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Challenges and Opportunities on E-Learning of Basilan National High School Teachers During COVID-19 Pandemic

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Abstract

This study examined the challenges and opportunities of implementing e-learning at Basilan National High School during the COVID-19 pandemic. Using a qualitative design, the researcher conducted separate focus group discussions with selected junior high school teachers and department heads. An open-ended questionnaire guided the discussions, and responses were transcribed, coded, categorized, and analyzed through constant comparison. Teachers reported that unreliable internet connectivity, limited access to devices and instructional materials, and insufficient training disrupted online instruction. They also described difficulties sustaining student participation, assessing learning, providing timely feedback, and managing the additional workload of adapting lessons. Department heads identified opportunities to broaden access to learning materials, support self-paced and personalized instruction, strengthen collaboration, and expand professional development through online training. The study concluded that e-learning offered flexibility, but its usefulness depended on equitable access to technology and adequate support for teachers. School administrators and division officials should prioritize reliable connectivity, access to devices, technical assistance, and training in online instruction and assessment. Teachers should provide flexible access to materials and timely feedback to students. The findings reflect educators' accounts from one school during the pandemic and offer indirect insight into students' experiences, with no direct measurement of learning outcomes. By identifying barriers to participation alongside opportunities for flexible instruction, the study provides school leaders with a basis for allocating resources and planning teacher development. These priorities align with Sustainable Development Goal 4 (Quality Education) and can help schools sustain inclusive instruction during disruptions and prepare for the continued use of digital tools in classrooms.

Keywords: COVID-19 Pandemic, Digital Divide, E-Learning, Focus Group Discussions, Junior High Teachers, Personalized Learning, Teacher Professional Development

1. Introduction

COVID-19 emerged in late 2019 (David J. Sencer CDC Museum, 2023). School closures prompted a rapid shift to remote instruction, but the reach and quality of provision varied (World Bank et al., 2021). In K–12 settings, online instruction relies on technology access, educator preparation, and course design that supports interaction and assessment (Johnson et al., 2023). At BNHS, teachers adapted lessons and assessments, learned unfamiliar platforms, and sought ways to support students remotely.

Access to devices, connectivity, and a workable home learning environment shaped participation in emergency remote instruction. Filipino students reported difficulties with their home learning environment and access to resources (Barrot et al., 2021). In Sri Lankan distance education, students described digital literacy, infrastructure, and financial barriers (Madhubhashini, 2022a). International guidance likewise identifies access and teacher preparation as conditions for equitable educational technology use (UNESCO, 2023). Teachers faced substantial changes in work and instructional responsibilities. Filipino teachers described limited resources, heavier workloads, and opportunities for professional growth (Collado et al., 2021). A study with Philippine senior high school teachers documented the adjustment to teaching at a distance (Corcuera & Alvarez, 2021). Reviews of K–12 remote teaching emphasize professional development and technical and instructional support (Crompton et al., 2022), while accounts from educators describe how emergency teaching affected professional practice and well-being (Trust & Whalen, 2021). Synchronous delivery supports immediate interaction, while asynchronous delivery gives learners time to review materials independently. In India, students reported screen-related stress during live sessions and pressures from independent workloads, alongside benefits from combining the two formats (Fernandez et al., 2022). Philippine national research also documented teachers' adjustments to emergency instruction and assessment (Bulaon-Ducusin, 2021). In an Indian higher education study, instructor quality, course design, and prompt feedback were associated with student satisfaction (Gopal et al., 2021). Digital tools can support self-paced, adaptive, and collaborative learning. An adaptive environment was associated with greater engagement in a higher education setting (El-Sabagh, 2021). Research on social e-learning and online assessment examined how assessment formats could support student-centered instruction (Al-Ansi, 2022). In K–12 instruction, accessible resources, individualization, active learning, connected learners, and real-time assessment are among the practices identified in a systematic review (Johnson et al., 2023). Readiness also matters. In a study of pre-service teachers, readiness for online learning was negatively associated with social anxiety in e-learning environments (Çam & İşbulan, 2023). Research on language educators' transition to emergency remote teaching similarly examined changes in readiness and instructional practice across school and postsecondary settings (Moser et al., 2021). Instructional design affects how learners use online materials. Work on software instruction describes how technology-based materials can manage demands on working memory (Darejeh et al., 2022).

