions on self-efficacy are positively improved because of mindfulness while those variables determine the students' academic success. Dispositional mindfulness, academic motivation, and emotional maturity are correlated with each other, and students who had the first examination scores above average score also had high scores on mindfulness and academic motivation scale (AMS) compared to those who had average examination scores [26].

In conclusion, it could be summarized that mindfulness aspect has many beneficial effects to solve several problems in learning process, particularly those related to students' motivation and performance. Based on that inference, this study aimed to investigate the relations among mindfulness, academic motivation, and academic performance. Different from some previous studies, this present study investigation was conducted specifically in the context of EFL students in Indonesia in order to provide a fresh perspective on mindfulness research from the standpoint of education, especially in the context of EFL in Indonesia. There are three research problems of this study: i) Was there any significant relationship between mindfulness and academic performance?; ii) Was there any significant relationship between academic motivation and academic performance?; iii) Was there any significant relationship between mindfulness and academic motivation (predictor variables) and academic performance (criterion variable) of the EFL students?

2. RESEARCH METHOD

This quantitative research used correlation analysis that examine the relations among three variables (mindfulness, academic motivation, and academic performance) of the 170 English Department students in one public university in Indonesia. They were EFL students who ranging from the age of 18-22 years old. Additionally, the variables were divided into two different categories including predictor and criterion

variable. The predictor variable has the role to predict the outcome of the correlation analysis while the criterion variable is the being predicted outcome [27]. The predictor variables of this research were mindfulness and academic motivation, whereas the criterion motivation was academic performance.

There were two sets of questionnaires and official documentation used as the instruments for data collection. To collect the data of students' mindfulness, the researchers used five facets of mindfulness questionnaires (FFMQ) [18]. This instrument collected the participants' mindfulness scale focusing on the five facets of mindfulness (i.e., observing, describing, acting with awareness, non-judging, and non-reacting). There were 39 items in total, which were put on a Likert scale.

To collect the data related to EFL students' academic motivation, the writers used some sets of questions from the AMS questionnaire [11]. The instrument consisted of 28 items for collecting the data of AMS from seven types of motivation (IM-to know, IM-toward accomplishment, IM-to experience stimulation, EM-identified, EM-introjected, EM-external regulation, and motivation). This instrument used seven scale options which ranged from "Does not correspond at all" to "Correspond exactly."

The FFMQ instrument is considered reliable [18]. Each facet's Cronbach alpha values were 0.83 for Observing, 0.91 for Describing, 0.87 for Acting with Awareness, 0.87 for Non-judging, and 0.75 for Nonreacting. At sum, all facet scales considered have good internal consistency. Likewise, the AMS Questionnaire is also a valid and reliable tool to measure the motivation scale in educational settings, in which the alpha values were 0.84 for IM-TK, 0.85 for IM-TA, 0.86 for IM-TES, 0.62 for EM-Id, 0.84 for EM-It, 0.83 for EM-ER, and 0.85 for AM. Although the alpha value of EM-identified regulation was 0.62, this instrument was still considered reliable as it was stated "considering the fact that these scales are made up of four items, they appear to display adequate levels of internal consistency" [18]. Thus, the overall result supported the temporal stability and internal consistency of this instrument.

Furthermore, the participants' academic performance data were obtained from the documentation of their Grade Point Average (GPA). GPA and act score are considered the best predictors of students' academic achievement among several other variables (i.e., learning style, GPA, act composite score, and high school class rank) [28]. Furthermore, the data of GPA were obtained from academic official data.

In analyzing the data, there were some statistical procedures conducted. The first was descriptive statistics which included finding the maximum and minimum scores, means, standard deviation that were calculated to summarize the student's response to FFMQ, AMS questionnaire, and GPA. In addition, the results of each instrument were categorized into some categories in order to draw further explanation from the result. Second, Pearson's product moment correlation coefficient was conducted to find out the correlation among the students' mindfulness, academic motivation, and academic performance.

3. RESULTS AND DISCUSSION

The findings include the mindfulness questionnaire, academic motivation questionnaire, GPA documentation, and the correlation analyses among the variables results. Prior to the data analysis by using parametric tests, it is necessary to ensure that the data were normal and homogeneous. To examine the data normality distribution, the Kolmogorov-Smirnov test was conducted. The significant values for mindfulness, academic motivation, and academic performance were 0.20, 0.93, and 0.20, respectively. The three instruments were normally distributed because their p -value were higher than the significance level ($\alpha=0.05$). Moreover, Levene's test was done to find out if the data sets had the same distribution. The first test was conducted to examine the data homogeneity between FFMQ and GPA, whereas the second test was conducted to examine the data homogeneity between AMS and GPA. The results found that the significance values were 0.78 and 0.60, respectively, in which both values were higher than the significance level (0.05). Thus, the data sets were found to have the same distribution, which means they were homogeneous.

