Motivation and Self-efficacy Boost Academic Flow in Students During COVID-19

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Abstract. The purpose of this quantitative study is to determine the effect of achievement motivation, social support, self-efficacy, and academic flow on Muhammadiyah Junior High School students in Sidoarjo during the COVID-19 pandemic. The study surveyed 449 students using scales of achievement motivation, social support, self-efficacy, and academic flow, and analyzed the data using multiple regression. The results indicate a significant influence of achievement motivation, social support, and self-efficacy on academic flow. Specifically, achievement motivation and self-efficacy have a positive effect on academic flow, while social support has no effect. These findings can be used to improve students' academic performance during the pandemic.

Keywords: Achievement Motivation · Social Support · Self-Efficacy · Academic Flow · Junior High School Students

1   Introduction

In the field of education, teaching and learning process always involves the process of receiving, reviewing, understanding, until the process of evaluating to find out whether the material presented by the teacher can be understood by students and can be applied in the form of completing assignments, carrying out exams. Students who are actively involved in the learning process often show themselves concentrating during learning activities, feel comfortable participating in learning and often do not even realize that learning time is running out, and have motivation that arises from within yourself when carrying out any learning activity. The condition in which a person shows the power of concentration when carrying out an activity, accompanied by inner motivation, and a sense of comfort in participating in an activity is called flow [1, 2]. In the field of education, the condition of flow where students carry out activities related to academic activities such as following the entire learning process, both in learning and doing assignments is called academic flow [3, 4]. At present, where the impact of the Covid 19 pandemic is still being felt, the teaching and learning process is experiencing different conditions from the conditions of the previous teaching and learning process. Many difficulties experienced by students and educators have an impact on students' academic flow conditions. The results of an initial survey conducted on 27 students in 2 Muhammadiyah Junior High

School Sidoarjo showed that many students (85%) had not experienced academic flow, such as not being able to concentrate fully, feeling bored, uncomfortable while attending lessons, and lacking enthusiasm in academic activities. This condition illustrates an indication that there are problems in the academic flow, namely (a) Absorption (able to stay focused in the learning process), (b) Enjoyment (feeling comfortable during learning and not easily bored), (c) Intrinsic Motivation (having a desire from within oneself to carry out activities, with the aim of getting satisfaction from the activities carried out) [3].

There have been several studies on academic flow that have been carried out by several researchers which relate them to one variable such as Self-Efficacy [5, 6], social support [7, 8], achievement motivation [6, 9–11], religiosity [1], academic stress [12]; or with 2 variables such as Achievement Motivation & Social support [12]; Classroom Climate and Self Regulated Learning [13]. To be associated with 3 variables such as Self Efficacy, Social Support, Achievement Motivation [14]. Research on academic flow from outside Indonesia which discusses the basis of academic flow [3, 15]. The previous studies were not conducted on Junior High School students. Therefore, researchers consider it important to conduct this research on Junior High School students considering that they are starting to enter the formal operational stage of cognitive development, namely the stage of development of abstract thinking. In fact, many junior high school students have not yet reached this stage of development, so they have difficulty learning materials that use abstraction skills [16].

There are several internal and external factors considered to have contributed to the condition of academic flow in the field of education. One of the internal factors such as achievement motivation. Achievement motivation from the point of view of McClelland (1987) is the motivation possessed by humans to achieve success, and succeed in competition in accordance with the established criteria of excellence (standard of excellence) [14], either from his own standards of achievement (autonomous standards) in the past or the achievements of others (social comparison standard) [17]. Aspects of achievement motivation, as stated by Mc. Clelland [8], includes having personal responsibility, setting the value to be achieved, behavior that is directed towards the desired goal, and having creativity in completing tasks. These aspects can lead a person to actions that are focused, comfortable, and arise on their own initiative. In the field of education, it can be predicted that the greater the motivation for achievement in students, the higher the ability to focus and enjoy doing their academic tasks [18].

In addition, the self-efficacy factor also has an influence to determining student academic flow. Self efficacy is the belief in one's ability to complete the task [5]. Self efficacy make students have an interest in the tasks that have been given, and can control behavior to maintain business in their activities or in carrying out tasks then directly students will feel immersed in doing the task and fully concentrate on the activities being carried out [6]. Self-efficacy leads to a person's belief in the ability and ability to achieve and complete tasks with a predetermined target and time [19]. Aspects of self-efficacy such as level, generality, and strength according to Bandura [19]. Students who have confidence in their ability to complete assignments usually apply success in one lesson to another, working on assignments from the easiest to the most difficult, and keep trying diligently accompanied by the belief that they can complete their tasks. This

condition can be predicted to direct students not to get bored easily, stay focused, and do everything on their own initiative [20].

External factor such as social support are among the factors that determine students' academic flow in education (Rosiana, 2015) [18]. Sarafino (1994) mentions social support as attention, appreciation, comfort, as well as help that a person gets from other people and groups, which makes a person feel loved, cared for, and considered part of family, peers, friends, teachers [8]. Social support is needed by students to face demands to understand learning material and academic assignments during the learning process which is increasingly difficult during the Covid 19 pandemic.

