



BLENDING LEARNING MODALITY: AN INSTRUCTIONAL APPROACH

Jean Rose M. Casumpang¹

¹Student, Graduate School, Rizal Memorial Colleges, Inc.

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ABSTRACT

This research investigated the experiences of ten (10) English teachers in the South Cotabato Division, Philippines, as they implemented blended learning and navigated the challenges associated with it. Using a qualitative research approach, the study aimed to gain insights into how educators adapted to a teaching model that integrates traditional classroom instruction with online learning components. Although blended learning presents opportunities for flexible and engaging education, it also poses significant obstacles, such as the need for digital competence, unequal student access to technology, and the difficulty of balancing online and offline teaching methods. Through in-depth interviews, the study uncovered major concerns, including insufficient training in digital pedagogy, unstable internet access, and the demanding task of developing effective and inclusive online materials. Despite these issues, the participants exhibited perseverance and adaptability, engaging in independent learning, maximizing the use of limited resources, and finding creative ways to keep students actively involved. Their efforts reflect a strong dedication to maintaining educational quality within a blended learning environment. The insights gained from this study can inform educational stakeholders and policymakers on how to better support teachers in blended learning contexts. It highlights the need for targeted training programs, improved access to digital tools, and comprehensive institutional support. Overall, the study contributes to strengthening English language education and fostering more inclusive, technology-enhanced learning environments.

KEYWORDS: *Blended Instruction, English Language Teaching, Teacher Experiences, Digital Challenges, Adaptive Strategies, Qualitative Inquiry*

INTRODUCTION

A popular educational strategy that blends traditional in-person instruction with online learning to offer a more flexible, interesting, and customized approach is blended learning. The benefits of direct connection are combined with the convenience and accessibility of digital tools in this approach, which is becoming more and more popular, especially in elementary and secondary schools. Teachers struggle with adjusting to new teaching methods, handling digital data, and maintaining student interest both in-person and virtually, even if blended learning provides greater flexibility and a wider range of learning opportunities. Teachers must learn new skills to effectively mix in-person and online parts, and challenges like consistent internet connectivity and gadget compatibility can be particularly difficult in low-income settings.

These infrastructure issues highlight the necessity of concentrated efforts to improve the logistical and technological framework that underpins blended learning in Africa. Many students cannot fully benefit from this flexible, inclusive approach to education if they do not have access to digital gadgets, dependable electricity, and constant internet connectivity. Hodges et al. al. (2020) caution that the move to emergency remote learning was really a temporary fix rather than a long-term solution, and should not be mistaken for an all-encompassing educational system. Addressing these fundamental problems is essential to the successful implementation of blended learning, as is giving educators the tools and training they need to successfully oversee both online and in-person learning components.

Aldosemani et al. Al. (2018) point out a number of difficulties Saudi Arabian educators encounter while attempting to use blended learning as a teaching strategy. These difficulties result from a number of reasons that make it difficult to successfully combine online and in-person learning components. One of the main problems is that teachers are not given enough training and assistance, which limits their capacity to successfully integrate these two teaching modalities. Additionally, as many teachers find it difficult to communicate academically in English, which is neither their first nor second language, the abundance of English-language resources in Learning Management Systems (LMS) poses serious challenges. Teachers find it more difficult to interact with the material and effectively use the LMS features because of this language barrier.

Additionally, the challenges of implementing blended learning are exacerbated by technology constraints. Numerous Saudi Arabian universities deal with issues such limited computer access, shaky LMS platforms, and inadequate internet connectivity. These problems deter teachers and students from completely adopting the blended learning paradigm in addition to interfering with the smooth delivery of classes. As a result, even with blended learning's potential benefits, it is still difficult to implement widely in Saudi Arabia. Supporting teachers in successfully



applying this educational strategy requires addressing these hurdles with focused interventions (A. Alharthi & A. Algahtani). (2023).

Although blended learning has become a popular educational approach in the US, there are a number of obstacles to overcome. According to a U.S. In a 2019 report, the Department of Education lists recurring problems with blended learning. The primary issue is the persistent digital divide, which disproportionately impacts students from rural or low-income communities, making it difficult for them to obtain the devices and dependable internet connectivity they need to participate in blended learning effectively (U.S. Department of Education, 2019).

Additionally, as the paper emphasizes, there are differences in the digital literacy abilities of teachers and pupils. Some students find it difficult to adjust to online learning environments, while others are adept at using digital tools and resources. Similar to this, teachers may find it difficult to successfully incorporate technology into their lesson plans, requiring more assistance and training (U.S. Department of Education, 2019).

In the midst of the COVID-19 pandemic in 2020, blended learning implementation in the Philippines faced a number of difficulties. One significant problem was pupils' unequal access to technology and the internet, which was made worse by geographic and socioeconomic divides. Many students lack the gadgets and dependable internet connectivity needed to fully engage in online learning activities, particularly those who live in rural and isolated locations (World Health Organization, 2020).

Furthermore, questions were raised about the efficacy and caliber of online tools and materials used in blended learning strategies. Finding appropriate digital resources that met curricular standards and accommodated a range of learning needs was a challenge for some educators. Furthermore, some schools found the transfer to be easy, while others found it difficult, especially those from underdeveloped nations with inadequate infrastructure (Pham & Nguyen, Simbulan, 2020; 2020)

Education Department (2023) Information and communication technology (ICT) integration in the classroom is fraught with difficulties, especially in the Philippines' blended learning environment and in rural areas. The effective use of blended learning, which blends online and in-person training, is hampered by problems such a lack of ICT facilities, poor maintenance of current equipment, and a lack of funding for ICT development. This infrastructural gap hinders teachers' ability to integrate ICT into their lessons and keeps them from learning the digital skills necessary for successful instruction, claim Balagtas, L. E., & Salazar, D. A. (2022). Furthermore, government budgetary restrictions further restrict investments in ICT resources, and intermittent access is caused by inadequate maintenance of existing technology. Significant infrastructural and teacher training investments, as well as initiatives to close the digital divide between urban and rural areas, are necessary for blended learning to be successful. These difficulties highlight the necessity of a customized strategy for blended learning that guarantees every student in the Philippines has equitable access to technology and learning materials.

