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Student Participation in the Activities of the Department's Student Association (HMJ) is Connected with Learning Achievements in the Department of Mechanical Engineering Education, Manado State University

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ABSTRACT

The purpose of this study is to determine the relationship between student participation in the activities of the Department Student Association (MHJ) and Student Learning Achievement. The object of research was students of the Department of Mechanical Engineering Education with a total sample of 65 students. The statistics used are non-parametric statistics with analysis using Chi Squared. The results of the analysis showed that there was no relationship between student participation in HMJ activities and the learning achievements achieved by students with the proven calculation results which showed that the chi squared count was smaller than the chi squared table (χ2calculate = 0.764 < χ2table = 9.94). The conclusion is that students can participate in all HMJ activities while running lectures to get good or excellent learning achievements. Keywords: Participation, Department Student Association (MHJ), Learning Achievement.

Keywords*: learning model, student, Student Association, Learning Achievements, university*

INTRODUCTION

The empowerment of human resources can only be done through education, because through education all the potential that exists in humans can be formed. Humans who are educated in

educational institutions are called students (students and students), and students who have studied must have the learning results they have achieved. The learning outcomes achieved in students consist of 3 domains, namely: cognitive domain, affective domain and psychomotor domain (Sousa, 2016). The three realms describe that through education can be mastered the knowledge taught (cognitive), have a good attitude (affective) and master skills (psychomotor).

The mechanical engineering education study program at Manado State University is a study program that educates students whose graduates are directed to become teachers in the field of mechanical engineering. In carrying out its mission as an educational institution, the mechanical engineering education study program expects that students who are educated must have excellent quality. The quality of students is excellent, measured by how far students master all three domains (cognitive, affective and psychomotor). And the quality of students during lectures can be seen from the achievements achieved by students. Therefore, achievement as a form of assessment determines whether the student has good quality or not.

In addition to lecture activities, students are also faced with other activities, namely major student activities under the name of the department's student association organization (HMJ). And the HMJ organization in the department of mechanical engineering education does not bind students to participate in it. As an organization majoring in HMJ, it has a variety of activities carried out by students in developing their potential as a scientific society. So that students become very dense in carrying out their education, where facing lectures and being involved in the HMJ organization.

The results of a preliminary survey conducted by researcher I. Parsaoran Tamba in the department of mechanical engineering education with an open question and answer métode on 115 students, found that 35 students (30.43%) stated that they were disturbed, there were 10 students (8.69%) hesitant to give answers and the remaining 70 students (60.86%) stated that they were not disturbed. some students stated that if they participate in HMJ activities, lectures will be disrupted. And the variety of answers given by students shows that students' thoughts of responding to activities carried out by HMJ are not all the same.

Departing from the results of the survey, researchers are interested in conducting research related to the quality of students in mechanical engineering education related to HMJ activities. With the purpose of the study: knowing the description of student achievements majoring in mechanical engineering education UNIMA, knowing the extent of student participation in HMJ activities, and knowing the relationship between student participation in HMJ activities and learning achievement.

METHOD

Based on the research objectives to be achieved, this research includes quantitative research. As mentioned, quantitative research uses research data in the form of numbers and analysis using statistics (Sugiyono, 2014; Muri Yusuf, 2014, Patricia D. Morrell and James B Carroll, 2010). This research includes correlational research because it wants to know the degree of relationship between variables (Hotman Simbolon, 2009). Statistics used to solve quantitative data using non-parametric statistics.

Population is the overall subject of the study (Suharimi Arikuto, 2006; Sugiyono, 1999). And the population of this study is all students who have reached the final stage, namely semester 8

with a total of 65 students. Suharsimi Arikunto (2006) stated that the sample was a part or representative of the study, and stated that if the research subjects were less than 100, then it was better to take all so that the research was a population study. However, if the subject is large or more than 100, it can be taken between 10-15% or 20-25% or more. Because the total population is 65 students and less than 100, the research sample is 65 students.

The research data were taken with instruments using question sheets about involvement in HMJ activities and the achievements achieved by students. To analyze the data of this study, the SPSS Program was used, which was used to determine the relationship between the variables studied using the quadratic chi equation ($\chi 2$).

Learning achievement is the learning outcomes achieved by students as seen from the cumulative achievement index from semester 1 to semester 8 with a grade scale of 1 to 4. Meanwhile, HMJ activities are all forms of activities designed by HMJ administrators to be carried out by students of the department.

The research hypothesis is that there is a relationship between student participation in HMJ activities and student quality

RESULTS AND DISCUSSION

Student learning achievements obtained from the results of cumulative achievement from semesters 1 to 8, show the category of student quality. The range of assessment of learning achievement from the range of 0 to 4. Assessment categories of low, medium, good and excellent grades. If depicted in the scale range as follows figure 1.