Furthermore, the linearity test was done to see if the relationship among the variables was linear. The results showed that the deviation from the linearity significance value between FFMQ and GPA was 0.245, whereas the value between AMS and GPA was 0.187. The relationships between the variables were linear since both of the values were higher than 0.05.

3.1. The result of five facet mindfulness questionnaire (FFMQ)

This instrument has five dimensions and a total of 39 items. The five dimensions are Observing (O), Describing (D), Acting with Awareness (AA), Non-Judging (NJ) and Non-reacting (NR). The result showed that the majority of the 170 students (86%) had poor level of mindfulness and the rest (1%) were in fair level of category. Meanwhile, based on the means presented at Figure 1, it was found that Observing ($M=3.4$) was the most dominant dimension followed by Describing ($M=3.2$), Non-reacting ($M=3.1$), Acting with awareness ($M=3.0$), and Non-judging ($M=2.5$).

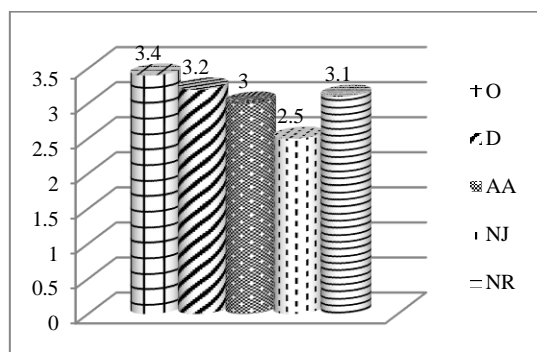


Figure 1. Mindfulness facet means

3.2. The result of academic motivation scale (AMS) questionnaire

AMS questionnaire was used to collect the data of students' academic motivation. This instrument consists of 28 total items, seven sub-types of academic motivation (IM-TK, IM-TA, IM-TES, EM-Id, EM-It, EM-ER, and AM). Table 1 shows the academic motivation result obtained from the participants, in which 104 students (61%) were in the good category, 42 students (25%) were in fair category, 24 students (14%) were in the excellent category, and no student was in poor or very poor categories. Figure 2 presents the seven AMS sub-types means. The most dominant academic motivation sub-type was EM-Id (M=5.4), followed by IM-TK (M=5.1), EM-ER (M=5.0), EM-It (M=5.0), IM-TES (M=4.8), and IM-TA (M=4.7). Conversely, amotivation (AM) subtype was the lowest (M=2.3).

Table 1. AMS data result

AMS category	Frequency	Percentage
Excellent	24	14%
Good	104	61%
Fair	42	25%
Poor	0	0%
Very poor	0	0%

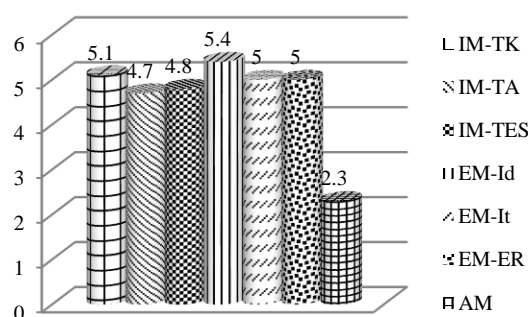


Figure 2. AMS Sub-types means

In addition, Table 2 reveals each individual's dominant type of motivation by comparing the means of the three motivation types from the questionnaire result. The majority of students (64%) tended to be more extrinsically motivated, 55 students (32.35%) had a higher level of intrinsic motivation, and no student had amotivation. In contrast, six students (3.35%) had an equal result between their intrinsic motivation and extrinsic motivation.

Table 2. The domination of students' academic motivation type (N=170)

Type	Frequency	Percentage
IM	55	32.35%
EM	109	64%
AM	0	0%
Equal IM-EM	6	3.35%

3.3. The result of academic performance

The academic performance of 170 participants was obtained from official university GPA data. Table 3 shows the result of students' GPA. The categories ranged from cum laude (33%), very satisfactory (59%), satisfactory (7%), to graduated (1%).