Problematic academic flow conditions can reduce student academic achievement [21]. Given the limited research on academic flow. This research is intended to enrich the results of research that examines academic flow, which aims to find out how the influence of the three factors achievement motivation, social support, and self efficacy in determining student's academic flow. To respond to this objective, the following hypotheses are raised. First, there is a relationship between achievement motivation, social support, self-efficacy with academic flow (major hypothesis). Second, there is a positive relationship between achievement motivation and academic flow (minor hypothesis 1). Third, there is a relationship between social support and academic flow (minor hypothesis 2). Fourth, there is a positive relationship between self-efficacy and academic flow. The influence of these factors is important to know about those who are directly related to students' interests in mastering the material, as well as working on academic assignments during the learning process, so that there are appropriate follow-ups in dealing with this problem.

2   Methodology

This research is a study that uses a quantitative approach with correlational research methods. The variables in this study consist of independent variables of achievement motivation, social support, self-efficacy, and academic flow dependent variables. The population of this research is Muhammadiyah Junior High School student in Sidaorjo. There are 10 Muhammadiyah Junior High School in Sidoarjo. The sample in this study was determined using the probability sampling technique of the Cluster Sampling model, and obtained 2 Muhammadiyah Junior High Schools in Sidaorjo, namely Muhammadiyah Junior High School 5 Tulangan and Muhammadiyah Junior High School 8 Tanggulangin, with a total sample of 449 students.

Data collection uses 4 psychological scales which are arranged using the Likert scale model, namely the academic flow scale, achievement motivation scale, social support scale, and self-efficacy scale. The academic flow scale and social support scale were compiled by the researchers themselves. The achievement motivation scale is an adaptation scale from the scale compiled by [8]. The self-efficacy scale is an adoption scale from the scale compiled by [22]. The data analysis technique was performed using multiple regression with the help of the JASP statistical program. Before carrying out data analysis, the researcher conducted an assumption test which included a normality test and a linearity test.

3   Result and Discussion

3.1   Result

Before carrying out data analysis, the researcher conducted an assumption test which included a normality test and a linearity test. The normality test results on residual data on the association between variables show that the Kolmogorov-Smirnov $Z = 0.752$ and $p = 0.623 > 0.05$, indicating that the data is normally distributed. The linearity assumption test shows that the relationship between each x variable and y variable is linear because the significance of linearity shows a number below 0.05, as shown in the Table 1.

Likewise with the multicollinearity test, the results of the collinearity statistical analysis show that scores on achievement motivation (VIF $= 2.070$; tolerance $= 0.483$), social support (VIF $= 1.743$; tolerance $= 0.574$), and self-efficacy (VIF $= 2.193$; tolerance $= 0.456$) are still in the VIF value range < 10 and the tolerance value is >0.1. This data can be said that there is no multicollinearity between variables.

The data analysis test used multiple regression statistics which were calculated with the help of the JASP statistical program. The results of the data analysis test answering the hypothesis proposed by the researcher show that:

In the major hypothesis, it shows that achievement motivation, social support, and self-efficacy factors influence students' academic flow (F $= 91,046 > 2,624$, p $= 0,000 < 0,05$). This means that Academic Flow can be predicted simultaneously by achievement motivation, social support, and self-efficacy. It shows in Table 2.

Furthermore, in the minor hypothesis test, the researcher analyzed the effect of each independent variable partially. The effect of the independent variables on the dependent variable partially by looking at the regression coefficients of achievement motivation, social support and self-efficacy variables with academic flow, as shown in Table 3.

Table 1. Linearity Test

	Sig	Keterangan
Academic Flow – Achievement Motivation Academic Flow – Social Support Academic Flow – Self Efficacy	0,000 0,000 0,000	Linier Linier Linier

Table 2. Multiple Regression Analysis of Academic Flow Predictor Variables

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	8603.383	3	2867.794	91.046	.000[a]
	Residual	14016.773	445	31.498		
	Total	22620.156	448			

Table 3. Effect of Academic Flow Predictor Variables

Unstandardized Coefficients				Standardized Coefficients	t	Sig.
Model		B	Std. Error	Beta		
1	(Constant)	15.912	2.697		5.901	.000
	Achievement motivation	.535	.057	.500	9.316	.000
	Social Sup port	.028	.043	.032	.650	.516
	Self Efficacy	.172	.074	.129	2.330	.020

