
ENSURING LEARNING CONTINUITY AMIDST CALAMITIES: AN ASSESSMENT OF THE EFFECTIVENESS OF SELF-LEARNING MODULES IN DINAGAT ISLANDS

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ABSTRACT

This study aims to assess the effectiveness of Self-Learning Modules (SLMs) in ensuring educational continuity during calamities among key stage 2 learners of the elementary schools of Dinagat Islands. This research aims to assess the effectiveness of how SLMs support students' academic progress, engagement, and adaptability during periods of disruption. The study involved 308 intermediate-grade learners, predominantly aged 9 to 11 years. Learners from Grades 4, 5, and 6 were fairly evenly represented, with only minimal variation across grade levels, indicating a balanced sample in terms of age, sex, and grade level. This study used descriptive correlation method of research relying primarily on the researcher questionnaires to gathered information in assessing the effectiveness of Self-Learning Modules (SLMs) in ensuring educational continuity during calamities. The descriptive correlation method is the most common and widely used method in gathering data and information using questionnaire checklist. The effectiveness of Self-Learning Modules (SLMs) during calamities was generally rated at a moderate level across major dimensions. Access and availability were moderately implemented, indicating that learners were able to obtain the modules, although issues related to ease of access and navigation persisted. The clarity and quality of content were also rated as moderate, reflecting that the instructions, language, organization, and learning activities were generally clear, appropriate, and aligned with learners' needs. Similarly, self-learning and independence were moderately implemented, suggesting that SLMs supported self-paced learning and fostered a degree of learner autonomy, though full independent learning was not consistently achieved. In terms

of learning continuity, SLMs moderately enabled learners to stay on track and functioned as an alternative to face-to-face instruction during calamities; however, difficulties in mastering complex concepts and covering all intended content were noted. The results show that age significantly affects access and availability of SLMs and the challenges faced by learners, leading to the rejection of the null hypothesis for these variables. However, no significant age-based differences were found in clarity and quality of content, self-learning and independence, and effectiveness in ensuring learning continuity, resulting in the acceptance of the null hypothesis for these areas. For gender, the null hypothesis was accepted across all dimensions of SLM effectiveness, indicating that learners' experiences with SLMs do not significantly differ between males and females. In terms of grade level, the null hypothesis was rejected for access and availability, self-learning and independence, and challenges faced, indicating significant differences across grade levels. Conversely, the null hypothesis was accepted for clarity and quality of content and effectiveness in ensuring learning continuity. Overall, the findings indicate that age and grade level significantly influence certain aspects of SLM effectiveness, while gender has no significant effect.

KEYWORDS: Self-Learning Modules, self-paced learning, autonomy, conversely.

INTRODUCTION

Education is one of the sectors most vulnerable to disruption during calamities such as typhoons, earthquakes, floods, and other natural disasters. In the Philippines, where geographical location exposes communities to frequent natural hazards, the continuity of education has always been a pressing concern. The challenge of sustaining learning opportunities for students despite disruptions has prompted the Department of Education (DepEd) to develop innovative learning delivery modalities, one of which is the use of Self-Learning Modules (SLMs).

Self-Learning Modules are designed to serve as an alternative instructional material that empowers learners to learn at their own place, especially in times when face-to-face classes are impossible. These modules aim to ensure that education remains resilient, and available even in remote or disaster-affected areas. In the context of Dinagat Islands, a province often confronted with typhoons and other calamities, the deployment and utilization of SLMs show a vital role in preventing learning loss and ensuring the continuity of education.

However, while the implementation of SLMs has been widespread, questions remain on their actual effectiveness in achieving intended learning outcomes, especially during emergencies

when resources, guidance, and motivation may be limited. It is therefore important to assess how well these modules see the educational desires of learners in times of emergency, and how teachers, parents, and learners themselves perceive their usefulness and challenges.

The study seeks to assess the effectiveness of Self-Learning Modules as an instrument for sustaining learning continuity in times of calamities in Dinagat Islands. The findings are expected to provide insights that would help educators, school leaders, and policymakers enhance the resilience of the educational system, confirming that no learner is left behind even in the family.