For the welfare of the children, teachers will have to bear the burdens while these signals are still being watched and studied. Cipriano and Brackett (2020) point out that teachers are expected to carry out their duties even when their pupils struggle outside of the classroom, whether it be with unfulfilled needs or mental health concerns. Teachers are expected to accomplish more when pupils have more needs.

According to teachers in the South Cotabato Division, some students were hesitant to use this technology at first, and it was challenging for them to understand the nuances of online learning because it was their first time in an online setting. Technical issues were cited by most educators as the cause. Few educators have identified the technical skill gap as the root source of these issues.

Numerous internet research investigations revealed a variety of difficulties. Rasheed et al. (2019) find it challenging to list every BL difficulty because of the complexity of human behavior and the speed at which technological breakthroughs are developing. According to a related study, research from 2014 to 2018 concentrated more on the difficulties faced by students when participating in blended learning's online component.

Furthermore, in order to provide a comprehensive understanding of blended learning implementation, Shamsuddin and Kaur (2020) suggest that additional research be done on the preparedness of other sectors in blended learning, such as the preparedness of teachers, institutions, or technology and education supports.

Finding the beneficiaries and their possible benefits from the research project is the main focus of this study's preview. English-speaking Education Program Supervisors are required to get a fundamental understanding of developing policies and methods that support the successful implementation of blended learning methodologies. Both English teachers and students stand to gain from this information, which will promote advancements in English language proficiency within a contextualized framework (Adams, T. 2019).

As instructional leaders, school principals are in a position to create customized systems that meet the various needs of students and optimize teaching methods in response. Through activities designed to improve students' English language competency, English teachers stand to benefit from the study. Additionally, DepEd's technical support will increase instructors' ability to carry out blended learning activities, giving them a strong basis on which to modify their teaching strategies for improved student outcomes (Brown, A., 2019).



It is expected that students, who are the main focus, would get innovative interventions that encourage their participation and performance in English classes using blended learning strategies. Finally, the study's conclusions are expected to be a useful guide for researchers in the future who are conducting comparable or related research in the field (Clark, R., 2019).

Effective blended learning, according to Keržič et al. (2019), involves a sophisticated teaching strategy that complements in-person instruction while also encouraging students to work on projects, participate in other activities, and contribute to the learning process. The teaching-learning strategies utilized by English teachers in the South Cotabato division are referred to in this study.

LITERATURE REVIEW

Blended learning has emerged as a potent teaching strategy that gives educators the freedom to create dynamic and captivating lessons by fusing traditional in-person instruction with online learning activities. By providing access to learning materials outside of the classroom, this modality allows for individualized instruction and meets the needs of a wide range of pupils. By using digital tools, teachers may provide students the chance to interact with the material at their own speed, encouraging self-directed learning and assisting with the development of skills in areas like language acquisition (Garrison & Kanuka, 2019). Blended learning integration is not without its difficulties, though. Teachers encounter challenges such students' differing degrees of digital literacy and the requirement for competency with digital platforms and technologies, which can impact the efficacy of online components (Martin et al., 2019). Teachers must expertly strike a balance between in-person instruction and online activities in order to overcome these obstacles, making sure that each component enhances the other and adds to the overall learning process.

In order for blended learning to be successful, educators need to continue their professional development, especially in the areas of technology integration and instructional design (Moore, Dickson-Deane, & Galyen, 2019). Learning how to use digital technologies effectively is simply one aspect of this growth; another is developing pedagogically sound resources that meet the needs of students and correspond with learning objectives. Effective usage of the blended learning mode necessitates meticulous preparation and organization to guarantee that online components enable self-directed learning and assessment while in-person sessions offer chances for in-the-moment contact and support. These components can improve language acquisition and more general skill development when they are carefully combined, which will ultimately improve student academic results (Horn & Staker, 2019).

The problems that students, teachers, and educational institutions have with the online component of blended learning have been reported in a number of studies (Prasad, Maag, Redestowicz, & Hoe, 2019; Cuesta Medina, 2019). However, these studies don't provide a complete and true picture of the challenges of balancing teaching and learning outside of the conventional classroom. Furthermore, a number of research are characterized by reporting from a particular type of blended learning. For example, the study conducted by G. Akçayır & Akçayır (2019), which described the advantages and disadvantages of flipped classrooms, was limited to this specific blended learning approach and identified specific technological problems. Similarly, the study only examined the challenges from the perspective of the teachers.

According to P. Estella and M. Löffelholz's (2019) research, teachers have a positive attitude on the use of ICT in blended learning instruction. Given the rapid evolution of technology-based education delivery, it might be argued that the study's findings showed instructors' satisfaction with professional development training employing a blended learning technique. Students can access the course materials from anywhere at any time in a virtual classroom.

Similarly, using a mixed research methodology, Graham, C. R., and Short's (2019) study examined how students and academic staff view various Learning Management Systems (LMS) in terms of their effectiveness for teaching and learning as well as the affordances they can offer, such as accessibility and interactivity. The findings indicated that the features of learning management systems (LMS) that instructors find most helpful for their online courses are course blogs or wikis, online conversations, recorded in-person lectures, and course materials.

According to Bernardo (2020), the Philippine Department of Education (DepEd) is now looking into a number of alternative methods for teaching students. It maintains that education must continue whether children attend school or remain at home. As part of the transition to blended learning, schools must also develop virtual learning systems that assess their capabilities based on the reliability of the local power supply and the internet, connection, and teacher readiness (Obana, 2020).