In the Philippines, DepEd Order No. 012 provided for multiple learning delivery modalities during the public health emergency (Department of Education, 2020a), and DepEd Order No. 032 established guidelines for engaging learning support aides (Department of Education, 2020b). DepEd later issued the 2022–2023 school calendar and transitional arrangements for resuming in-person instruction (Department of Education, 2022). At BNHS, School Learning Action Cell sessions introduced teachers to e-learning platforms. Teachers supplemented self-learning materials and assessments with online instruction and communication through Messenger, Google Classroom, Google Meet, Zoom, and MS Teams. An international review of K–12 emergency remote teaching documented both opportunities and challenges for teachers and students (Al Mazrooei et al., 2022). In Sri Lankan secondary education, participants reported flexibility alongside technical and access barriers (Madhubhashini, 2022b). At the elementary level, a study examined how messaging and teacher-managed platforms supported remote delivery despite connectivity and device constraints (Adenan, 2022).

The study draws on cognitive load and multimedia learning principles, which explain how design can manage the demands of processing instructional material and support learning (Mayer & Fiorella, 2021; Mayer & Moreno, 2003). The design of interactive multimodal environments also informs the use of digital resources and activities (Moreno & Mayer, 2007). Bourdieu's (1972/1977) theory of practice links everyday action to individual dispositions and social structures. Applied to BNHS, it provides a basis for examining how teachers adapted instructional practices within the resources and institutional conditions available during the pandemic. The conceptual framework locates teachers' experiences within the context of their professional and demographic characteristics. It organizes the inquiry around the challenges and opportunities of e-learning, including differences in delivery schedules, ways of presenting and adapting materials, and individual and collaborative learning. The framework links these experiences to teacher technical skills and online instructional strategies.

Research on emergency remote teaching has documented recurring concerns about digital access, teacher preparation, instructional design, and student participation (Al Mazrooei et al., 2022; Crompton et al., 2022; Johnson et al., 2023). Philippine studies describe teachers' transition to remote work and instruction (Collado et al., 2021; Corcuera & Alvarez, 2021). The BNHS inquiry extends this discussion by documenting how junior high school educators experienced these issues and what opportunities they identified in their own setting. These studies frame the local inquiry into two questions: what challenges BNHS junior high school teachers encountered and what opportunities educators identified while using e-learning during the pandemic. The inquiry focused on junior high school educators and was intended to inform school support and the use of e-learning to supplement face-to-face instruction.

The study aligns with Sustainable Development Goal 4 (Quality Education) through its focus on access to instruction and teacher preparedness. By examining how connectivity, digital resources, and teacher training

shaped pandemic-era instruction at BNHS, it identifies conditions that school leaders can consider when planning more inclusive and flexible learning.

The study's educational relevance lies in identifying ways for teachers to maintain instruction, student interaction, and assessment during disruptions. Its technological relevance concerns the connectivity, equipment, and skills needed to use digital platforms consistently. At the institutional level, the accounts can inform decisions about professional development, technical assistance, and resource sharing when BNHS uses e-learning alongside classroom instruction.

2. Material and methods

2.1 Research Design

The study employed a qualitative research design to explore participants' experiences with e-learning during the pandemic. Separate focus group discussions were used to elicit the experiences of department heads and subject teachers.

2.2 Locale of the Study

The study was conducted in the Junior High School Department of Basilan National High School.

2.3 Respondents of the Study

The target population comprised 200 junior high school teachers, including department heads. The study drew participants from department heads across different departments and from subject teachers or classroom advisers.

2.4 Sample and Sampling Procedure

The sampling plan specified 10 department heads and 12 subject teachers or classroom advisers for separate focus groups. Published evidence on qualitative sample adequacy emphasizes the importance of the study population and analytic purpose when interpreting sample size (Hennink & Kaiser, 2022).