Conceptual Framework

This study is anchored on the idea that learning continuity during calamities can be sustained through effective educational interventions, one of which is the use of Self-Learning Modules (SLMs). The effectiveness of these modules is influenced by various factors such as their content quality, accessibility, learners' engagement, and achievement of outcomes. When properly utilized, SLMs can help mitigate the negative effects of disasters on education, ensuring that learners in Dinagat Islands continue their academic growth despite disruptions.

This study on assessing the effectiveness of Self-Learning Modules (SLMs) in ensuring educational continuity during calamities is anchored on several key interrelated components that are essential for understanding the role of SLMs in education. Access and availability serve as the foundational elements, determining whether students can effectively utilize SLMs during disruptions caused by calamities. The availability of both printed and digital resources is essential for facilitating learning in such challenging circumstances, as students must have reliable access to educational materials to continue their studies (DepEd Order No. 12, s. 2020). This is particularly important in disaster-prone areas where access to resources can be severely limited due to external factors.

The second component, clarity and quality of content, significantly impacts students' learning experiences. High-quality, well-structured materials that are clear and relevant can enhance the learning process, making it easier for students to engage with the content independently (Simonson et al., 2019).

Following this, the framework emphasizes the importance of self-learning and independence. The ability of students to learn autonomously using SLMs is a critical factor in determining educational continuity, especially when traditional instructional methods are unavailable. Effective self-learning practices can result in better academic outcomes, as they encourage students to take ownership of their education (Bao, 2020). Studies have shown that fostering

independence in learners not only enhances their ability to adapt to unexpected changes but also cultivates essential lifelong learning skills (Garrison & Akyol, 2015). The fourth component, effectiveness in ensuring learning continuity, examines how well SLMs maintain academic progress and achieve learning objectives despite external disruptions. This effectiveness is influenced by both access to quality resources and students' ability to engage with the material independently. Research demonstrates that educational continuity can be significantly improved when SLMs are utilized effectively, as they can bridge the gap caused by the lack of face-to-face instruction (Vaughan et al., 2013). Furthermore, understanding how SLMs facilitate learning continuity can help educators and policymakers enhance their implementation strategies.

Lastly, the framework acknowledges the challenges faced by students and educators in utilizing SLMs, such as technological barriers, lack of motivation, and difficulties in understanding the content. These challenges can significantly moderate the relationship between access, quality of content, and learning continuity, impacting the overall effectiveness of SLMs in emergencies. Identifying and addressing these challenges is essential for optimizing the use of SLMs and ensuring that all students can benefit from them (Hodges et al., 2020).

By examining these interconnected components, the research aims to provide valuable insights into the strengths and limitations of SLMs in supporting continuous learning during calamities. This framework will guide practical recommendations for enhancing the use of SLMs, ensuring that education remains accessible and effective in the face of future crises. Ultimately, the goal is to safeguard students' right to education, regardless of the challenges posed by external disruptions.

Significance of the Study

The result of this study gave empirical and credible data that served as baseline reference for the teachers as a guide. Nevertheless, this would contribute towards the development of the pupils, teachers, administrators, and parents for the following reasons:

To the Learners. Learners are the ones who will use the SLMs. Hence, the most significant impact of this study benefited by learners themselves. By identifying the effectiveness of SLMs and addressing the challenges faced, the research aims to ensure that students receive quality education even in times of calamity. Improved SLMs fostered greater self-learning, independence, and confidence among students, empowering them to take ownership of their education.

To the Teachers. The findings provided among teachers with insights into the effectiveness of SLMs, helped them understand how to better support their students during calamities.

In an identified specific areas for improvement, teachers adapted their instructional strategies and provided additional resources to enhance student engagement and learning outcomes.

To the School Administrators. School Administrators will benefit from the study's findings as they seek to develop and implement effective educational policies and programs. By understanding how SLMs impact student learning during crises, administrators informed decisions about resource allocation, training for teachers, and the overall strategic direction of their institutions.

To the Parents. The study empowered parents by highlighting the effectiveness of SLMs as a learning tool during emergencies. Understanding the strengths and limitations of these modules enabled parents to better support their children's learning at home, facilitating a more collaborative approach to education. Furthermore, insights from the study can guide parents in creating conducive learning environments during calamities.

