



Volume 5	Issue 2	November (2025)	DOI: 10.47540/ijqr.v5i2.2353	Page: 191 – 199
----------	---------	-----------------	------------------------------	-----------------

## Embracing the Benefits of an Online Learning Approach: Exploring the New Teaching Set-up in the Academic Sphere

Bernardo K. Gumarang Jr.<sup>1</sup>, Jeyfa C. Eleponio<sup>1</sup>, Richelle S. Ibasco<sup>1</sup>

<sup>1</sup>Isabela State University, Cabagan Campus, Philippines

**Corresponding Author:** Bernardo K. Gumarang Jr.; Email: [bernardo.k.gumarang@isu.edu.ph](mailto:bernardo.k.gumarang@isu.edu.ph)

### ARTICLE INFO

*Keywords:* Distance Education, Experiences of Students, Online Learning.

*Received* : 29 October 2025

*Revised* : 22 November 2025

*Accepted* : 27 November 2025

### ABSTRACT

The study explored the benefits of the online learning approach as a new setup of teaching modality. Specifically, it examined the benefits as experienced by the students. Qualitative in-depth interviews were utilized in this study, and purposive sampling was used to select the participants. The participants were students invited from one of the universities in the Philippines. Thematic analysis was employed to extract themes from the transcribed interviews of the participants. The study revealed six themes: Self-Directed Learning, Breaking the Culture of Being a Dependent Learner, Online Learning Broadens Academic Horizons, Online Learning Improves Academic Performance, Online Learning Offers Students the Accessibility of Time, and Opportunity to Pursue a Degree from Home. The findings suggest that this new setup of teaching should be adopted by all universities to cater to the needs of students who are unable to attend school due to certain circumstances and who wish to complete their college degrees.

### INTRODUCTION

In the last few years, the education sector has gone through a major change, which was mainly caused by new technology and unexpected crises like the COVID-19 pandemic. One of the outcomes of these changes was the spread of online and modular learning, which were regarded as alternative solutions to the traditional teaching style, giving students flexible and remote access to the curriculum (Hodges et al., 2020). Online learning uses digital platforms to its advantage, thus students can interact not only with the teacher but also with their classmates and learning materials without physically being there (Bao, 2020; Mithhar et al., 2021), while in modular learning, self-contained units or modules, either in print or digital form, are used for self-paced completion (Baticulon et al., 2021). The growing use of these learning modalities is not accompanied by a corresponding amount of research, which has created a demand for more studies on the effects, differences, and impacts of these modalities in various contexts (Adedoyin & Soykan, 2020).

Among the main issues that need to be addressed in the literature is the lack of understanding about student engagement and learning outcomes in online and modular learning environments (Kuhfeld et al., 2020). A number of studies have mentioned advantages such as flexibility and accessibility; however, research about how students from different socio-economic backgrounds, learning styles, and levels of digital literacy perform in these environments is still limited (Bozkurt & Sharma, 2020). Modular learning presupposes that learners are self-disciplined and motivated enough to finish modules independently, yet very little research has explored the conditions under which modular learning improves academic performance (Lapada et al., 2020). Without such insights, teachers may adopt these methods without full knowledge of the factors that affect student success, which may widen existing educational disparities (Toquero, 2020).

Another gap in research involves technological access and digital equity. Online learning requires reliable internet, digital devices, and technological literacy resources not equally accessible to all

students (UNESCO, 2020). In several developing regions, students lack stable internet connections, digital tools, or knowledge of online platforms (Rapanta et al., 2020). Modular learning provides an offline alternative, yet the extent to which it promotes equitable opportunities remains unclear (Tria, 2020). Many studies represent urban or well-supported settings, while insights from rural or marginalized areas remain insufficient (Villanueva & Ignacio, 2022). This reinforces the importance of understanding how each modality performs under diverse socio-economic and infrastructural constraints (Cahapay, 2020).

Moreover, the long-term educational and psychological effects of online and modular learning have not been fully explored. Most studies focus only on immediate outcomes or student satisfaction (Cavanaugh et al., 2021). There is a lack of longitudinal research showing how these modes influence critical skills such as collaboration, problem-solving, and self-regulation over time (Yen, 2020). Additionally, possible impacts on student motivation, mental health, and socialization remain understudied, despite their essential role in holistic development (Gonzales et al., 2020).