2.5 Research Instrument

An open-ended, unstructured questionnaire guided the focus group discussions. Validity concerns how well a measure corresponds to its purpose (Borg & Gall, 1989). The methodology called for at least three experts to assess the face validity of the questions. The questionnaire elicited narrative responses, and the methodology did not include a quantitative reliability test.

2.6 Data Gathering Procedure

The procedure called for securing the school principal's approval before identifying participants. Before each discussion, the researcher was to explain the study's purpose and objectives and obtain informed consent. A secretary was assigned to take minutes. The discussion with teachers focused on the challenges they encountered, while the discussion with department heads focused on the opportunities they identified.

2.7 Data Analysis Techniques

The qualitative responses were recorded and transcribed. The analysis used coding, categorization, and constant comparison to identify similarities and differences across responses. The findings were presented in narrative form.

3. Results and Discussion

3.1 Challenges in Implementing E-Learning

3.1.1 Technical Difficulties

Teachers reported unstable internet connections, software glitches, device failures, and compatibility issues. These problems interrupted lessons, delayed access to materials and assignment submissions, and sometimes caused teachers to lose unsaved work. Because instruction depended on functioning devices and platforms, technical failures affected lesson continuity and student participation. Teachers described troubleshooting during class and switching to alternative ways of delivering lessons when problems arose.

3.1.2 Limited Training and Familiarity with Digital Tools

Some teachers had difficulty navigating learning platforms, uploading content, using electronic class records, and submitting school forms. They reported relying on colleagues, trial and error, and self-directed learning to complete unfamiliar tasks. The transition required teachers to develop technical skills while continuing to teach and assess students. Participants linked limited training and prior experience to lower confidence and efficiency in delivering online lessons, engaging students, and providing feedback.

3.1.3 Limited Access to Learning Resources

Teachers reported limited access to computers, reliable internet, and electricity. They also observed that some students lacked textbooks or digital materials and had fewer opportunities to use libraries and laboratories. Teachers responded by sharing digital and printed materials and using virtual experiments where possible. Resource limitations affected both routine school tasks and the kinds of learning activities teachers could offer. Virtual experiments and shared materials provided alternative ways to continue instruction, while restricted access to laboratories reduced opportunities for hands-on practice.

3.1.4 Student Engagement and Participation

Teachers reported difficulty motivating students, sustaining participation, and judging understanding during online lessons. Some students could not attend live sessions, and teachers found it harder to observe reactions, maintain a sense of connection, and adapt activities to different learning needs. Limited attendance and fewer opportunities to observe students made it harder for teachers to adjust instruction in the moment. Participants identified interactive materials, virtual simulations, and individual support as possible ways to address these difficulties, particularly in subjects that rely on practical activities.

3.1.5 Assessment and Feedback

Teachers found it difficult to monitor progress, verify the authenticity of students' work, and provide timely, individualized feedback. They also expressed concern that differences in connectivity, learning resources, and support at home could affect assessment performance. These concerns made fairness and academic integrity central to online assessment. Participants identified clear rubrics, flexible submission arrangements, and tasks that required students to apply their knowledge as ways to support fairer evaluation and more meaningful feedback.

3.1.6 Communication and Collaboration

Teachers reported difficulty maintaining clear communication, coordinating group work, and ensuring that students had opportunities to contribute. They also described delays when students had to wait for answers or feedback during asynchronous activities. Fewer opportunities to observe nonverbal cues made it harder to gauge understanding and offer individual support. Online group work also required teachers to pay closer attention to how students communicated and contributed through the available platforms.

3.1.7 Inequity and Accessibility Barriers

Teachers observed unequal access to devices, reliable internet, quiet study spaces, and support at home. They also identified barriers for students with disabilities, students who needed language support, and students from different cultural backgrounds. Participants described accessibility as a matter of both access to technology and the ability to use learning materials. They identified offline and multilingual resources, accessible platform features, flexible deadlines, and individualized assistance as ways to respond to different barriers.