Table 4. The Influence of 3 Academic Flow Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.617[a]	.380	.376	5.612

a. Predictors: (Constant), Self Efficacy, Dukungan Sosial, Motivasi Berprestasi

Table 3 shows the analysis all of minor hypotheses. The minor hypothesis test 1 shows that achievement motivation has a significant effect in determining students' academic flow (B = 0,535; t = 9,316; signif = 0,000). These results indicate that the higher the student achievement motivation, the higher the student's academic flow. Conversely, the lower the achievement motivation, the lower the student's academic flow. Meanwhile, in the minor hypothesis test 2 it is proven that the social support factor does not have a significant effect on determining students' academic flow (B = 0,028; t = 0,650; signif = 0,516). In the minor hypothesis test 3, the self-efficacy factor has a significant influence in determining students' academic flow (B = 0,172; t = 2,330; signif = 0,02). This means, the higher the self-efficacy, the higher the student's academic flow, and conversely, the lower the student's self-efficacy, the lower the academic flow. Thus, achievement motivation and self-efficacy are influential in determining student academic flow, while social support has no influence in determining student academic flow. The results of calculating the magnitude of the influence of the three variables of achievement motivation, social support, and self-efficacy simultaneously on students' academic flow is 37,6%, as shown in Table 4. Thus there are 62,4% other factors that determine students' academic flow that are not examined here.

To find out how much influence each variable has on student's academic flow, a calculation of the effect size of the three variables of achievement motivation, social support and self-efficacy is carried out in determining student academic flow.

The results show that achievement motivation has an influence of 36.9% in determining students' academic flow; social support has a 16.2% influence in determining student's academic flow, and self-efficacy has a 24.2% influence in determining student's academic flow, as shown in Table 5.

Table 5. Effect of Academic Flow Predictor Variables

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
Achievement motivation	.608[a]	.369	.368	5.650
Social Support	.403[a]	.162	.161	6.510
Self-Efficacy	.493[a]	.243	.242	6.187

3.2 Discussion

The results of the study as a whole show that the factors of achievement motivation, social support, and self-efficacy simultaneously prove to have an influence in determining the academic flow of Muhammadiyah Junior High Shool students. This shows that students who have strong learning goals and ambitions, plus self-confidence will be able to overcome situations during the learning process [23]. The student are sure to get positive results from what they do. as well as supported by parties that students hope will help, support both in material and non-material support, will make students show indications of academic flow, such as being able to concentrate and focus on subjects, also feeling comfortable and not easily bored following the learning process, and will carry out all academic activities on their own initiative [3, 24]. This study has similar results with the research conducted [14], the results show that there is a significant influence of self-efficacy, social support, and demographic factors on the academic flow of high school students in Mathematics which is moderated by achievement motivation. Although simultaneously the three factors of achievement motivation, social support, and self-efficacy have an influence on determining students' academic flow, but the results of the analysis show that it is partially proven that the achievement motivation factor has a significant effect on determining students' academic flow [25]. Several studies that support the results of this study [11, 14, 25]. Students with high achievement motivation show indications of student action with goals, have standards to achieve, and are diligent in achieving their goals. These characteristics make students have their own initiative for their academic activities, will focus, feel comfortable and not easily get bored following the learning process. Likewise with self-efficacy, it is proven to be influential in determining students' academic flow. This is in accordance with several studies that have been carried out [5, 6, 20, 26, 27]. Students with high self-efficacy will work on tasks from the easy ones, they will be carried out until they are finished even though the tasks are getting more difficult, also use the experience that has been previously obtained to do the tasks so that the results are better than before, persist in trying to achieve what is expected, believe in all their abilities and be diligent in completing tasks. According to Bandura This characteristic makes students have intrinsic motivation in doing the tasks given by the teacher astuti.

Meanwhile, in this study the social support factor did not have a significant effect on determining students' academic flow. Although not exactly the same, the results of this study are partly in accordance with the research conducted [14], the results show that self-efficacy moderated by achievement motivation influences academic flow, but social-support does not significantly affect the academic flow of high school students

specifically in mathematics. The results of this study are inversely proportional to the results of research that links social support factors with academic flow that was previously carried out [26, 28]. In theory, students who get social support from people who are close to them, such as parents, peers, or teachers in the learning process make them feel that there are people who provide help when they experience difficulties [29]. Students who get social support will be able to focus, feel comfortable, be able to take lessons without feeling bored. In this study, simultaneously it is seen that social support has an influence in determining academic flow, but by looking at the regression coefficients of each new factor it appears that the effect is very small, as well as the effect of the influence of social support is also small, so it is considered to have no significantly effect in determining academic flow [24]. The influence of the effect sizes of the two factors, namely achievement motivation and self-efficacy, can be input for those who are directly related to students, such as schools, teachers, and parents who are proven to contribute to students' academic flow, and take action according to the conditions. at the moment.

Limitation. This study has taken into account several variables that are expected to be able to detect Academic Flow simultaneously, such as achievement motivation, social support, and self-efficacy. It's just that it still needs to be continued on research on concrete forms of activity that can increase academic flow.

4   Conclusion

This study shows that student's academic flow can be predicted simultaneously by achievement motivation, social support, and self-efficacy. Partially reviewed, achievement motivation and self-efficacy have an effect on determining students' academic flow, while social support has no effect. The implications of the research results can be applied by teachers in order to improve academic flow, taking into account aspects of achievement motivation and student self-efficacy, social support from teachers and peers.

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