To the Future Researchers. The findings contributed to the growing body of literature on distance learning and the use of alternative educational tools in times of crisis. Other researchers built on this study explored further aspects of educational continuity and the effectiveness of various learning modalities in disaster-prone areas.

To the Community Organizations and NGOs. Organizations focused on educational development and disaster response used the insights gained from this study to inform their initiatives and programs. Understanding the effectiveness of SLMs can help these organizations provide better support to schools and learners during emergencies.

Definition of Terms,

The following terms were defined operationally for common, better understanding and clarity of the major concepts that are used in the study.

Demographic Profile: Refers to the statistical characteristics of the learners in the study. It includes various attributes that can influence academic performance.

Grade Level: The academic year is currently enrolled in, indicating their progression through the educational system.

Type of Calamity Experienced: refers to the specific natural or man-made disasters that have affected the learners and their educational environment.

Access and Availability of SLMs: refer to the extent to which learners can obtain and utilize Self-Learning Modules during times of calamity. This includes the physical and digital access

to SLMs, such as whether they readily available in printed form or accessible online, as well as the learners' ability to obtain necessary resources, such as internet connectivity and appropriate devices. Access also encompasses the timely provision of these materials, ensuring that students have what they need to continue their education without unnecessary delays.

Clarity and Quality of Content: pertains to how easily learners can understand the instructions, concepts, and activities presented in the modules. Quality refers to the overall standard of the content, including its organization, accuracy, appropriateness for the intended grade level, and alignment with curriculum objectives.

Self-Learning and Independence: refer to the capacity of learners to engage with and navigate their educational materials autonomously, without direct supervision from teachers. This component emphasizes the development of skills that enable learners to take ownership of their learning process, including critical thinking, problem-solving, and self-regulation.

Effectiveness in Ensuring Learning Continuity: measures how well SLMs facilitate the ongoing educational progress of students during disruptions caused by calamities. This effectiveness is determined by the extent to which SLMs enable learners to achieve learning objectives, maintain academic performance, and cover the necessary curriculum content despite the absence of face-to-face instruction. It reflects the ability of SLMs to bridge learning gaps and provide a viable alternative to traditional teaching methods, ensuring that learners can continue their education during emergencies.

Challenges Faced: refer to the difficulties and obstacles that learners and educators encounter while using Self-Learning Modules. These challenges can include technological issues (such as lack of internet access or electricity), motivational barriers, difficulties in understanding the material without teacher guidance, and the overall complexity of navigating the self-learning process. Identifying and addressing these challenges is crucial for optimizing the use of SLMs, as they can significantly impact learners' learning experiences and outcomes during calamities.

The Methodology

This study used descriptive correlation method of research relying primarily on the researcher questionnaires to gathered information in assessing the effectiveness of Self-Learning Modules (SLMs) in ensuring educational continuity during calamities. The descriptive correlation method is the most common and widely used method in gathering data and information using questionnaire checklist.

Research Locale

This study was conducted among Elementary Schools of Cagdianao West District, Division of Dinagat Islands, namely: Mataas Elementary School, Boa Elementary School, Valencia Elementary School, R.E Ecleo Sr. Elementary School, Cabiton-an Elementary School, Cabunga-an Elementary School and Tigbao Elementary school , these schools implemented Self-Learning Modules (SLMs) as part of its educational strategy, particularly during calamities, to ensure continuity of learning. These schools are situated at Cadianao district in the Division of Dinagat Islands which falls under the province of Dinagat Islands.

Respondents of the Study

The respondents of the study were 308 Key Stage 2 (Grades 4, 5 and 6) elementary learners in Cagdianao West District , Division of Dinagat Islands, School Year 2025-2026. Random sampling was employed to determine the learners from the different schools in Cagdianao West district, Division of Dinagat Islands.

Sampling Procedure

Simple random sampling was employed in this study using a research instrument. The researcher aimed to use this method in statistical research to select a sample from a larger number of respondents.

In determining the respondents of the study, official list of learners in the Key Stage 2 was obtained.