3.1.8 Time Management and Workload

Teachers reported spending additional time adapting lesson plans, developing digital materials, learning platforms, grading assignments, and supporting students individually. They also found it difficult to coordinate live and independent activities and to maintain boundaries between work and personal time. Online instruction added preparation and coordination to teachers' existing responsibilities. Participants identified shared planning, clearer schedules and expectations, and more realistic workload distribution as ways to manage these demands.

3.2 Opportunities Identified in E-Learning

3.2.1 Wider Access to Instruction

Department heads reported that online platforms gave students an alternative way to attend lessons and obtain materials from home. They identified potential benefits for students facing long commutes, transportation difficulties, physical limitations, or family responsibilities. Remote access offered an alternative for students who faced barriers to attending in person. The access challenges reported by teachers also showed that students' ability to use this option depended on available devices, connectivity, and appropriate support.

3.2.2 Flexibility in Learning

Department heads noted that students could access materials at convenient times, revisit recorded lessons, and study at their own pace. They also reported that flexible scheduling helped students balance schoolwork with other responsibilities. The ability to pause and review lessons gave students more control over how they used their study time. Participants viewed this flexibility as an opportunity for students to work independently and spend more time on topics they found difficult or wanted to explore further.

3.2.3 Collaboration and Communication Through Online Tools

Department heads identified discussion forums, chat, videoconferencing, and virtual group projects as ways for students to communicate with teachers and peers. They described opportunities to share resources, exchange ideas, and receive immediate clarification during live interactions. These tools created opportunities for teamwork and

peer learning when students could participate. Live exchanges offered immediate clarification, while the delays described by teachers showed how communication could differ during asynchronous activities.

3.2.4 Personalized Learning

Department heads identified videos, digital modules, simulations, self-assessment quizzes, and progress-tracking tools as resources for adapting learning to individual needs. They reported that students could focus on areas where they needed additional support or explore topics of interest. Participants viewed these resources as ways for teachers to tailor instruction and for students to monitor their progress. The range of materials and activities also gave students more choices in how they reviewed lessons and worked toward their learning goals.

3.2.5 Continuous Professional Development

Department heads reported that educators could access online courses, webinars, workshops, and virtual conferences. They also identified online communities and forums as opportunities to connect with colleagues and exchange resources and teaching practices.

4. Conclusion & Recommendations

The study found that e-learning gave Basilan National High School a way to continue junior high school instruction during the COVID-19 pandemic, but teachers' and department heads' accounts showed that its benefits depended on access to resources and support for online teaching. Unreliable connectivity, limited access to devices and materials, and uneven familiarity with digital platforms made it difficult for teachers to deliver lessons consistently. Teachers also found it harder to sustain student participation, assess understanding, and provide timely feedback while managing the additional work of adapting lessons. At the same time, participants identified opportunities to reach students who faced barriers to attending in person, provide materials that students could revisit at their own pace, and tailor instruction to individual needs. Online tools also offered ways for students to collaborate and for teachers to continue their professional development. Together, these accounts show how e-learning offered greater flexibility while creating new demands for teachers and students.

Education policymakers and school administrators should prioritize reliable internet access, adequate devices, and technical support for teachers and students with limited access. Where connectivity remains unreliable, teachers should provide offline materials and flexible submission options so students can continue learning when they cannot join live sessions. The division office should organize regular, practical training on platform use, online lesson design, student engagement, and remote assessment. School administrators should support shared planning and the exchange of teaching materials to help teachers manage preparation demands. Teachers should use clear rubrics and assessments that ask students to apply what they have learned, while allowing flexibility when access barriers affect submission. They should also pair live sessions with recordings or self-paced materials and use available communication tools to clarify instructions and provide timely feedback. Future research may evaluate whether the training and technical support address the difficulties teachers identified.

The study drew on qualitative focus group accounts from selected junior high school teachers and department heads at one school during the COVID-19 pandemic. Its findings reflect the experiences of those participants, and their transferability to other schools or to regular blended learning settings depends on differences in resources and instructional conditions. Students' experiences were reported by educators, and the study did not directly measure student learning outcomes. Future studies could include students' accounts, compare schools with different levels of digital access, and track teaching practices and student outcomes over time to examine whether the reported challenges and opportunities persist.