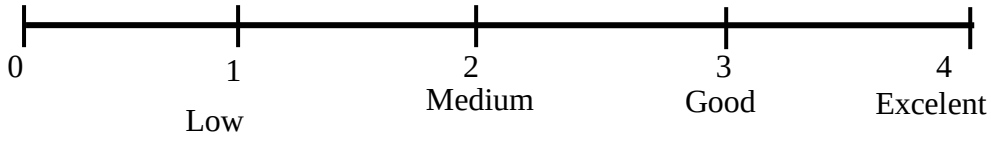

Figure 1. The interpretation criteria

The interpretation criteria for learning achievement score
Number 0 – 1 is low
Number 1.1 – 2 is medium
Number 2.1 – 3 is good
Number 3.1 – 4 is very good

The results of data collection on learning achievements of 65 students as well as assessment categories can be seen in Table 1.

Table 1. Student Learning Achievement of Mechanical Engineering Education Department

No	Learning Achievements	Sum	%	Category
1	2,8	3	4,61	Good
2	2,9	6	9,23	Good
3	3	20	30,76	Good
4	3,1	7	10,76	Excellent
5	3,2	2	3,07	Excellent
6	3,3	8	12,30	Excellent
7	3,4	9	13,85	Excellent
8	3,5	4	6,15	Excellent
9	3,6	3	4,61	Excellent
10	3,7	1	1,53	Excellent
11	3,8	2	3,07	Excellent

Data in Table 1 of the learning achievement of mechanical engineering education students shows that most of them are only in two categories, namely in the good category of 44.6% and very good at 45.4%, while in the medium category and low category there is no. see figure 2

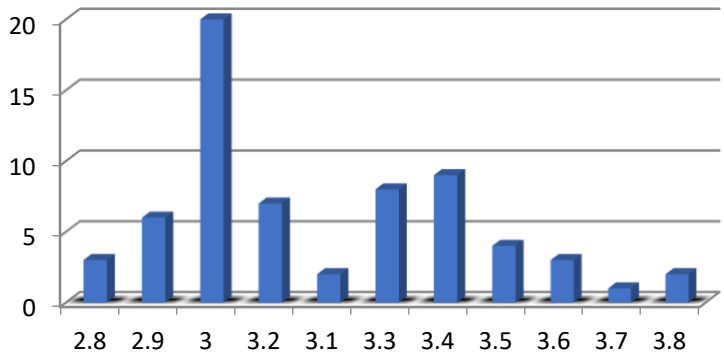

Figure 2. Learning Achievement Beam Diagram

The results of collecting data on student involvement in HMJ organizations found that students who participated in HMJ were 33 students with a percentage of 50.76% and the rest did not participate in HMJ totaling 32 with a percentage of 49.24%. The importance of student participation in HMJ activities can be seen in the figure 3.

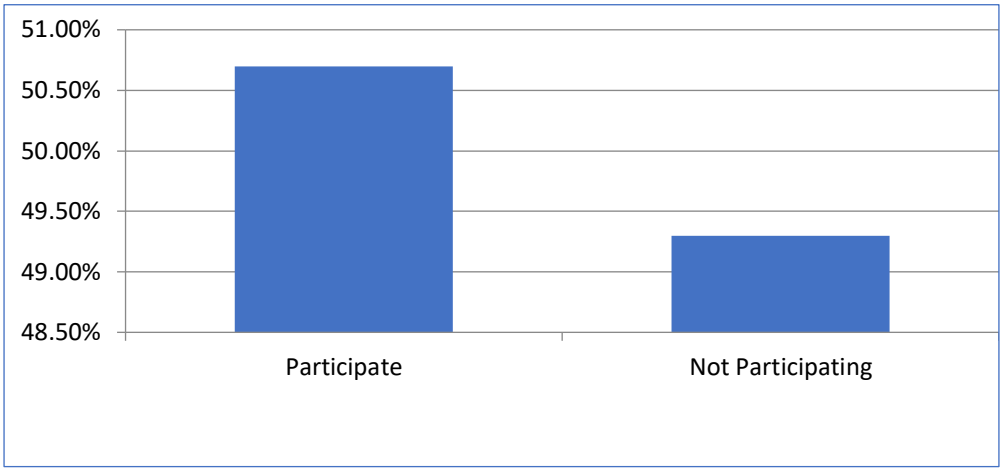

Figure 3. Student Participation in HMJ Activities

The results of student data collection on all HMJ activities with student learning achievements can be seen in the Table 2 and Table 3

Table 2. Categories of Learning Achievement with Student Participation in HMJ Activities

No	Categories of Learning Achievement	Participate in Activities HMJ		Not Participating in activities HMJ	
		Student	%	Student	%
1	Good	14	42,42	17	53,12
2	Excelent	19	57,58	15	46,88
	Sum	33	100	32	100

Tabel 3. Cross Tab Categories of Learning Achievement With Student Participation in HMJ Activities

		Activities Student		Sum
		Participate	Not Participating	
Learning Achievement	Excelent	19	15	34
	Good	14	17	31
Sum		33	32	65

The results of testing the relationship between student participation in HMJ activities and student achievement using Chi Squared equations can be seen in the table. 4.