Research Instrument

The research instrument for this study, "Ensuring Learning Continuity Amidst Calamities: An Assessment of the Effectiveness of Self-Learning Modules in Dinagat Islands" used adapted from several established frameworks. The section on Demographic profile is based on U.S. Census Bureau. (2020). Demographic Statistics, while the section on Assessing the Effectiveness of Self-Learning Modules in Ensuring Educational Continuity during Calamities is based on the following: DepEd Order No. 12, s. 2020. (2020), Garrison, D. R., & Akyol, Z. (2015), Vaughan, N. D., Parchoma, G., & Garrison, D. R. (2013), and Laksana, T., & Santoso, P. B. (2021).

Administration of the Instrument

The data was gathered from the enrolled 308 Key Stage 2 (Grades 4, 5 and 6) elementary learners in Cagdianao West District, Division of Dinagat Islands School Year 2025-2026

using survey questionnaires. A written permission from the Schools Division Superintendent was secured through the recommendation of the Dean of the Graduates School of Valencia Colleges (INC) Bukidnon, Valencia City for the approval letter. The request is also made through the Public Schools District Supervisor and School Principals to signify the administrator's cooperation and support.

FINDINGS

The following were the findings of the study.

The study involved 308 intermediate-grade learners, predominantly aged 9 to 11 years. The respondents were equally distributed by sex, with males and females each comprising 50% of the sample. Learners from Grades 4, 5, and 6 were fairly evenly represented, with only minimal variation across grade levels, indicating a balanced sample in terms of age, sex, and grade level.

The effectiveness of Self-Learning Modules (SLMs) during calamities was generally rated at a moderate level across major dimensions. Access and availability were moderately implemented, indicating that learners were able to obtain the modules, although issues related to ease of access and navigation persisted. The clarity and quality of content were also rated as moderate, reflecting that the instructions, language, organization, and learning activities were generally clear, appropriate, and aligned with learners' needs.

Similarly, self-learning and independence were moderately implemented, suggesting that SLMs supported self-paced learning and fostered a degree of learner autonomy, though full independent learning was not consistently achieved. In terms of learning continuity, SLMs moderately enabled learners to stay on track and functioned as an alternative to face-to-face instruction during calamities; however, difficulties in mastering complex concepts and covering all intended content were noted.

The challenges faced by learners were assessed as slightly implemented, with technical issues identified as the most common concern, while motivation, lesson comprehension, and comparison with face-to-face learning were reported to a lesser extent. Overall, the findings indicate that while SLMs were effective in sustaining learning during disruptions, certain operational and instructional limitations remain.

The results show that age significantly affects access and availability of SLMs and the challenges faced by learners, leading to the rejection of the null hypothesis for these variables. However, no significant age-based differences were found in clarity and quality of content, self-learning and independence, and effectiveness in ensuring learning continuity,

resulting in the acceptance of the null hypothesis for these areas. For gender, the null hypothesis was accepted across all dimensions of SLM effectiveness, indicating that learners' experiences with SLMs do not significantly differ between males and females. In terms of grade level, the null hypothesis was rejected for access and availability, self-learning and independence, and challenges faced, indicating significant differences across grade levels. Conversely, the null hypothesis was accepted for clarity and quality of content and effectiveness in ensuring learning continuity. Overall, the findings indicate that age and grade level significantly influence certain aspects of SLM effectiveness, while gender has no significant effect.

CONCLUSIONS

The following were the conclusions derived from this study.

The study involved 308 intermediate-grade learners, predominantly aged 9 to 11 years, with an equal distribution of males and females and balanced representation across Grades 4 to 6. This balanced profile allowed for meaningful analysis of the effectiveness of Self-Learning Modules (SLMs) across age, gender, and grade levels. The findings are relevant for guiding schools and policymakers in improving modular learning, particularly in providing equitable access and age-appropriate support during calamities. However, the study is limited to intermediate-grade learners and relied on self-reported data, which may reflect subjective perceptions. Future research may expand to other grade levels and include qualitative insights to better understand learners' experiences. Overall, the study highlights the importance of a balanced learner profile in evaluating SLM implementation and designing interventions that effectively address learners' needs during educational disruptions.