5. Compliance with ethical standards

The study's ethical protocol provided for obtaining permission from the principal of Basilan National High School and informed consent from participating teachers and department heads before conducting focus group discussions. Participants were to be informed of the study's objectives and procedures, with consideration for their privacy and confidentiality. The author acknowledges the support of school administrators, participants, research adviser, and panel members. Confirmation of informed consent, ethics review or exemption, and conflict-of-interest disclosure remains pending.

REFERENCES

Adenan, F. (2022). How is e-learning-based distance learning implemented in elementary schools? *Al-Ishlah: Jurnal Pendidikan, 14*(4), 6527–6538. https://alishlah.ahfpublishing.id/alishlah/article/view/1483

Al-Ansi, A. M. (2022). Reinforcement of student-centered learning through social e-learning and e-assessment. *SN Social Sciences, 2*(9), Article 194. https://doi.org/10.1007/s43545-022-00502-9

Al Mazrooei, A. K., Almaki, S. H., Gunda, M., Alnoor, A., & Sulaiman, S. M. (2022). A systematic review of K–12 education responses to emergency remote teaching during the COVID-19 pandemic. *International Review of Education, 68*(6), 811–841. https://doi.org/10.1007/s11159-023-09986-w

Barrot, J. S., Llenares, I. I., & del Rosario, L. S. (2021). Students' online learning challenges during the pandemic and how they cope with them: The case of the Philippines. *Education and Information Technologies, 26*(6), 7321–7338. https://doi.org/10.1007/s10639-021-10589-x

Borg, W. R., & Gall, M. D. (1989). *Educational research: An introduction* (5th ed.). Longman.

Bourdieu, P. (1977). *Outline of a theory of practice* (R. Nice, Trans.). Cambridge University Press. (Original work published 1972) https://doi.org/10.1017/CBO9780511812507

Bulaon-Ducusin, G. (2021, August 11). *Remote learners need remediation, teachers say*. Department of Science and Technology. https://www.dost.gov.ph/knowledge-resources/news/72-2021-news/2391-remote-learners-need-remediation-teachers-say.html

Çam, E., & İşbulan, O. (2023). The effect of pre-service teachers' readiness for online learning on their social anxiety in e-learning environments. *International Journal of Educational Research Review, 8*(1), 102–109. https://doi.org/10.24331/ijere.1221364

Collado, Z. C., Concha, C. B. A., & Orozco, N. M.-I. G. (2021). Teaching in transition: How do Filipino teachers face the migration to cyberspace amid the pandemic? *Computers in the Schools, 38*(4), 281–299. https://doi.org/10.1080/07380569.2021.1988317

Corcuera, L. C., & Alvarez, A. V., Jr. (2021). From face-to-face to teaching at a distance: Lessons learned from emergency remote teaching. *Asian Journal of Distance Education, 16*(2), 166–179. https://doi.org/10.5281/zenodo.5793090

Crompton, H., Burke, D., Jordan, K., & Wilson, S. (2022). Support provided for K–12 teachers teaching remotely with technology during emergencies: A systematic review. *Journal of Research on Technology in Education, 54*(3), 473–489. https://doi.org/10.1080/15391523.2021.1899877

Darejeh, A., Mashayekh, S., & Marcus, N. (2022). Cognitive-based methods to facilitate learning of software applications via e-learning systems. *Cogent Education, 9*(1), Article 2082085. https://doi.org/10.1080/2331186X.2022.2082085

David J. Sencer CDC Museum. (2023, March 15). *CDC Museum COVID-19 timeline*. Centers for Disease Control and Prevention. https://stacks.cdc.gov/view/cdc/126356

Department of Education. (2020a, June 19). *Adoption of the Basic Education Learning Continuity Plan for school year 2020–2021 in the light of the COVID-19 public health emergency* (DepEd Order No. 012, s. 2020). https://www.deped.gov.ph/wp-content/uploads/2020/06/DO_s2020_012.pdf