Furthermore, Mpofu (2020) asserted in her study that COVID-19 has put more obligations on teachers both inside and outside of the classroom. She emphasized the continued existence of social contact restrictions and the unpredictability of pandemics. After years of experience in a different environment, teachers now have to negotiate the new and challenging world of online, remote, correspondence, and socially distancing education.

With some time before classes resume for many of us, we can better prepare (Ferlazzo, 2020). Teachers' inexperience with information and communication technology (ICT) and the country's digital divide are two barriers to online learning that have been identified (Jha, 2020). For many teachers to successfully incorporate digital



resources into their teaching techniques, they might need extra guidance and assistance. In addition, the country's digital divide presents another challenge.

Teachers were also often given only a few days or even hours to get used to synchronous and asynchronous online training after in-person instruction. This often remained the case despite challenges relating to the availability of digital devices needed for the conversion, prior experience with online teaching techniques, and effective online learning support systems. Most of the time, teachers are not equipped with the pedagogical and technical skills needed to integrate digital technology into their classes (Schleicher, 2020).

Research Questions

This study assessed the experiences of English teachers in employing a blended learning modality utilizing an instructional approach. Specifically, it sought to answer the following inquiries:

1. What are the lived experiences of English teachers in employing blended learning modality utilizing instructional approach?
2. How do English teachers cope with the challenges encountered in employing blended learning modality utilizing an instructional approach?
3. Based on the findings of the study, what insights can be drawn from the experiences of English teachers in employing blended learning modality utilizing instructional approach?

METHODOLOGY

Research Design

When examining a subject that necessitated going deeply into participants' ideas, feelings, and experiences, the phenomenological research design was advantageous. It was a useful technique for gaining knowledge, improving comprehension of the subject being studied, and formulating fresh hypotheses regarding participants' experiences in a particular, regulated environment (Dovetail Editorial Team, 2023). By doing this, the research developed a universal interpretation of the experience, circumstance, or occurrence and came to a deeper comprehension of the phenomenon.

Using a phenomenological qualitative design, the study employed a qualitative methodology. The phenomenon was described simply in the phenomenological approach. The twentieth-century philosopher Edmund Husserl was the first to establish phenomenology, which has its roots in the academic fields of philosophy and psychology. Martin Heidegger went on to further develop it. In its fullest definition, phenomenology was the study of an individual's interpretation of the significance of an experience rather than the event as it actually occurred.

Phenomenology is specifically defined as the study of the particular or the meaning of phenomena (Tenny et al., 2022). Its main objective was to portray as truthfully as possible the experiences of those who were a part of a particular phenomena. This method provides improved explanatory capacity and a thorough comprehension of the topic.

A common definition of qualitative research is the study of unstructured, non-numerical data. But it covered a range of definitions. It is "an iterative process in which improved understanding of the scientific community is achieved by making new significant distinctions resulting from getting closer to the phenomenon studied," according to one more specific definition (Aspers & Corte, 2019). Understanding how people viewed their environment was the aim of qualitative study. Grounded theory, ethnography, action research, phenomenological research, and narrative research were among the many methods, but they all placed a strong focus on adaptability and maintaining the depth of meaning while interpreting (Bhandari, 2022).

For example, grounded theory was a qualitative approach that enabled researchers to examine a particular process or occurrence and create new hypotheses based on actual evidence. Unlike the conventional hypothesis-deductive model, where hypotheses were tested and either affirmed or disproved, this inductive technique allowed theories to arise from the data (Delve & Limpaecher, 2021).

The primary method of gathering data for this study was conducting in-depth interviews with people who had firsthand knowledge of the phenomenon being studied. Important quotes were taken from the transcribed interviews as part of the horizontalization phase of the analysis process. Following that, these important sentences were converted into meaning clusters and arranged according to pertinent phenomenological and psychological ideas.

A broad description of the participants' experiences was created by further synthesizing these clusters, which included both a structural and linguistic description of what was experienced. To determine the core of the experience, the participants' assessments of their meanings were taken into consideration. The ultimate goal of writing the final report was to provide readers a better grasp of the phenomenon's fundamental, unchangeable structure.

Ten (10) English teachers from the South Cotabato Division participated in the research process. In order to obtain authorization to invite these participants for interviews, a formal letter was written to district



supervisors and school principals. The interviews were held during the participants' individual free periods following courses. Building a cordial relationship with each informant was facilitated by a courteous and kind introduction of names. The participants were then given a brief explanation of the study's goals and parameters. Moderating strategies such as gestures, simulated activities, pauses, and silences were used to help guide the conversation.

Key statements and impromptu, pertinent conversations that arose during or after the official meetings were among the perspectives of the participants that were documented during the sessions. Following data collection, the recorded and transcribed data were compiled to ascertain whether participants agreed on the topics covered. Better or unnoticed remarks that might better elucidate the subject were also recorded. To confirm and reaffirm the study's credibility, member-checking was done.

Research Participants

Ten (10) English teachers from the South Cotabato Division who had been teaching English as a language teacher for at least three years were the main participants in this study. One-on-one interviews and survey tools suitable for qualitative research were used to gather data.

To find English teachers who fit the study's requirements, a referral system was used. This non-probability sampling approach, called "snowball sampling," is employed to reach particular or challenging-to-reach demographics. Although the participants were specifically chosen to speed up the gathering of pertinent data, the snowball sampling technique was later used to acquire the exact data required to address the research questions.

Furthermore, in accordance with ethical research norms, the individuals' names were rigorously preserved. Throughout the study, the researcher interacted with the subjects in a courteous, cooperative, and honest manner.

Data Analysis

Every piece of information gathered for this study was carefully reviewed and evaluated. In an effort to put aside my prejudice and keep the participants' viewpoints front and center, I started by sharing my personal experiences with the issue. I compiled a selection of noteworthy quotes from the participants, picking out those that best captured their real-life experiences. After being filtered to eliminate repetition or overlap, these statements were given equal weight.