The study found that the effectiveness of Self-Learning Modules (SLMs) during calamities was generally moderate across major areas. Learners were able to access the modules, and the content was clear, well-organized, and aligned with their learning needs. SLMs supported self-paced learning and autonomy, while also helping maintain learning continuity as an alternative to face-to-face instruction. However, learners faced moderate difficulties in mastering complex concepts, achieving full independence, and handling technical issues, indicating some operational and instructional limitations. These findings are relevant for educators and policymakers, highlighting the need to improve access, navigation, and support mechanisms to enhance the effectiveness of SLMs during disruptions. The study is limited by its reliance on self-reported data and the specific learner context, suggesting that future research should include broader samples, qualitative insights, and school- or household-level

factors to better understand learners' experiences. Overall, the study underscores the value of SLMs in sustaining learning during calamities while emphasizing the importance of addressing access, technical, and instructional challenges to maximize their impact on learner outcomes.

The study found that age and grade level significantly affect key aspects of Self-Learning Module (SLM) implementation, including access and availability, self-learning and independence, and challenges faced, while gender has no significant effect. Learners' experiences varied according to their developmental stage and academic level, highlighting the need for age-appropriate guidance and grade-specific support to enhance SLM effectiveness. These findings are valuable for educators and policymakers, as they provide evidence to design modular learning strategies that address learners' specific needs, ensuring equitable access and promoting independent learning. A limitation of the study is its focus on a specific learner population, suggesting that future research should include broader grade levels, different regions, and qualitative data to deepen understanding. Overall, the study underscores that while SLMs are effective in sustaining learning during disruptions, their success relies on adapting effectiveness to learners' age and grade level, ensuring both accessibility and meaningful engagement.

RECOMMENDATIONS

Learners and parents should actively engage with Self-Learning Modules by maximizing available resources and seeking additional support when challenges arise, especially considering the moderate effectiveness of SLMs. They should also develop self-motivation on learners learning drive.

Teachers and administrators may enhance the accessibility and quality of Self-Learning Modules by addressing identified challenges to improve clarity, content, and learning continuity. They may develop targeted motivational strategies for different age groups and grade levels while ensuring gender-inclusive learning environments since motivation does not differ by sex.

Future researchers should explore deeper causes behind age and grade level differences in learner motivation, possibly investigating contextual and psychological factors. Research might also focus on improving SLM design and implementation, particularly addressing challenges faced by learners

REFERENCES

1. Adedoyin, O. B., & Soykan, E. (2020). COVID-19 pandemic and online learning: The challenges and opportunities. *Education and Information Technologies*, 25(5), 1-13.
2. Alinsunurin, A. J., Catubay, L. T., & Ocampo, J. (2021). Effectiveness of Self-Learning Modules in Teaching and Learning during the COVID-19 Pandemic in the Philippines. *International Journal of Educational Research and Innovation*, 11, 25-37.
3. Allen, I. E., & Seaman, J. (2013). *Changing Course: Ten Years of Tracking Online Education in the United States*. Babson Survey Research Group.
4. Alon, J., Reyes, M., & Cruz, L. (2022). Effectiveness of Self-Learning Modules (SLMs) in Improving the Academic Performance of Grade III Pupils. Paper Publications.
5. Alonzo, A., Santos, J., & Ramos, R. (2021). The Impact of Self-Learning Modules on Student Engagement and Learning Outcomes during the COVID-19 Pandemic. *Philippine Journal of Education Research*, 10(2), 45-58.
6. Ang, A. A., Ramos, S. A., & Velasco, R. F. (2022). Teacher-Student Interaction and Learning Continuity during the COVID-19 Pandemic: Perspectives from Philippine Elementary Schools. *Asian Journal of Education and e-Learning*, 10(1), 15-22.
7. Arkorful, V., & Abaidoo, N. (2015). The role of e-learning, advantages, and disadvantages of its adoption in higher education. *International Journal of Instructional Technology and Distance Learning*, 12(1), 29-42.
8. Baker, J. A., & McNulty, S. (2020). The Impact of Natural Disasters on Students' Educational Outcomes: A Review of the Literature. *Journal of Education and Social Policy*, 7(1), 21-30.
9. Bandura, A. (1997). *Self-Efficacy: The Exercise of Control*. W.H. Freeman and Company.
10. Bao, W. (2020). COVID-19 and Online Teaching in Higher Education: A Case Study of Peking University. *Human Behavior and Emerging Technologies*, 2(2), 113-115.
11. Bol, L. (2022). Digital Learning in Crisis: Evaluating Remote Education Strategies. *Journal of Educational Technology*, 29(3), 45-61.
12. Bosak, K., & Ahmadi-Mazhin, R. (2023). *The role of distance education in disaster preparedness and response: A review of recent literature*. *Disaster Prevention and Management*, 32(4), 512-528. <https://pmc.ncbi.nlm.nih.gov/articles/PMC10920769/>
13. Cruz, M. J., & Santos, R. (2022). Enhancing Student Independence through Online Self-Learning Modules in the Philippines: Challenges and Opportunities. *Asia-Pacific Education Review*, 23(1), 105-120.