Table 3. The students' GPA result (N=170)

Predicate	Frequency	Percentage
Cumlaude	56	33%
Very satisfactory	101	59%
Satisfactory	12	7%
Graduated	1	1%

3.4. The result of correlation analysis

In this study, the Pearson product moment correlation coefficient was used to examine the relationship between each variable. To begin, a correlation study was carried out to look into the relationship between academic performance (GPA) and mindfulness (FFMQ), as well as academic motivation (AMS) and academic performance (GPA). Table 4 displays the findings of a correlational study of mindfulness and academic performance. As introduced, the p-value of the FFMQ total (0.57) was higher than 0.05, implying that there was no significant relationship between FFMQ and AMS. Furthermore, the p-values of the five FFMQ dimensions were all higher than the significant level (0.05), implying that none of the FFMQ dimensions essentially related to GPA.

Table 4. Correlation between FFMQ Total and Dimensions with GPA (N=170)

	FFMQ Total	OBS	DCB	AWA	NJG	NRC
r-obtained	0.04	0.05	-0.14	0.07	0.09	0.04
p-value	0.57	0.50	0.07	0.40	0.24	0.61

Table 5 shows the result of the correlational examination between the AMS questionnaire total and dimensions with GPA. The r-obtained and p-value of the correlational investigation were 0.125 and 0.104. Since the p-value (0.572) was higher than 0.05, it tends to be reasoned that there was no significant relationship between AMS and GPA. Subsequently, it tends to be seen that the p-value of all dimensions except AM were higher than the significant level (0.005), which implied that the dimensions had no significant relationship with GPA. The p-value of the AM dimension was 0.033, in which the r-obtained was -0.164. Because the p-value was lower than 0.05 and the r-obtained was negative, it may be reasoned that there was a significant negative relationship between 'amotivation' and GPA.

Table 5. Correlation between AMS total and dimensions with GPA (N=170)

	AMS total	IM-TK	IM-TA	IM-TES	EM-Id	EM-It	EM-ER	AM
r-obtained	0.13	0.07	0.05	0.01	0.14	-0.00	0.13	-0.16
p-value	0.10	0.37	0.54	0.86	0.06	0.96	0.07	0.03

The multiple correlations using regression analysis were used to address the research question of finding the relationship between mindfulness and academic motivation as the predictor variables and academic performance as the criterion variable. Table 6 shows the value of sig. F (0.266), was greater than 0.05. It is suggesting no significant association between the predisposition and the outcome.

Table 6. The result of multiple correlation analysis

	F	Sig.
Predictor & criterion variables	1.336	0.27

3.5. The result of regression analysis

The contribution of the Amotivation type to academic performance was investigated using regression analysis. The regression analysis result is shown in Table 7. The 0.021 adjusted R Square value indicated that A motivation clarified 2.7% of the variance in GPA.

Table 7. The regression analysis result

Model	R	Model summary			Std. Error of the estimate
		R Square	Adjusted R Square		
1	0.16	0.027	0.02		0.207

3.6. Discussion

Based on the findings, there are several discussions highlighted in this study. First, the students' low mindfulness scale led to the conclusion that the majority of students are judgmental of current experiences, including thoughts and feelings [29]. This hypothesis is reinforced by the findings of item review, which indicate that 68 percent of students blamed themselves for their unreasonable and insensitive feelings (item 3). It also correlates to the descriptive research finding in which the non-judging dimension in the FFMQ is the least dominant. Another interpretation of the low mindfulness scale finding is that students tended to do behavior in automatic pilot mode as a result of being less mindful [18]. This hypothesis is confirmed by the descriptive study findings showing that the two least dominant facets in the FFMQ were non-judging and acting with awareness.

Meanwhile, the FFMQ dimension descriptive analysis revealed that observing (3.45) had the highest mean, indicating that students have a strong capacity to reflect on the environment around them. This assumption is also supported by the result of the FFMQ item analysis stating that "I pay attention to sound, such as clocking ticking, birds chirping, or cars passing", 68% students pointed "often true" and "very often true". This is in accordance with Baer *et al.* statement [18] explaining that "high observe dimension scale means have more tendency in noticing and focusing the world around, both in inner context (e.g., emotion, cognition, and sensation.) and in outer context (e.g., sounds, smells, and sights)."

Next, in relation to the result of the AMS questionnaire, it was shown that students had more tendency on the extrinsic motivation meaning that they were more motivated by external influences than by self-satisfaction while participating in an EFL classroom. This is applicable to the results of item review, which revealed that the topics related to career and future life had the highest mean among the others. It can be inferred that, rather than pursuing self-satisfaction by learning, students are increasingly motivated by the prospect of a successful job and a stable future life. This is consistent with Ryan and Deci's [9] assertion that "Students are performed not out of interest but because they are believed to be instrumental to some separable consequence."