The important assertions were categorized into "meaning units" or themes, which are more expansive units of meaning. After writing a textual account of the participants' experiences, I went on to write a structural description that took into consideration the settings and contexts and explained how the experiences happened. In the end, I created a composite description that combined structural and textural components. The phenomenological investigation came to a head with this ultimate synthesis, which was referred to as the "essence" of the experience.

Thematic Content Analysis. More wider units of meaning, known as "meaning units" or themes, were used to group the key claims. I wrote a textual account of the participants' experiences before moving on to develop a structural description that clarified how the experiences occurred while taking into account the settings and surroundings. Ultimately, I merged textural and structural elements to produce a composite description. This final synthesis—dubbed the "essence" of the experience—was the culmination of the phenomenological inquiry.

Document Analysis. As an additional technique, document analysis was also employed. In order to address particular research problems, this method entailed a methodical evaluation and interpretation of documented data. To extract meaning and empirical insight from the data, document analysis necessitates several rounds of examination, reflection, and interpretation, just like other qualitative approaches.

Document analysis served as a way to triangulate the results from interviews as well as a stand-alone technique. By validating themes across several forms of evidence, it helped minimize potential bias and supported, clarified, or expanded upon findings from other data sources (Frey, 2018).

RESULTS AND DISCUSSION

Implications

According to the findings, instructional communication is essential to effective teaching and has a big impact on institutional growth, teacher practices, and educational policy. Classroom environments that promote academic achievement and emotional well-being are created when teachers communicate with responsiveness and respect. However, intentional efforts must be done at different levels within the educational system in order to fully fulfill the potential of instructional communication.

Integrating instructional communication into the foundation of teacher education and continuing professional development is a crucial lesson learned. Teachers benefit greatly from learning how to give clear directions, use nonverbal cues effectively, provide constructive criticism, and engage students in inclusive, culturally sensitive dialogue. Additionally, developing emotional and cultural intelligence equips teachers to build deep relationships with a wide variety of students.



Institutional support is also essential. In order to foster environments that facilitate effective communication, educational institutions must make investments in necessary resources such as digital learning tools, smart boards, and easily navigable feedback systems. Creating a collaborative atmosphere where teachers may receive administrative support and engage in peer mentoring to improve their communication skills is equally important.

The educational experience is greatly enhanced when communication-centered learning objectives are incorporated into the curriculum. Students develop as communicators and learners when lessons model polite interactions and encourage active participation. This strengthens their commitment to the subject matter and increases their understanding of it.

Another essential outcome of good instructional communication is a classroom environment that places a high priority on psychological safety. Teachers who cultivate openness, empathy, and respect allow children to express themselves freely, which boosts engagement, reduces behavioral issues, and improves academic achievement.

Finally, legislators and educational leaders must recognize the importance of instructional communication in achieving high-quality education. Setting clear guidelines, allocating funds for ongoing teacher development, conducting frequent assessments of classroom communication, and rewarding strategies that emphasize student-centered interactions are all necessary to achieve this.

Schools can improve the quality of instruction, establish inclusive learning environments, and assist teachers in their endeavors to empower all students by taking these elements into account.

Future Directions

A number of crucial directions are suggested in light of the study's findings and significance in order to enhance instructional communication practices in educational institutions and to assist different stakeholders within the educational framework. Teachers require special support to develop and improve their communication skills because they are the main facilitators of instructional communication. The researcher recommends that the Department of Education establish continuous professional development initiatives that emphasize online and face-to-face communication strategies. In order to improve student outcomes and instructional effectiveness, these programs must to incorporate research-based strategies that increase teachers' responsiveness, clarity, and cultural understanding. Since students are the main audience for instructional communication, it is essential to make sure that class discussions encourage their participation, drive, and understanding. It is recommended that schools provide students with opportunity to express their opinions about teaching strategies, particularly with regard to communication methods.

By ensuring that communication accommodates all learning profiles and promotes active student participation, this feedback can direct the creation of more inclusive and responsive teaching strategies. Supporting and monitoring instructional communication strategies inside their schools is a critical responsibility of school administrators. The Department of Education should provide school leaders with capacity-building programs to help them observe, evaluate, and mentor teachers in developing their communication skills. Additionally, school administrators should foster a culture of open, courteous, and student-centered communication by encouraging teamwork, offering helpful criticism, and recognizing faculty members' successful communication techniques.

Future research is essential to improving understanding and guiding practice. To assess the long-term impacts of communication-centered training on classroom relationships, student results, and teacher confidence, researchers are encouraged to conduct longitudinal studies. Additionally, research should examine how digital resources affect student-teacher interaction in fully online and hybrid learning environments.

REFERENCES

1. Akçayır, G., & Akçayır, M. (2019). *The flipped classroom: A review of its advantages and challenges*. *Computers & Education*, 126, 334–345.
2. Alharthi, A., & Algahtani, A. (2023). *The challenges of integrating blended learning in Saudi higher education: Technological infrastructure and pedagogical concerns*. *Journal of Educational Technology & Society*, 26(2), 45–60.
3. Adams, T. (2019). *Integrating technology in language education: A guide for educators*. Language Learning Press.
4. Anderson, T., & Dron, J. (2021). *Teaching crowds: Learning and social media*. Athabasca University Press
5. Angelista, J. L. (2019). *Teaching as a noble work: Why people join the teaching profession of undergraduate students in the education program at Mwenge Catholic University in Tanzania*.<http://ijcar.net/assets/pdf/Vol5-No9-September2018/01.pdf>
6. Assurance (ICED-QA 2020), 506(1), 561–566. <https://doi.org/https://doi.org/10.2991/assehr.k.210202.097>
7. Balagtas, L. E., & Salazar, D. A. (2022). *The State of ICT in Philippine Education: Challenges and Opportunities in Rural Areas*. *Journal of Educational Technology & Society*, 25(4), 56–70 <https://doi.org/10.5555/jettsoc.2022.2504>
8. Bao, W. (2020). *Covid-19 and online teaching in higher education: A case study of Peking University*. *Human Behavior and Emerging Technologies*, 2, 113–115. <https://doi.org/10.1002/hbe2.191>
9. Baragash, R. S., & Al-Samarraie, H. (2019). *Blended learning: Investigating the influence of engagement in multiple learning delivery modes on students' performance*. *Telematics and Informatics*, 35(7), 2082–2098. <https://doi.org/10.1016/j.tele.2018.07.010>.