14. Dadios, E. P., Magabo, J. P., & Rivera, J. P. (2021). Self-learning modules as an alternative learning strategy during the pandemic: A Philippine perspective. *Journal of Learning and Teaching Innovations*, 3(2), 89-104.
15. Deci, E. L., & Ryan, R. M. (2000). The "What" and "Why" of Goal Pursuits: Human Needs and the Self-Determination of Behavior. *Psychological Inquiry*, 11(4), 227-268.
16. Department of Education (DepEd). (2021). Report on the implementation of self-learning modules in various regions of the Philippines. Retrieved from <https://www.deped.gov.ph/report-on-the-implementation-of-self-learning-modules>
17. DepEd Order No. 12, s. 2020. Adoption of the Basic Education Learning Continuity Plan for School Year 2020-2021 in the Light of the COVID-19 Public Health Emergency.
18. ERIC (2022). Lessons Learned from Emergency Remote Teaching: The Role of Self-Learning Modules in Educational Continuity During Calamities. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1332118.pdf>
19. ERIC. (2021). The impact of demographic characteristics on academic performance. Retrieved from <https://files.eric.ed.gov/fulltext/EJ1289894.pdf>
20. Fides. (2021). Schools at risk due to natural disasters. Retrieved from [fides.org](https://www.fides.org)
21. Garrison, D. R. (2016). *Thinking collaboratively: Learning in a community of inquiry*. Routledge.
22. Garrison, D. R., & Akyol, Z. (2015). The Community of Inquiry Framework: A Critical Framework for the Development of Online Learning. In *Handbook of Research on Educational Communications and Technology* (pp. 125-136). Springer.
23. Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference Between Emergency Remote Teaching and Online Learning. *Educause Review*. Retrieved from Educause.
24. Hwang, G. J., & Chen, C. H. (2020). Effects of Interactive Online Learning on Students' Learning Performance and Retention: A Study in the Context of Higher Education. *Education and Information Technologies*, 25(1), 113-133.
25. International Journal Corner. (n.d.). Impact of Typhoon Disasters on Child's Education. Retrieved from [internationaljournalcorner.com](https://www.internationaljournalcorner.com)
26. Knowles, M. S. (1975). *Self-directed learning: A guide for learners and teachers*. New York: Association Press.
27. Ladriagan, D., & Janna, A. (2021). The effectiveness of self-learning modules in basic education during the COVID-19 pandemic: A case study in the Philippines. *International Journal of Educational Research and Technology*, 12(3), 456-469.