Table 4. Test Results on the Relationship between Student Participation in HMJ Activities and Learning Achievement

	Value	Df	Asymp. Sig. (2-sided)	Exact Sig. (2-sided)	Exact Sig. (1-sided)
Pearson Chi-Square	.746[a]	1	.388		
Continuity Correction[b]	.378	1	.538		
Likelihood Ratio	.747	1	.387		
Fisher's Exact Test				.460	.269
Linear-by-Linear Association	.734	1	.392		
N of Valid Cases	65				

a. 0 cells (0.0%) have expected count less than 5. The minimum expected count is 15.26.
b. Computed only for a 2x2 table

The conclusion of the test results is based on the following hypothesis:

H_0 : There is no relationship between student involvement participation in HMJ activities and student learning achievement

H_1: There is a relationship between student involvement participation in HMJ activities and student learning achievement

Drawing conclusions on the chi squared test using SPSS there are 2 ways, namely: 1) by looking at the chi squared value calculated, and 2) by looking at the probability value.

Way 1

If chi squared count (χ2count) < chi squared table (χ2table), then H0 is accepted If chi squared count (χ2count) > chi squared table (χ2table), then H0 is rejected The result of calculating chi squared (χ2calculate) using SPSS is obtained χ2calculate = 0.764 (see table 4.6). And from the chi squared table with α = 5% obtained χ2table = 9.49. Thus the conclusion shows that the chi squared count is greater than the chi squared of the table (χ2calculate = 0.764 > χ2tabel = 9.94) and the result H0 is accepted.

Way 2

If the probability > 0.05, then Ho is accepted If the probability < 0.05, then H0 is rejected The result of the calculation using SPSS is obtained the probability value or its significance is 0.388 (see table 4.5). Thus the conclusion is that the probability (0.388) is greater than 0.05 (0.388 > 0.05) and the result is H0 received. With the results of method 1 and method 2, it turned out that the results were the same, namely receiving H0, and it was concluded that there was no relationship between student involvement in HMJ

activities and student learning achievement.

The results of this study show that when students participate in HMJ activities, it does not interfere with the lectures they are running. Even though the results of this study show that there is nothing to do with students participating in HMJ activities with their learning achievements. The results of this study also provide input to students who do not want to participate in HMJ activities which he said add to busyness and become a barrier to getting good learning achievements. The results of this research are strengthened by the results of research by Rahma Fariza, et al (2020) who analyzed student activity in academic activities, apparently recommending that students during lectures can actively participate in academic activities such as competitions and scientific publications. The results of research by Rahma Fariza, et al (2020) show that good activities for students can support their learning achievements. As the establishment of the HMJ organization, it aims to shape the attitude and mentality and creativity of students while attending higher education. If you also look at HMJ's activities, it provides provisions for students when they graduate from the mechanical engineering education department to be ready to enter as a leader.

Observing the findings of this study that HMJ activities have nothing to do with student learning achievement, it turns out that the main thing is the motivation and interest of the students themselves to learn. Even though there are many activities carried out at HMJ, when the motivation and interest in learning are high, the learning achievements achieved must be good too. As the results of the study revealed by Lastri, et al (2020) The results show that learning motivation has a positive and significant effect on learning achievement and interest in learning has a positive impact and has a significant effect on learning achievement. Likewise, the number of students involved in organizations does not have a negative impact on their learning achievement, such as the results of research revealed by Pipit Ramadhanti, et al (2021) students who are active in organizations have a positive impact and a significant influence on learning achievement and improvement of soft skills.

The question is whether it is true that when students are involved in juralization organization (HMJ) activities, they will experience decreased learning achievement so that the quality of students is reduced. Likewise, when students are not involved in major organizational activities (HMJ) will experience increased learning achievements or the quality of students is getting better. The results of the research show that between students who are involved in major organizations (HMJ) and students who are not involved in major organizational activities (HMJ) there is actually no difference or nothing to do with getting good learning achievements. Like the results of this study which shows that the participation of UNIMA mechanical engineering education students in HMJ activities has nothing to do with the learning achievements they have achieved. As long as students must still have high motivation and interest in learning.

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CONCLUSION

The conclusion of this study is there was no relationship between student participation in HMJ activities and their learning achievement, which was proven by the calculation results, which showed that the chi-squared count was smaller than the chi-squared table (χ2count = 0.764 < χ2table = 9.94) which concluded that there was no relationship between student involvement in HMJ activities and student learning achievement.

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