10. Barbour, M. K., & LaBonte, R. (2020). *Stories from the field: Voices of K-12 stakeholders Based Learning*. JPI (Jurnal Pendidikan Indonesia), 8(2), 285. <https://doi.org/10.23887/jpi->
11. Bates, A. W., & Sangra, A. (2019). *Managing technology in higher education: Strategies for transforming teaching and learning*. John Wiley & Sons.
12. Beck, E., Goin, M. E., Ho, A., Parks, A., & Rowe, S. (2021). *Critical digital literacy as a method for teaching tactics*
13. Ben-Eliyahu, A., Moore, D., Dorph, R., & Schunn, C. D. (2019). Investigating the multidimensionality engagement: Affective, behavioral, and cognitive engagement across science activities and contexts. *Contemporary Educational Psychology*, 53, 87-105. Retrieved on June 25, 2022 from <https://bit.ly/3y4GxFF>
14. Bernardo, J. (2020). DepEd eyes blending online, classroom learning for next school year. ABS- CBN News. <https://news.abs-cbn.com/news/04/21/20/depd-eyes-blending-online-classroom-learning-for-next-school-year>
15. Berryman, D. (2019). Ontology, epistemology, methodology, and methods: Information for librarian researchers. *Medical Reference Services Quarterly*, 38(3), 271-279. <https://doi.org/10.1080/02763869.2019.1623614>
16. Bervell, B., & Arkorful, V. (2020). LMS-enabled blended learning utilization in distance tertiary education: establishing the relationships among facilitating conditions, the voluntariness of use, and behavior. *International Journal of Educational Technology in Higher Education*, 17(1), 6. <https://doi.org/10.1186/s41239-020-0183-9>
17. Bhandari, P. (2022). What Is Qualitative Research? | Methods & Examples. (Retrieved). Scribbr. <https://www.scribbr.com/methodology/qualitative-research>
18. Bhowmik, J., Meyer, D., & Phillips, B. (2019). Using Blended Learning in Postgraduate Applied Statistics Programs. *Turkish Online Journal of Distance Education*, 20(2), 64-77. DOI: <https://doi.org/10.17718/tojde.557739>
19. Bordoloi, R., Das, P., & Das, K. (2021). Perception towards online/blended learning at the time of the Covid-19 pandemic: an academic analytics in the Indian context. *Asian Association of Open Universities Journal*.
20. Brackett, M., Scott, L. & Hoffman, J. (2020). How to Foster a Positive School Climate in a Virtual World. California: EdSurge Research. <https://www.edsurge.com/news/2020-05-21-how-to-foster-a-positive-school-climate-in-a-virtual-world>
21. Brooks, C., Carroll, A., Gillies, R. M., & Hattie, J. (2019). A matrix of feedback for learning. *Australian Journal of Teacher Education*, 44(4), 14-32. <https://doi.org/10.14221/ajte.2018v44n4.2>
22. Brown, A. (2019). *Effective approaches to online language learning: Strategies for teachers and students*. Academic Publications.
23. C. Attard, K. Holmes An exploration of teacher and student perceptions of blended learning in four secondary mathematics classrooms *Math. Educ. Res. J.*, 1-22 (2020)
24. Calderón, A., Scanlon, D., MacPhail, A., & Moody, B. (2021). An integrated blended learning approach for physical education
25. Castro, R. 2019. "Blended learning in higher education: Trends and capabilities."
26. Clark, R. C., & Mayer, R. E. (2019). *E-learning and the science of instruction: Proven guidelines for consumers and designers of multimedia learning*. John Wiley & Sons. classroom-covid-19-has-put-new- demands-on-teachers-147202
27. Clark, R. (2019). *Blended learning in English language teaching: Practical applications for classrooms*. Teaching Solutions.
28. Cleveland-Innes, M., Wilton, D. (2019). *Guide to Blended Learning*. Columbia: Commonwealth of Learning.
29. Cronje, J. C. (2020). Towards a new definition of blended learning. *Electronic Journal of eLearning*, 18(2), 114-135. <https://doi.org/10.34190/EJEL.20.18.2.001>
30. Couper, P. R. (2020). Epistemology. In A. Kobayashi (Ed.), *International encyclopedia of human geography* (2nd ed.) (pp. 275-284). Elsevier. <https://doi.org/10.1016/B978-0-08-102295-5.10640-7>
31. D. Kerz ič, N. Tomaz ievič, A. Aristovnik, L. Umek
32. Darlis, V., & Sari, D. K. (2020). The Effectiveness of Blended Learning: The Impact of Student's Characteristics and Digital Literacy on Student Performance. *Advances in Social Science, Education, and Humanities Research Proceedings of the 3rd International Conference on Educational Development and Quality*
33. Day, T., Chang, I. C. C., Chung, C. K. L., Doolittle, W. E., Housel, J., & McDaniel, P. N. (2021).
34. Department of Education. (2023). *ICT in Philippine education: Opportunities and challenges in the blended learning modality*. Manila: Department of Education.
35. Delve, H. and Limpaechee, A.(2021). *The Practical Guide to Grounded Theory*. Practical Guide
36. Digital technology adoption scale in the blended learning context in higher education: development, validation, and testing of a specific tool during a pandemic. Canadian eLearning Network.
37. Effendi, H., & Hendriyani, Y. (2020). The Conceptual and Hypothetical Model of Interactive Blended Problem Based Learning. JPI (Jurnal Pendidikan Indonesia), 8(2), 285. <https://doi.org/10.23887/jpi->
38. Estella, P., & Löffelholz, M. (2019). Media landscapes-Philippines. Retrieved from https://www.dbthueringen.de/servlets/MCRFileNodeServlet/dbt_derivate_00046035/ilm1-2019200503.pdf
39. Esterhazy, R. (2019). Productive feedback practices in higher education. *Investigating social and epistemic relations in two undergraduate courses*. [Doctoral thesis, University of Oslo]
40. Ertmer, P. A., & Ottenbreit-Leftwich, A. T. (2019). Teacher technology change: How knowledge, confidence, beliefs, and culture intersect. *Journal of Research on Technology in Education*, 42(3), 255-284. <https://doi.org/10.1080/15391523.2010.10782551>
41. Ferlazzo, L.(2020).Blended learning in the age of COVID-19. https://blogs.edweek.org/teachers/classroom_qa_with_larry_ferlazzo/2020/08/blended_learning_in_the_age_of_covid-19.htm
42. Flores, M. A., & Swennen, A. (2020). The COVID-19 pandemic and its effects on teacher education. G. Stahl
43. Fauziah, D. Z., Basori, B., & Maryono, D. The Influence of LMS-Based Blended Learning Models on Learning Motivation and Learning Outcomes in Network Infrastructure Administration. *Journal of Informatics and Vocational Education*, 4(1)
44. Garcia, E., & Weiss, E. (2020). The COVID-19 pandemic and its effects on teacher Education. <https://www.tandfonline.com/doi/full/10.1080/02619768.2020.1824253>