Moreover, extrinsic motivation-identified control means (5.37) was also found to be the highest motivation subtype among the others and therefore is the most dominant subtype motivation. It showed that, while external influences inspired students more, the driving force in the learning process is still mostly self-determined. Since the external motivation factor was internally identified in the extrinsic motivation-identified control phase, the task became more self-determined and willingly performed by the students [9] as confirmed by the item stating "Honestly, I don't know, I really feel that I am wasting my time in school" which was the least dominant item. It means that the students participated in the learning process for a specific purpose instead of considering it as a wasting time activity. In addition, the AMS item result data indicating students' potential job and life expectancy when enrolled in an English education department implied that students' high expectations of their future career opportunities and a better life motivate them to be more prepared and involved in the learning process.

Forth, the academic performance data revealed that the majority of students had Cumlaude and very Satisfactory GPAs. These results indicate that students are actively involved in the learning process. This interpretation is consistent with the finding that students have a low level of amotivation, as shown by the questionnaire objects, which suggest disengagement in the learning process as Lei, Cui, and Zhou [30] reveal that learning outcomes are strongly linked to academic engagement.

Fifth, in comparison to some previous researchers [24], [31] that found relationships between mindfulness and academic performance, the correlational analysis between FFMQ and GPA in this study revealed that there was no significant association between those two variables. The majority of the students

have low and medium mindfulness scales; none of them have a high or very high mindfulness scale, despite the fact that their GPA scores are mainly in the very satisfactory and Cumlaude predicate. However, despite the lack of a correlation between dispositional mindfulness, the type of mindfulness trait explored in this study, and academic performance, mindfulness as a learning intervention may still be effective in improving students' academic performance. This is relevant to Brausch's argument [32] stating that in spite of the lack of a connection between dispositional mindfulness and academic performance, the efficacy of meditation-based mindfulness as a treatment for improving students' academic performance should not be overlooked.

Sixth, despite the fact that students had positive outcomes in both variables, academic motivation did not correlate significantly with academic success. The data showed that some students who had good score in motivation did not have high GPA; while some other who had low motivation scale had good GPA. This finding indicated that academic motivation did not affect students' GPA. This assumption related to the possibility of the other factor which had more significant role in determining students' GPA, such as classroom environment, academic self-efficacy, cognitive ability, short and long term memory [33], [34]. It may be associated with the element of students' academic engagement, as the amotivation component was found to be significantly associated with academic success. Indeed, the majority of the students did not fit the argument demanding disengagement from learning. Furthermore, the low amotivation increased the students' academic engagement [35]. The academic engagement aided students in improving their grades, in which the more involved students were in the learning process, the better their academic results would be [30].

The final point to consider is the correlational analysis outcome between mindfulness and academic motivation as the predictor variables and academic performance as the criterion variable. The multiple correlation analysis found no significant relationship between the variables. Furthermore, it suggests that mindfulness and academic motivation have little impact on academic success. Among all aspects, only the amotivation dimension was found to be significantly correlated to academic performance. This fact is related to the students' academic engagement factor which was found as the aspect reflected in the amotivation dimension in the AMS questionnaire [36]. Moreover, the academic engagement aspect is negatively correlated with emotional exhaustion and burnout [37]. Further, the less students feel burnout, the better GPA they obtain. Thus, it explains how amotivation dimension negatively correlates with academic performance.

4. CONCLUSION

From the data taken from 170 EFL students in Indonesia, most of them had low mindfulness scale, high academic motivation scale with a dominant extrinsic motivation type, and very satisfactory GPA. The observed dimension was the most dominant dimension among the other mindfulness variables which implied that most of the students had good focus ability. However, it was found that most of the students' academic motivation was dominated by extrinsic motivation type meaning that the reason of the students to study came from the external factor instead of the internal pursue.

Moreover, it was also found that there was no correlation between mindfulness and academic performance as well as between mindfulness and academic achievement. Despite the fact that students had positive outcomes in both variables, academic motivation had no relationship with academic success. Meanwhile, the amotivation factor was found to have a significant negative connection to academic success across all factors. These findings also added to the understanding that the predictor variables did not predict the criterion variable and that the contributions of mindfulness and academic success had no direct impact on academic performance.

ACKNOWLEDGEMENTS





The authors wish to acknowledge the assistance and support from the Sriwijaya University Research and Public Service Institution (LPPM UNSRI) for the Science, Technology, and Arts 2020 Grant.

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