BAB V
CONCLUSIONS AND SUGGESTIONS

5.1. Conclusion

Based on the results of the study, the following conclusions can be determined:

1. At the definition stage, the initial analysis through school observation and interviews with teachers showed that the development of learning media in the form of an e-module based on Ethnopedagogy Integrated PJBL on reaction rate material. Based on the results of the survey analysis of student needs, it is known that 85.5% of students expressed interest and agreed with the development of learning in the form of e-modules that are integrated with the surrounding culture and based on Project Based Learning (PjBL). The results of interviews with chemistry teachers also revealed that the teaching materials used so far have not fully related chemistry materials to daily life and local wisdom, so it is necessary to develop teaching materials that are more contextual and meaningful for students. This finding confirms that PjBL-based e-modules that are integrated with the ethnopedagogy of the following culture are needed as an alternative learning media for reaction rate material.
2. At the design stage, the developed reaction rate e-module is designed based on the project-based learning syntax and integrated with the ethnopedagogy of local wisdom of the seering culture and spiritual values. The results of the analysis of three chemistry books used in the high school where the research site showed that although the books had met the BSNP feasibility standards with an average percentage of 91.7% (very good category), the books were not yet in the form of e-modules, were not project-based, and had not integrated local wisdom of the weaning culture. Therefore, the design of the e-module in this study is focused on completing these shortcomings while still referring to the feasibility aspects of BSNP, namely the feasibility of content, language, presentation, and graphics.
3. The results of the e-module validation show that the teaching materials developed have met the eligibility criteria according to BSNP standards. The

validation of the material by three expert lecturers in the aspects of content, contextual, and presentation feasibility obtained an average of 88.1%, which is included in the very feasible category. Furthermore, the results of media validation by experts in the aspects of graphic and linguistic feasibility obtained an average of 86.8%, so that the e-module was declared very feasible to be used in learning. Validation by three chemistry teachers showed higher results, with an average material feasibility of 96.7% and an average of 94.3% of media eligibility, indicating that the e-module is very feasible for practical use in schools.

4. The response of chemistry teachers to PjBL-based e-modules that are integrated with the culture of weaning on reaction rate materials showed a very high level of interest. Based on the aspects of attractiveness, material, and language, an average percentage of 94.6% was obtained, with the interpretation of the questionnaire in the category being very interesting. The response of students at the research site also showed very positive results, with an average percentage of 89.7%, while the response of students outside the research site obtained an average of 89.9%. Both results are in the very interesting category, which shows that the e-module is very well received by students.

Overall, this research successfully answered all research objectives, namely producing **an e-module based on Project Based Learning (PjBL) that is integrated with ethnopedagogy on reaction rate materials**, and has met the BSNP feasibility standards and received a very positive response from teachers and students.

5.2. Suggestion

Based on the results of the research, discussion and conclusions above, the author suggests:

1. For schools, it is recommended to support the application of e-module-based digital teaching materials in chemistry learning, especially those that integrate *ethnopedagogical net-based learning projects*. Support can be provided through the provision of technological facilities and infrastructure as well as training for teachers so that the use of e-modules can run optimally.
2. For teachers and prospective teachers, it is recommended to use Project-Based Learning-based reaction rate e-module teaching materials that are integrated

with local wisdom of the following culture as supporting teaching materials in the learning process. This e-module can be used to increase students' active engagement, foster critical thinking skills, and help relate chemistry concepts to daily life and local culture.

3. For students, it is expected to be able to use this e-module independently or in groups as an alternative learning resource. Through project-based learning that is integrated with local wisdom, students are expected to be able to improve their understanding of the concept of reaction rate, collaboration skills, and appreciative attitudes towards culture and spiritual values in daily life.
4. For the next researcher to develop this research by using module products in its implementation in the classroom. Further research can be focused on testing the effectiveness of e-modules on learning outcomes, critical thinking skills, creativity, and attitudes of students through experimental or quasi-experimental research designs.
5. For further researchers to further develop the next researcher is advised to develop similar e-modules on other chemical materials or at different levels of education by integrating relevant local wisdom in their respective regions.As in stoichiometric materials using local wisdom and also other chemical materials such as reaction rate materials are integrated with local wisdom dekke naniura.