HOW LEARNING INTEREST, MOTIVATION, AND OUTCOME OF STUDENTS IN LEARNING MATHEMATICS; THE COMPARATIF STUDY

Abstract. This study compares interest, motivation, and learning outcomes between the COVID-19 pandemic and the new normal. This research is quantitative. The study population was all students at SMP Al-Ikhsan Boarding School, while the sample was two classes taken purposively. The research instrument was a structured observation sheet. The analytical technique used is descriptive statistics and independent-sample t-test. The analysis results show differences in motivation, interest, and student learning outcomes between the time of the pandemic and post-covid-19 pandemic. the average COVID-19 Pandemic of interest variable was 31,10 while after COVID Pandemic was 40.05. The average of motivation variable at COVID-19 pandemic was 34.47 while after COVID-19 Pandemic was 45.13. The average of students' learning results at COVID-19 Pandemic was 70.53 while after COVID-19 Pandemic was 80.03. there was a significant difference between the learning on COVID-19 Pandemics and after COVID-19 Pandemic on the interest, motivation, and students' learning outcome. The interest, motivation, and students learning results had a significant correlation with good criteria.

Keywords: *Learning Effectiveness, Mathematics, COVID-19 Pandemics*.

1. INTRODUCTION

The education effectiveness is determined how learning activities. Learning activities carried out in or out the classroom has a maximally impact on the education quality[1], [2]. The students and teachers' interactions will shape students' character [3]–[5]. The best learning will generate a good student characters, otherwise, bad learning will generate a bad student character[6]–[8]. Therefore, the government and teachers, principal, and society must pay attention to learning by evaluating learning processes and outcomes.

The schools or society environment determines learning quality. The calm of learning activities will make learning process be effective and affect to learning interest, motivation and learning outcome [9]–[11]. The environment that designed by the maximally will contribute in transferring the new knowledge to students. In other that, learning environment must get an attention by the education stakeholders because without the calm condition, learning activity will run bad and students' outcome will not well. Therefore, the learning activities with the good environment must be priority [12], [13]. The better environment with the good facilities will result the better learning so the objective national education will achieve maximally.

Islamic boarding schools at Kampar District is schools that implement the teaching and learning in classroom with online when COVID-19 and offline after pandemics. In online, teachers used the google meet and Zoom platform to transfer the mathematics material while after Covid-19 pandemic, teachers used the offline platform with conventional approach and interacted directly to student. Difference of method in difference of time will give the difference of learning results so which one better is needed to know so the best policy can be made for resulting the best results of students outcome from certain period of classroom activities. Based on this reason, this research is needed to do so every stakeholder can make the better planning when Indonesia get pandemic such as COVID-19.

2.   RESEARCH METHOD

This research was quantitative research with an ex post facto approach. The research subject is two condition of the learning activity in classroom that is; COVID-19 Pandemics learning activity and after COVID-19 pandemic. The data collection techniques were checklist, questionnaire, and test. Checklist is used to get information about the learning interest of students and motivation. The questionnaire is used to get information about motivation and crosscheck the checklist instrument. Test is used to get information about the students learning results from the COVID-19 Pandemic and after COVID-19 Pandemic. The data analysis technique were descriptive and Independent T-Test. Descriptive can describe where the higher of interest, motivation and learning results variables between the COVID-19 Pandemics and after COVID-19 Pandemic.

3.   RESULTS

Table 1. Descriptive Statistics of Interest, Motivation, and Students' Learning Result

Variables	Learning Interest		Learning Motivation		Learning Outcomes	
	Average	Standard Deviation	Average	Standard Deviation	Average	Standard Deviation
Pandemic Condition	31.10	4.79	34.47	3.34	70.53	7.11
After Pandemics	40.06	2.03	45.13	1.81	80.03	6.33

Table 1 explained that the average COVID-19 Pandemic of interest variable was 31,10 while after COVID Pandemic was 40.05. The average of motivation variable at COVID-19 pandemic was 34.47 while after COVID-19 Pandemic was 45.13. The average of students' learning results at COVID-19 Pandemic was 70.53 while after COVID-19 Pandemic was 80.03. To know whether there was the significant difference of interest, motivation and learning results variable, Independent-T Test can be used to explain them.

Table 2. Independent Sample T-Test

	F	Sig.	t	Sig. (2-tailed)
Interest	3.27	0.103	-2.634	0.027
Motivation			-3.137	0.039
Learning Outcome	2.94	0.214	-1.98	0.001

From the table of Independent sample T-Test, it was got the t value -2.634 with a significant value was 0.027 (<0.05) for learning interest variable. The significant motivation variable was 0.039. The significant students' learning outcome was 0.001. From this result, it can be concluded that there was a significant difference between the learning on COVID-19 Pandemics and after COVID-19 Pandemic on the interest, motivation, and students' learning outcome. From seconder data, the learning activities after COVID-19 Pandemic in strict control of the mathematics teachers while in COVID-19 Pandemics, teachers had difficult to control because the network is unstable. This result showed the teachers control in teaching and learning process in classroom can be best solution in increasing the interest, motivation, and students learning results.

Table 3. The Variables Correlation

Variables	Interest	Motivation	Results
Interest	1.00	0.83	0.79
Motivation	0.83	1.00	0.71
Result	0.79	0.71	1.00

Table 3 explained that correlation between interest and motivation was 0.83 with good category. Correlation between interest was 0.79 with good category. Correlation between motivation and learning results was 0.71 with good category. These results indicated that interest, motivation, and students learning results had a significant correlation that needed to improve to the best contribution to educational quality. Increasing the students' interest, motivation, and learning results was the teachers, parent, principal, society and every element of education system in a country.

4. DISCUSSION

Results analysis showed that there was a significant difference in the learning and teaching process between before and after COVID-19 Pandemic. The learning activities after pandemic was better than pandemic because the teaching process after pandemics can control students activities in classroom. Teachers' control will help students to focus and be serious in learning [14], [15]. The learning in the classroom makes an interesting interaction between teachers and students where students can motivate students directly [16]–[18]. Teachers can support students who have problems or broken homes. Teachers and students can work together to make an effective relationship where teachers and students shared their

experiences so that this relationship will increase students' interest and motivation in learning [19]–[21]. Teachers and students can build effective communication in the classroom so that all of the problems about teaching and learning can be overcome. Offline learning gave the best learning result than online learning at COVID-19 Pandemic Era.

The analysis result showed that there was a significant difference of learning interest, motivation, and students' learning outcome at COVID-19 Pandemic and after COVID-19 Pandemic. The interest, motivation, and students' learning outcome can be the best variables and huge contribution on educational improvement so the education quality will be improved [22], [23]. The interest, motivation and students' learning outcome will be relevant work in fixing the learning activities quality for the advanced education future. Interest, motivation, and students' learning outcome run together in giving the maximal contribution for education sustainable [24]–[26]. Improving the learning interest, learning motivation, and students outcome become the best way to fix the equation quality of Indonesia [27]–[29].

5. CONCLUSION

There was a significant difference between pandemic and after pandemic of interest, motivation and students' learning outcome variables. Learning after pendemic gave a better impact on the learning outcome because the teachers can give direct instruction, motivation, support to students. If students do not understand the mathematics material, students can ask directly to teachers and teachers can answer every question from student direcly.

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