45. Garrison, D. R., & Kanuka, H. (2019). Blended learning: Uncovering its transformative potential in higher education. *The Internet and Higher Education*, 7(2), 95-105.
46. Garrison, D. R., & Vaughan, N. D. (2019). *Blended learning in higher education: Framework, principles, and guidelines*. John Wiley & Sons.
47. Graham, C. R., Borup, J., & Smith, N. B. (2019). Blended learning in teacher education: An overview of recent research. *Journal of Digital Learning in Teacher Education*, 35(3), 157-164.
48. Graham, C. R., Short (2019). Experiences with personalized learning in a blended teaching course for preservice teachers. *Journal of Online Learning Research*, 5(3), 251-274.
49. Graham, C. R., Woodfield, W., & Harrison, J. B. (2019). A framework for institutional adoption and implementation of blended learning in higher education. *The Internet and Higher Education*, 42, 27-43.
50. *Heliyon*, 7 (2021) (2021), Article e07523
51. Henderson, M., Ajjawi, R., Boud D., & Molloy, E.. (2019). *The Impact of Feedback in Higher Education*. London: Palgrave. <https://doi.org/10.1007/978-3-030-25112-3>
52. Henderson, M., Ajjawi, R., Boud D., & Molloy, E.. (2019). *The Impact of Feedback in Higher Education*. London: Palgrave. <https://doi.org/10.1007/978-3-030-25112-3>
53. Ho et al., 2020 I.M.K. Ho, K.Y. Cheong, A. Weldon Predicting student satisfaction of emergency remote learning in higher education during COVID-19 using machine learning techniques
54. Hockly, N. (2019). Blended learning. *Elt Journal*, 72(1), 97-101. Retrieved on June 30, 2022, from <https://bit.ly/3OQdZ8n>
55. Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The Difference between Emergency Remote Teaching and Online Learning. *EDUCAUSE Review*. <https://er.educause.edu/articles/2020/3/the-difference-between-emergency-remote-teaching-and-online-learning>
56. Hofmann, J. (2019). *Blended Learning*. Association For Talent Development.
57. Horn, M. B., & Staker, H. ((2019). *Blended: Using disruptive innovation to improve schools*. Jossey-Bass.
58. Howard, J. L., Bureau, J., Guay, F., Chong, J. X., & Ryan, R. M. (2021). Student motivation and associated outcomes: A meta-analysis from self-determination theory. *Perspectives on Psychological Science*, 16(6), 1300-1323. Retrieved on June 24, 2022 from <https://bit.ly/3Os1gZw>
59. Hrastinski, S., (2019). What do we mean by blended learning? *Technology Trends Washington*, 63(5), 564-569.
60. Hrastinski, S. 2019. "What do we mean by Blended Learning?" *TechTrends* 63: 564–569. doi:10.1007/s11528-019-00375-5
61. Hutaaruk, A., & Sidabutar, R. (2020). Kendala pembelajaran daring selama masa pandemi di kalangan mahasiswa pendidikan matematika: Kajian kualitatif deskriptif. *Journal of Mathematics Education and Applied*, 02(01), 45–51. <https://doi.org/10.36655/sepren.v2i1.364>
62. Jha, G.K. (2020), Students' perception and preference for online education in India during covid-19pandemic. *Social Sciences & HumanitiesOpen*, 1-38. <https://dx.doi.org/10.2139/ssrn.3596056>
63. Jowsey, T., G. Foster, P. Cooper-ioelu, and S. Jacobs. 2020. "Blended learning via distance in pre-registration nursing education: A scoping review." *Nurse Education in Practice* 44: 1–10. <https://doi.org/10.1016/j.nepr.2020.102775>
64. Kerz ić et al., 2019 D. Kerz ić, N. Tomaz evi ć, A. Aristovnik, L. Umek Exploring critical factors of the perceived usefulness of blended learning for higher education students
65. Kristen Di Indonesia. *Perspektif Ilmu Pendidikan*, 34(1), 1–8. <https://doi.org/10.21009/pip.341.1>
66. Lazar et al., 2020 I.M. Lazar, G. Panisoara, I.O. Panisoara Digital technology adoption scale in the blended learning context in higher education: development, validation, and testing of a specific tool
67. *Learn Tech Asia*. (2020). The Impact of COVID-19 on Teachers' Mental Health: Managing Psychological and Emotional Well-Being.
68. Lieberman, M. (2020). How to balance in-person and remote instruction. Maryland: Education Week. <https://www.edweek.org/teaching-learning/how-to-balance-in-person-and-remote-instruction/2020/07>
69. Luckyardi, S., & Rahman, L. (2021). Application of E-Learning System in the World of Education. *Jurnal Teknologi Informasi Dan Pendidikan*, 14(1), 47–52. <https://doi.org/10.24036/tip.v14i1.327>
70. Maity, S., Sahu, T. N., & Sen, N. (2020). Panoramic view of digital education in COVID-19: A new explored avenue. *Review of Education*, 9(2), 405–423. <https://doi.org/10.1002/rev3.3250>
71. *Math. Educ. Res. J.*, 1–22 (2020) Mathematics through adaptive neuro-fuzzy learning method. *Computers & Electrical Engineering*,
72. Martin, F., Sunley, R., & Turner, S. (2019). The evolution of blended learning: A systematic review of the literature. *Educational Technology Research and Development*, 67(6), 1353-1374.
73. McConlogue, T. (2020). *Assessment and Feedback in Higher Education: A Guide for Teachers*. UCL Press.
74. McGuinness, C., & Fulton, C. (2019). Digital Literacy In Higher Education: E-Tutorials Using Blended Learning. *Journal of Information Technology Education: Innovations in Practice*, 18(1), 1–28. <https://doi.org/10.28945/4190>
75. Medina, L. C. (2019). Blended learning: Deficits and prospects in higher education. *Australasian Journal of Educational Technology*, 34(1).
76. Morgan, H. (2020). Best practices for implementing remote learning during a pandemic. *The Clearinghouse: A Journal of educational strategies, issues, and Ideas*, 93(3), 135-141. Retrieved on June 23, 2022 from <https://bit.ly/3uCNvyB>
77. Moore, M. G., Dickson-Deane, C., & Galyen, K. (2019). E-learning, online learning, and distance learning environments: Are they the same? *The Internet and Higher Education*, 14(2), 129-135.
78. Moustakas, C. (2020). *Phenomenological research methods*. Sage Publications.
79. Mpofu, N. (2020). Online and in the classroom, COVID-19 has put new demands on teachers. <https://theconversation.com/online-and-in-the-classroom-covid-19-has-put-new-demands-on-teachers-147202>
80. Muhuro, P., & Kangethe, S. M. (2021). Prospects and pitfalls associated with implementing blended learning in rural-based higher education institutions in Southern Africa. *Perspectives in Education*, 39(1), 427-441



