

CHAPTER V

CONCLUSION, IMPLICATIONS, AND RECOMMENDATIONS

5.1 Conclusion

In accordance with the research questions and the findings from the investigation of the influence of student motivation, study habits, and teaching strategies on academic performance on online science learning, the following conclusions can be inferred,

- 1) The findings showed that the majority of student participants were dominated by 9th-grade students (57%), followed by 8th-grade students (25%), and 7th-grade students (18%). Furthermore, the participants of this study were dominated by public school students (78%), whereas the remaining students were from private schools (22%). Also, the findings have revealed that smartphones (351 respondents) were the most frequently used device by students to conduct online science learning, followed by laptops (68 respondents), desktop computers (13 respondents), and tablets (8 respondents). On the other hand, the most frequently used platforms by the students during online science learning were WhatsApp (315 respondents), Google Class (183 respondents), Google Meet (70 respondents), and Zoom Meeting (50 respondents). Meanwhile, less than ten participants used Quizizz, Nearpod, Moodle, Wizer, Padlet, Live Worksheet, Gather Town, YouTube, Google Forms, Scola, Discord, and Canva. The findings also revealed that most of the teacher respondents taught 9th-grade students (45%), followed by 7th-grade teachers (33%), and the least was 8th-grade teachers (22%). Additionally, most teachers have taught science in an online setting for 1.5-2 years (89%), and the remaining have taught science subjects online for six months-1 years (11%). Lastly, teachers mostly used Google Classroom (8 respondents), Zoom Meeting and Google Meet (4 respondents), and WhatsApp (3 respondents) during online science teaching. On the other hand, the least commonly used learning aid platforms are *Kunci* Application, School LMS, and Edmodo.
- 2) The simultaneous relationship of student motivation, study habits, and teaching strategies on academic performance during online science learning

showed that the R Squared value is 0.206, which means 20.6% of the academic performance is explained by student motivation, study habits, and teaching strategies. The result indicated a weak relationship between the predictors and academic performance. On the other hand, this study found a significant simultaneous relationship of student motivation, study habits, and teaching strategies on academic performance during online science. The overall predictors of this study showed a significant value of ($F = 33.641$ and $p = 0.000$), whereas the p -value is more significant than the 0.05 significance level.

- 3) The findings on the respective relationship among student motivation, study habits, and teaching strategies on academic performance during online science learning had shown that teaching strategies ($\beta=0.410$) have the most substantial influence on academic performance. Moreover, student motivation showed a significant relationship with academic performance with a significance value of ($t = 8.984$ and $p = 0.000$), whereas the p -value is less than 0.05 significance level. Subsequently, student motivation ($\beta=0.154$) is the second most influential variable to academic performance. Additionally, the findings revealed that student motivation was significantly related to academic performance during online science learning with a significance value of ($t = 3.226$ and $p = 0.001$), which indicated that the p -value is less than the 0.05 significance level. On the contrary, study habits ($\beta=0.004$) are the least affecting variable on academic performance during online science learning. For that reason, there is no significant relationship between study habits and academic performance during science online learning due to the significant value of ($t = 0.078$ and $p = (0.938)$), which signifies the p -value is greater than the 0.05 significance level.

5.2 Implications

According to the findings, this research revealed the demographic of students and teachers participating in this study and the simultaneous and respective influence of student motivation, study habits, and teaching strategies on academic performance during online science learning. The result of the analysis indicated an overall significant relationship between student motivation, study habits, and teaching strategies on academic performance during online science learning. Additionally, this study discovered that student motivation and teaching strategies

had a significant relationship with students' academic performance. Nevertheless, this study failed to reveal the relationship between study habits and academic performance. The result of this study can be used as a reference for teachers, future researchers, and policymakers within the educational field to point out the factors that can influence students' academic performance during online science learning.

5.3 Recommendations

The recommendations for future research are mainly accounted to researchers and teachers. The followings are the elaboration of this study recommendation,

1) Future studies

According to the findings of this research, it is highly recommended that other researchers add more predictors to measure students' academic performance better. Most of the independent variables of this research are non-cognitive aspects (motivation, self-efficacy, and study habits). Therefore, adding cognitive aspects (SAT scores or GPA from last education) to the independent variable is strongly encouraged. Furthermore, future research may consider adding the participants' demographics as predictors of students' academic performance.

In this study, the demographic variables of the participants were excluded from the independent variables due to complex analysis. Hence, it is recommended to add demographic details as one of the students' academic performance predictors. Additionally, rather than only emphasizing student motivation during online science learning to predict academic performance, making an addition of teachers' intrinsic motivation and self-efficacy to the predictors is suggested. Thus, not only can we analyze the based on the students' perspectives, but the point of views of the teachers' were also considered.

Similarly, because this study only concentrates on students' intrinsic motivation, it is encouraged to include extrinsic motivation in the independent variable in future research. Therefore, the findings will show whether or not extrinsic motivation predicts students' academic performance. Lastly, adding several aspects such as students' attendance report, total individual study time, cramming before the exam, and study time preference (daytime or nighttime) to study habits indicator is recommended.

2) Teachers

Based on the findings of this study, teachers are encouraged to foster student motivation and study habits during online learning. The findings of this study show that student motivation and study habits influence student academic motivation during online science learning. Teachers and educational faculties can create a program that will promote student motivation and study habits, especially during distance learning. Furthermore, it is suggested that the teachers create teaching strategies for online science teaching as it is previously shown in the analysis of this study that teaching strategies showed an effect on students' academic performance.