Another neglected point is teachers' readiness and instructional design. Successful implementation of online and modular learning depends on teachers' ability to modify content, provide timely feedback, and monitor progress (Trust & Whalen, 2020). However, a large number of teachers report insufficient training or institutional support in using these modalities effectively (Alvarez, 2020). Research on professional development needs, effective teaching strategies, and alignment of instructional materials with learner needs remains scarce (Schleicher, 2020), creating a significant gap in understanding how to improve teaching efficacy in remote modalities.

Additionally, there is a shortage of context-specific studies in less developed countries like the Philippines. While global literature offers broad insights, local educational conditions differ greatly in culture, resources, and student needs (Del Castillo et al., 2021). Studies from urban or well-funded schools cannot be fully applied to rural or underserved communities (Reyes-Chua et al., 2020). This highlights the necessity of localized research to produce findings that are contextually relevant and actionable (Baloran, 2020).

These gaps show that research on online and modular learning is not just relevant, it is essential. Investigating impacts on engagement, learning outcomes, equity, psychosocial development, and teacher readiness can provide evidence-based insights for improved policy and planning (Basilaia & Kvavadze, 2020). Context-specific studies can help identify best practices suited for diverse learner populations, especially in resource-limited settings (Nabuan, 2022). Addressing these gaps can lead to more effective, inclusive, and sustainable systems of online and modular learning.

Overall, although online and modular learning offer flexibility, access, and convenience, research has yet to capture a full picture of their limitations, effectiveness, and long-term effects. The gaps regarding engagement, digital equity, psychosocial outcomes, teacher readiness, and localized challenges emphasize the need for further research (Castroverde & Acala, 2021). Such studies are essential for developing strategies that enhance learning outcomes, promote equity, and support student well-being across varied educational environments (Carter Jr., 2022).

Over the years, online learning has slowly but surely transitioned from being a minor educational method to becoming a primary one used in all educational systems around the world. Different large-scale reviews and national studies have shown that if online and blended learning are designed well, they can yield learning outcomes that are on par with and at times even better than traditional face-to-face teaching; and this is the case especially when online activities are perfectly matched with in-person ones (Means et al., 2015; Bernard et al., 2018; Allen & Seaman, 2019). These widespread studies mostly credit improvements to thoughtful course design, student control of the pace of learning, and the use of multimedia and adaptive materials that cater to different learning styles.

Numerous studies establish that the quality of the course, interaction design, and learner support are the main factors that influence student satisfaction, engagement, and learning success in online environments. The Community of Inquiry model (teaching, cognitive, and social presence) illustrates how educators' involvement and intentional interactions enhance online deep learning (Garrison et al., 2000). Another line of research points to course flexibility, perceived

usefulness, and reliable technology as major determinants of student satisfaction and, consequently, retention (Sun et al., 2008; Si et al., 2022). Besides, self-directed learning strategies (e.g., time management, metacognition, and effort regulation) have been continually associated with more successful outcomes in online higher-education contexts, which emphasizes the necessity to train and support these skills.

The global COVID-19 pandemic led to a rapid shift to online teaching and produced a considerable amount of literature that differentiated high-quality online learning from emergency remote teaching (ERT). The researchers pointed out that the emergency transitions brought to light the strengths (quick continuity, scalability, innovation) and the weaknesses (digital divides, faculty readiness, and the quality of course design lower than usual) and suggested that it was necessary to make systemic investments in pedagogy, training, and infrastructure to turn the short-term solutions into ongoing practices. In 2020-2022, case studies and systematic mappings illustrated how universities around the world had changed their methods of evaluation, had made asynchronous resources more available, and had increased the support provided to students. These are practices that, when implemented intentionally, not only preserve but also amplify the advantages of online approaches.

Equity and access are among the main themes found in the literature: the digital divide and inadequate support systems can reduce the impact of online learning, which provides flexibility and increased reach as its main advantages. According to researchers, accessibility (device and connectivity access, inclusive design, mobile-friendly resources) and institutional contingency plans are necessary to ensure that online approaches benefit diverse learners, particularly in developing contexts (Bao, 2020; Adedoyin & Soykan, 2020; Talidong, 2021). Concurrently, empirical evidence from studies indicates that retention and engagement improve, as well as the possibilities for lifelong and upskilling education, when the institution supports the training, tutoring, and well-structured e-learning platform.

The literature ultimately points out some of the practical design principles and theoretical lenses that are favorable to the adoption of online learning as a long-term, informative teaching setup:

evidence-based drawing (clear learning outcomes, varied assessment, interactivity), community-building (social presence and collaboration), and scaffolding for self-regulated learning. Different kinds of studies, including systematic reviews, meta-analyses, and the latest empirical work, suggest solid strategies: blended learning models often show the greatest gains, instructor development is pivotal, and producing high-quality asynchronous materials not only increases access but also allows for learning time to be more flexible. The academic world, thus, can take advantage of considerable pedagogical and access-related benefits from online learning, but this can only happen if the institutions are willing to invest in quality design, equity, and continuous evaluation.