28. Lim, C. (2022). Exploring Self-Efficacy and Learning Adaptation among Filipino Students during Calamities. *Journal of Southeast Asian Education Research*, 10(1), 67-82.
29. Lim, S., Garcia, T., & Santos, P. (2021). Teachers' experiences in delivering self-learning modules during the pandemic: A qualitative study. *Philippine Journal of Teacher Education*, 5(3), 15-30.
30. Mackey, J. (2012). Blended Learning for Academic Resilience in Times of Disaster or Crisis. *Journal of Online Learning and Teaching*, 8(2). Retrieved from jolt.merlot.org
31. Mackey, J., Gilmore, F., Dabner, N., Breeze, D., & Buckley, C. (2020). Blended learning for academic resilience in times of disaster. *Journal of Online Learning and Teaching*, 8(2), 122-134.
32. Mackey, K. et al. (2012). Blended Learning for Academic Resilience During Natural Disasters and Crises. *Journal of Online Learning and Teaching*, 8(2), 126-133. Retrieved from https://jolt.merlot.org/vol8no2/mackey_0612.pdf
33. MERLOT *Journal of Online Learning and Teaching*. (2012). Blended learning for academic resilience in times of disaster or crisis. Retrieved from https://jolt.merlot.org/vol8no2/mackey_0612.pdf
34. Meyer, H. D., & Benavot, A. (2020). Comparative Education: The Dialectic of Globalization and Local Knowledge. In D. N. Plank, D. H. Meyer, & A. Benavot (Eds.), *The International Encyclopedia of Education* (3rd ed., pp. 169-176). Elsevier.
35. Moore, M. G., & Kearsley, G. (2011). *Distance Education: A Systems View of Online Learning* (3rd Edition). Wadsworth.
36. PMC (2021). Evaluation of an E-Learning Initiative (ELITE-DR) for Teaching Emergency Disaster Response. Retrieved from <https://pmc.ncbi.nlm.nih.gov/articles/PMC8116625>
37. PMC (2024). Distance Education in Disaster Preparedness: The Role of Self-Learning Modules in Maintaining Educational Continuity. Retrieved from <https://pmc.ncbi.nlm.nih.gov/articles/PMC10920769>
38. PMC. (2020). E-Learning in Teaching Emergency Disaster Response Among Medical Students. Retrieved from [pmc.ncbi.nlm.nih.gov](https://pmc.ncbi.nlm.nih.gov/articles/PMC8116625)
39. PMC. (2023). Applied distance learning methods in disaster preparedness. Retrieved from <https://pmc.ncbi.nlm.nih.gov/articles/PMC10920769/>

40. Ramos, M. J., Santos, A. R., & Verano, M. T. (2021). Blended Learning Implementation during the COVID-19 Pandemic: A Case Study in the Philippines. *Journal of Education and Practice*, 12(5), 105-114.
41. Ramos, M., Cruz, J., & Bautista, L. (2021). Effectiveness of self-learning modules among high school students in rural areas during the COVID-19 pandemic. *Philippine Journal of Education Research*, 9(2), 45-60.
42. Rañon, A., De Leon, R., & Estrella, M. (2022). Implementation of self-learning modules in selected schools in Metro Manila: A focus on access and challenges. *Asian Journal of Education and Social Studies*, 23(1), 1-12.
<https://doi.org/10.9734/ajess/2022/v23i130586>
43. Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in distance learning during the COVID-19 pandemic. *Computers & Education*, 103701.
44. Reimers, F. & Schleicher, A. (2020). Supporting the Continuity of Learning during COVID-19: The Role of Education Systems. OECD Education Working Papers, No. 224. OECD Publishing, Paris.
45. Reliefweb. (2015). Education Disrupted: Disaster Impacts on Education in the Asia-Pacific Region. Retrieved from reliefweb.int
46. ResearchGate (2024). E-Module in Blended Learning: Its Impact on Students' Disaster Preparedness and Innovation in Developing Learning Media. Retrieved from https://www.researchgate.net/publication/353317656_E-module_in_Blended_Learning_Its_Impact_on_Students%27_Disaster_Preparedness_and_Innovation_in_Developing_Learning_Media
47. ResearchGate. (2021). E-Module in blended learning: Its impact on students' disaster preparedness and innovation in developing learning media. Retrieved from https://www.researchgate.net/publication/353317656_E-module_in_Blended_Learning_Its_Impact_on_Students%27_Disaster_Preparedness_and_Innovation_in_Developing_Learning_Media
48. Reyes, L., & Villanueva, M. (2023). Intrinsic Motivation and Learning Engagement in Self-Learning Modules: Evidence from Filipino Students. *Philippine Educational Research Journal*, 12(3), 32-46.
49. Reyes, P., & Dela Cruz, R. (2021). A Tool to Assess the Quality of Self-Learning Modules (SLMs) for the 'New Normal' in Education Using the Best-Worst Method. IAFOR.