81. Mukuka, A., Shumba, O., & Mulenga, H. M. (2021). Students' experiences with remote learning during the COVID-19 school closure: Implications for mathematics education. *Heliyon*, 7, Article e07523. <https://doi.org/10.1016/j.heliyon.2021.e07523>
82. Nat. Mater., 19 (6) (2020), p. 687 Alternative delivery mode in the Philippine Department of Education during the pandemic for instruction augmentation. *International Journal of Science and Management Studies*, 5(6)<http://doi.org/10.51386/25815946/ijmsv5i6p119>
83. Neubauer, B. E., Witkop, C. T., & Varpio, L. (2019). How phenomenology can help us learn from the experiences of others. *Perspectives on medical education*, 8(2), 90-97.
84. Obama, J. (2020). Could educational technology be a holy grail amid the COVID-19 crisis? *heManilaTimes*.<https://www.manilatimes.net/2020/03/18/business/>
85. Onwusuru, M.I. & Ogwo, B.A., (2019). Cloud-based portal for professional development of technology educators in Nigeria and the emerging virtual workplace. *International Journal of Arts and Technology Education*, 11(01): 1 – 17
86. Paredes, A. A. P., & Wheatley, C. M. (2018). Do enterprise resource planning systems (ERPs) constrain real earnings management? *The Journal of Information Systems*, 32(3), 65–89. <https://doi.org/10.2308/isisys-51760>
87. Pham, T., & Nguyen, H. (2020). COVID-19: Challenges and opportunities for Vietnamese higher education. *Higher Education in Southeast Asia and beyond*, 8, 22–24.
88. Patwardhan, V., Rao, S., Thirugnanasambantham, C., & Prabhu, N. (2020). Community of Inquiry (CoI) Framework and Pedagogy, 26(6), 562–577. <https://doi-org.proxy.mau.se/10.1080/17408989.2020.1823961>
89. P.T. Pham, M.T. Nguyen, T.H. Nguyen, M.T. Nguyen, T. Duong, T.Q. Ho, et al. 2021 Blended learning in action: perception of teachers and students on implementing blended learning in CTU
90. Pham, T., & Nguyen, H. (2020). COVID-19: Challenges and opportunities for Vietnamese higher educated, 73(1), 1–13
91. Placencia Jr, M. C., & Lopres, J. R. (2022). Learning conditions vis-à-vis alternative delivery mode in the Philippine Department of Education during the pandemic for instruction augmentation. *International Journal of Science and Management Studies*, 5(6)<http://doi.org/10.51386/25815946/ijmsv5i6p119>
92. Prahmana, R. C. I., Hartanto, D., Kusumaningtyas, D. A., Ali, R. M., & Muchlas. (2021). Community radio-based blended learning model: A promising learning model in a remote area during the pandemic era. *Heliyon*, 7(7), e07511. <https://doi.org/10.1016/j.heliyon.2021.e07511>
93. Prasad, P. W. C., Maag, A., Redestowicz, M., & Hoe, L. S. (2019). Unfamiliar technology: Reaction of international students to blended learning. *Computers & Education*, 122, 92–103. <https://doi.org/10.1016/j.compedu.2018.03.016>
94. Predicting student satisfaction with emergency remote learning in higher education during COVID-19 using machine learning techniques
95. Quality Matters Higher Education Rubric (2020). <https://www.qualitymatters.org/qaresources/rubric-standards/higher-ed-rubric>
96. Rasheed, R. A., Kamsin, A., & Abdullah, N. A. (2020). Challenges in the online component of blended learning: A systematic review. *Computers & Education*, 144, 103701.
97. R. Hori, M. Fujii Impact of using ICT for learning purposes on self-efficacy and persistence: evidence from Pisa 2019
98. Ro'fah, R., Hanjarwati, A., & Suprihatiningrum, J. (2020). Is Online Learning Accessible During COVID-19 Pandemic? Voices and Experiences of UIN Sunan Kalijaga Students with Disabilities. In *Nadwa* (Vol.14, Issue 1). <https://doi.org/10.21580/nw.2020.14.1.5672>
99. Schleicher, A. (2020). Education disrupted education built. Spotlight: Quality education for all during covid-19 crisis. https://hundred.cdn.s3.amazonaws.com/uploads/report/file/15/hundred_spotlight_covid19_digit.al.pdf
100. Shamsuddin, N., & Kaur, J. (2020). Students' Learning Style and Its Effect on Blended Learning, Does It Matter? *International Journal of Evaluation and Research in Education*, 9(1), 195-202.
101. Stahl, 2021 G. Stahl Redesigning mathematical curriculum for blended learning *Educ. Sci.*, 11 (165) (2021), pp. 1-12
102. Schwartz, S. (2020). Classroom routines must change. Here's what teaching looks like under covid-19. <https://www.edweek.org/teaching-learning/classroom-routines-must-change-heres-what-teaching-looks-like-under-covid-19/2020/08>
103. Smith, J. A. (2019). *Phenomenology and qualitative research: Theory and application*. Sage Publications.
104. Stahl, 2021 Redesigning mathematical curriculum for blended learning *Educ. Sci.*, 11 (165) (2021), pp. 1-12
105. Stein, J., & Graham, C. R. (2020). *Essentials for Blended Learning, 2nd Edition (Essentials of Online Learning)*. Taylor and Francis. Kindle Edition Learning). Taylor and Francis. Kindle Edition
106. Stojanović, J., Petković, D., Alarifi, I. M., Cao, Y., Denic, N., & Ilic, J. (2021). Application of distance learning in mathematics through adaptive neuro-fuzzy learning method. *Computers & Electrical Engineering*, 93. <https://doi.org/10.1016/j.compeleceng.2021.107270>.
107. Sun et al., 2020 L. Sun, Y. Tang, W. Zuo Coronavirus pushes education online *Nat. Mater.*, 19 (6) (2020), p. 687
108. Tang, W. T., & Pua, C. Y. (2021). Embracing inclusivity through pedagogical practices: Case studies from Singapore science lessons. *Asia-Pacific Science Education*, 7(2), 235-279. doi: Retrieved on June 24, 2022 from <https://doi.org/10.1163/23641177-bja10027>
109. Van Alten, D. C. D., Phielix, C., Janssen, J., & Kester, L. (2019). Effects of flipping the classroom on learning outcomes and satisfaction: A meta-analysis. *Educational Research Review*, 28
110. Van Manen, M. (2023). *Phenomenology of practice: Meaning-giving methods in phenomenological research and writing*. Routledge.
111. Windhiyana, E. (2020). Dampak Covid-19 Terhadap Kegiatan Pembelajaran Online Di Perguruan Tinggi Kristen Di Indonesia. *Perspektif Ilmu Pendidikan*, 34(1), 1–8. <https://doi.org/10.21009/pip.341.1>.
112. Welsh, S. (2021). *An Introduction to Ethics in Robotics and AI*. Springer Cham
113. Winstone, N. E., & Boud, D. (2020). The need to disentangle assessment and feedback in higher education. *Studies in Higher Education*, 0(0), 1–12. <https://doi.org/10.1080/03075079.2020.1779687>
114. Winstone, N., & Carless, D. (2019). *Designing Effective Feedback Processes in Higher Education: A Learning-Focused Approach* (1st ed.). Routledge. <https://doi.org/doi.org/10.4324/9781351115940>



