

CHAPTER FIVE CONCLUSION, IMPLICATION AND RECOMMENDATIONS

A. Conclusion

Drawing on the study's findings, the following conclusions can be made:

- The ESD theme - based e-module was developed in accordance with the main components of ESD and tailored using disaster readiness related topics, which can be seen in the activity menu of the material. The e-module's display is vibrant which also includes pictures, illustrations, animations, audio, and video lessons, as recommended by several studies. The ESD-based e-modules using the material Disaster Readiness and Risk Reduction have been proven to be feasible in terms of content quality, instructional quality, and technical quality. In addition, This also depicts how ESD-based e-modules are essential to disaster education because they combine local knowledge, creative teaching strategies, and real-world scenarios to improve students' readiness and reaction to disasters. Particularly in regions where natural disasters are common, these technology-driven teaching strategy have greatly increased student awareness in disaster literacy across all student demographics.
- The Level of awareness of the respondents prior to the development of the intervention revealed to be in moderately low. This finding urges the researcher to utilize this data as one of the bases to inform the development of the intervention in a form of an educational prototype e-module design in order to address the need of the research subject. The creation of the intervention also resulted to a significant improvement on the level of

awareness of the student after the utilization of the e-module as an intervention.

- Students' disaster awareness improved dramatically as a result of the intervention; this suggests that the improvement was statistically significant, indicating that the change of the score is due to the intervention being implemented. The findings support the rejection of the null hypothesis and possibility of using similar tactics in other disaster readiness and risk reduction learning content by demonstrating the intervention's effectiveness in raising disaster awareness among senior high STEM students. This study also concludes that the level of learners' disaster awareness can be enhanced to the High category through learning using ESD-based e-modules focusing on disaster readiness and risk reduction material.
- The students' response result towards the ESD-based electronic module was also found very good. This implies that the level of acceptance of the students towards utilization of the e-module is very high. Thus, this also encourages educators to utilize various electronic learning material as part of the learning process of the students as it will motivate them and become enthusiastic during the learning process.

B. Implications

- The findings of the study emphasize how important it is to develop and validate the ESD-based e-module in a variety of subjects, including geography education. The e-module's solid basis is confirmed by the high expert validation scores, which are reflected in its technical, instructional, and content quality, establishing it as a trustworthy educational resource.

The electronic module is well-designed and pertinent to disaster risk education, guaranteeing that it fits in nicely with learning goals and material about disasters.

- Furthermore, the e-module's effectiveness in improving students' knowledge, attitudes, and behaviors about disaster is highlighted by the notable rise in students' disaster awareness, as seen by the significant difference comparing before and after the intervention survey findings. The module's usefulness and efficacy as an instructional tool are further reinforced by the good response from students.
- The results validate the effectiveness of the e-module tailored to the ESD concept, indicating that it is a useful instrument for improving disaster awareness in the fields and has a greater potential in expanding its use to other fields of study such as in geography education and or other related subjects.

C. Recommendations

- Due to its design, which draws inspiration from mobile applications, the ESD-based prototype e-module design can be access through mobile phones. This also suggest the full utilization of the developed e-module design as a basis in developing an ESD-based E-module which provides learning content and activities that could enhance students' understanding towards the concept of disaster and disaster risk. Given the primary limitations outlined in this investigation, it is advised that the Philippine Engineering and Agro-Industrial College, Inc. adopt ESD oriented electronic modules as

learning resources. Students can easily access this electronic module, which helps themselves to regulate their own learning with minimal supervision.

- This E-module was implemented limited to 39 Senior High School Students. Thus, the researcher suggests future researchers to implement this e-module into a larger group to deeply understand the current disaster awareness state of the students and the impacts of an ESD-based learning material.
- Moreover, this advice exhorts potential stakeholders to create the actual application using the instructional design strategy developed by the researcher, modified to fit the components of ESD. Considering the positive response of the learners towards the e-module. It is also imperative to acknowledge that the e-module presently been developed was merely a prototype design.