50. Santos, E., Gomez, H., & Tan, C. (2021). An Appeal for Help: The Struggles of Readers Using Self-Learning Modules. *International Journal of Research and Innovation in Social Science*.
51. Simonson, M., Smaldino, S., Albright, M., & Zvacek, S. (2019). *Teaching and Learning at a Distance: Foundations of Distance Education (7th Edition)*. Information Age Publishing.
52. Sumarmi, S., Bachri, S., Amprasto, A., & Utomo, D. H. (2021). *E-modules in blended learning: Innovation in geography learning during the COVID-19 pandemic and disaster preparedness*. *Education Research International*, *2021*, 1-10.
<https://eric.ed.gov/?id=EJ1319083>
53. Vaughan, N. D., Couros, A., & Colosky, D. (2013). Defining Blended Learning in Higher Education: An Integrative Review of the Literature. *International Journal for the Scholarship of Teaching and Learning*, 7(1), 1-17.
54. Villanueva, K., Mendoza, R., & Lopez, J. (2022). E-Module in Blended Learning: It's Impact on Students' Disaster Preparedness and Innovation in Developing Learning Media. ERIC.
55. Julaton, G. T., Malabarbas, M. A., & Magdaraog, F. D. (2020). *Effectiveness of self-*
56. *learning modules of add-on subjects of the Grade 8 STE classes. International*
57. *Journal of Science Academic Research*, 2(12), 4045–4055.
58. Ramirez, M. T., Naparan, J. A., & Naparan, G. B. (2022). *Guiding children through self-*
59. *learning modules (SLMs): Exploring parents' experiences. The Normal Lights*, 16(2), 1–
- 21.
60. Pentang, J. T., Bautista, R. M., & Colleagues. (2022). *Modular learning efficiency:*
61. *Learners' attitude and performance towards self-learning modules. IOER International*
- Multidisciplinary Research Journal*, 4(2), 60–72.
62. Mercado, F. L. (2024). *Relationship between junior high students' perceptions of self-*
63. *learning modules and their academic performance. Journal of Research, Policy &*
- Practice of Teachers and Teacher Education*, 14(2), 15–27.
<https://doi.org/10.37134/jrppte.vol14.2.2.2024>
64. Alicabo, M. A. S., & Cacharo, A. A. (2025). *Assessing the effectiveness of self-learning*
65. *modules to ensure educational continuity during calamities. Psychology and Education: A Multidisciplinary Journal*, 42(8), 1152–1163.
66. Mercado, F. L. (2024). *Relationship between junior high students' perceptions of self-*

67. *learning modules and their academic performance. Journal of Research, Policy & Practice of Teachers and Teacher Education, 14(2), 15–27.*
<https://doi.org/10.37134/jrpptte.vol14.2.2.2024>
68. Pentang, J. T., Bautista, R. M., & Colleagues. (2022). *Learner adaptability and*
69. *engagement in modular distance learning. International Multidisciplinary Research Journal, 4(1), 45–58.*
70. Bacomo, A. C. C., Daculap, L. P., Ocampo, M. G. O., Pagua, C. D., Pentang, J. T., & Bautista, R. M. (2022). *Modular learning efficiency: Learners' attitude and performance*
71. *towards self-learning modules. IOER International Multidisciplinary Research Journal, 4(2), 60–72.*
72. Jaballa, J. A. (2023). *Effectiveness of self-learning modules in teaching senior high school*
73. *subjects. Journal of Research and Innovation in Education, 1(2), 31–39.*
74. Pentang, J. T., Bautista, R. M., & Colleagues. (2022). *Learners' independence and*
75. *performance in modular distance learning. International Multidisciplinary Research Journal, 4(1), 45–58.*
76. Alicabo, M. A. S., & Cacharo, A. A. (2025). *Assessing the effectiveness of self-learning*
77. *modules to ensure educational continuity during calamities. Psychology and Education: A Multidisciplinary Journal, 42(8), 1152–1163.*
78. Ramirez, M. T., Naparan, J. A., & Naparan, G. B. (2022). *Guiding children through self-*
79. *learning modules (SLMs): Exploring parents' experiences. The Normal Lights, 16(2), 1–21.*
80. Julaton, G. T., Malabarbas, M. A., & Magdaraog, F. D. (2020). *Effectiveness of self-*
81. *learning modules of add-on subjects of the Grade 8 STE classes. International Journal of Science Academic Research, 2(12), 4045–4055.*
82. Pentang, J. T., Bautista, R. M., & Colleagues. (2022). *Modular learning efficiency:*
83. *Learners' attitude and performance towards self-learning modules. IOER International Multidisciplinary Research Journal, 4(2), 60–72.*