Department of Education. (2020b, October 15). *Guidelines on the engagement of services of learning support aides to reinforce the implementation of the Basic Education Learning Continuity Plan in time of COVID-19 pandemic* (DepEd Order No. 032, s. 2020). https://www.deped.gov.ph/wp-content/uploads/2020/10/DO_s2020_032-.pdf

Department of Education. (2022, July 11). *School calendar and activities for the school year 2022–2023* (DepEd Order No. 034, s. 2022). https://www.deped.gov.ph/wp-content/uploads/2022/07/DO_s2022_034.pdf

El-Sabagh, H. A. (2021). Adaptive e-learning environment based on learning styles and its impact on development students' engagement. *International Journal of Educational Technology in Higher Education, 18*(1), Article 53. https://doi.org/10.1186/s41239-021-00289-4

Fernandez, C. J., Ramesh, R., & Raja Manivannan, A. S. (2022). Synchronous learning and asynchronous learning during COVID-19 pandemic: A case study in India. *Asian Association of Open Universities Journal, 17*(1), 1–14. https://doi.org/10.1108/AAOUJ-02-2021-0027

Gopal, R., Singh, V., & Aggarwal, A. (2021). Impact of online classes on the satisfaction and performance of students during the pandemic period of COVID 19. *Education and Information Technologies, 26*(6), 6923–6947. https://doi.org/10.1007/s10639-021-10523-1

Hennink, M., & Kaiser, B. N. (2022). Sample sizes for saturation in qualitative research: A systematic review of empirical tests. *Social Science & Medicine, 292*, Article 114523. https://doi.org/10.1016/j.socscimed.2021.114523

Johnson, C. C., Walton, J. B., Strickler, L., & Elliott, J. B. (2023). Online teaching in K–12 education in the United States: A systematic review. *Review of Educational Research, 93*(3), 353–411. https://doi.org/10.3102/00346543221105550

Madhubhashini, G. T. (2022a). Digital divide: Challenges faced by the university students in the context of open and distance learning (ODL) during the COVID-19 pandemic. *The Journal of Development Communication, 33*(1), 16–23. https://jdc.journals.unisel.edu.my/index.php/jdc/article/view/222

Madhubhashini, G. T. (2022b). E-learning in secondary education during the COVID-19 pandemic. *VISTAS Journal of Humanities and Social Sciences, 15*(1), 31–45. https://www.academia.edu/93521534/E_Learning_in_secondary_education_during_the_Covid_19_pandemic

Mayer, R. E., & Fiorella, L. (Eds.). (2021). *The Cambridge handbook of multimedia learning* (3rd ed.). Cambridge University Press. https://doi.org/10.1017/9781108894333

Mayer, R. E., & Moreno, R. (2003). Nine ways to reduce cognitive load in multimedia learning. *Educational Psychologist, 38*(1), 43–52. https://doi.org/10.1207/S15326985EP3801_6

Moreno, R., & Mayer, R. (2007). Interactive multimodal learning environments. *Educational Psychology Review, 19*(3), 309–326. https://doi.org/10.1007/s10648-007-9047-2

Moser, K. M., Wei, T., & Brenner, D. (2021). Remote teaching during COVID-19: Implications from a national survey of language educators. *System, 97*, Article 102431. https://doi.org/10.1016/j.system.2020.102431

Trust, T., & Whalen, J. (2021). Emergency remote teaching with technology during the COVID-19 pandemic: Using the whole teacher lens to examine educator's experiences and insights. *Educational Media International, 58*(2), 145–160. https://doi.org/10.1080/09523987.2021.1930479

UNESCO. (2023). *Global education monitoring report, 2023: Technology in education: A tool on whose terms?* https://doi.org/10.54676/UZQV8501

World Bank, UNESCO, & UNICEF. (2021). *The state of the global education crisis: A path to recovery*. https://documents.worldbank.org/curated/en/416991638768297704/pdf/The-State-of-the-Global-Education-Crisis-A-Path-to-Recovery.pdf