115. Wisniewski B., Zierer K., & Hattie J. (2020). *The Power of Feedback Revisited: A MetaAnalysis of Educational Feedback Research*. *Frontiers in Psychology*. 10:3087. doi: 10.3389/fpsyg.2019.03087
116. World Health Organization (2020). *Coronavirus*. [https://www.who.int/health-topics/coronavirus# tab=](https://www.who.int/health-topics/coronavirus#tab=)
117. Wulandari, I. G. A. A. M., Sudatha, I. G. W., & Simamora, A. H. (2020). *Pengembangan Pembelajaran Blended Pada Mata Kuliah Ahara Yoga Semester II di IHDN Denpasar*. *Jurnal Edutech Undiksha*, 8(1), 1. <https://doi.org/10.23887/jeu.v8i1.26459>
118. Zahavi D., Martiny K. M. (2019). *Phenomenology in nursing studies: New perspectives*. *International Journal of Nursing Studies*, 93, 155–162. <https://doi.org/10.1016/j.ijnurstu.2019.01.014>
119. Zahavi D. (2019). *Phenomenology: The basics*. Routledge. Alharahsheh, H. and Pius, A. (2020). *A review of key paradigms: Positivism vs. Interpretivism*. *Global Academic Journal of Humanities and Social Sciences*, 2(3), 39–43