## **METHODS**

This study used a qualitative as its research design. Specifically, an in-depth interview in exploring the benefits of online learning to the students. Purposive sampling was used by the researcher in selecting the participants. The participants were screened based on the criteria set by the researcher. The researcher set inclusion and exclusion criteria in selecting the participants of the study.

The participants of the study are seven (7) students in one of the universities of the Philippines. The investigation was done using an interview as a primary instrument in gathering the data needed. Specifically, a semi-structured interview was utilized in the study, which consisted of several key questions that helped to define the areas to be explored, but also allowed the interviewer and interviewee to diverge in order to pursue an idea or response in more detail.

In the conduct of the study, the researcher gave a consent form that was signed by the participants before the conduct of the study. The interview guide made by the researcher was also validated by research experts, and pilot testing was performed before the proper conduct of the interview. The interview was audio recorded by the researcher with the permission of the participants for the purpose of written transcripts. There was also a follow up questions conducted through messenger application. The researcher used thematic analysis to extract themes based on the transcribed interviews of the participants.

## RESULTS AND DISCUSSION

### Benefits of Online Learning to the Students

The new set-up of learning after the pandemic is indeed challenging for students, yet this gave them the chance to help themselves by practicing independent learning. The student participants of this study reported that they were able to improve their study habits by studying on their own and not just depending on their teachers. Online learning is an approach where students can meet their teachers on a computer, and as reported by the participants, they were just given learning activities to answer. This kind of approach moulded the students to improve Self-study habit as they pursue their degree in higher education (Abu Bakar et al., 2023; Firmansyah & Daroini, 2023).

#### Theme 1: Self-Directed Learning

Self-directed learning (SDL) is a process in which a student organizes and manages his or her own learning activities and responsibilities. SDL encourages individuals to take responsibility for their learning, identify weak areas, and critically evaluate new knowledge (Tlili, Burgos & Huang, 2021). Self-directed learning not only allows students to be in charge of their own learning but also promotes the development of responsibility and critical thinking (Mou, 2021). The students reported that their studies became more autonomous. SDL not only makes a learner the one who sets the goal, monitors the progress, and evaluates the outcome, but also leads to better academic performance (Kohan, 2017; Dogan, 2022). The participants shared that, because of online learning, they learned to practice self-directed learning by being responsible for their studies and by teaching themselves what they needed to study for improvement. Filipinos, especially the Ibanag people, traditionally tend to rely on listening to teachers, and this learning approach initially made students dependent on their instructors. However, the new learning set-up encouraged students to practice self-directed learning, as reflected in the reports shared by the participants.

Participant 1 shared that the new setup of learning taught her to practice learning independently. She stated that: *“May mga naitulong din sa akin sir yung online learning kasi dahil dito kahit mahirap natuto akong aralin yung modules na binibigay nila kahit hindi pa tinuturo ng prof namin. ... inaaral ko na lang din”*. Participant 2 also

reported that she encountered challenges in online learning, but she learned to help herself by studying on her own. She stated that: *“kailangan kong pag aralan ng mabuti, I have to study hard by spending time to understand those topics ... unti-unti natutunan ko na kailangan turuan mismo ang sarili ko ...”*

#### Theme 2: Breaking the Culture of Being a Dependent Learner

Students after the pandemic have learned to embrace the new setup of learning amid the pandemic. In connection, students are actually somewhat dependent in nature because they love to work with unity, but when there is a need to change their practices for their own good, they can eventually embrace the new one. Online education caused a major shift in the learning methods used in education, making it inevitable that students develop independent problem-solving abilities and exhibit less dependence on their colleagues for academic help. The presence of online learning environments calls for individual responsibility, which can be a means of building self-dependence and academic resilience (Sustainability SRL study, 2022; Mou, 2021). This manifested to the student participants that from being dependent on their teachers and friends, they were able to break this culture by practicing independent learning amid the pandemic. One of the participants with the code name Participant 4 shared that: *“dati kasi sir lagi ako nagongompiya ... Pero dahil online learning ... kailangan mo sagutin lahat ng activities mag isa ... nadevelop ko rin mag aral mag-isa ...”*. Participant 6 also shared that she learned not to depend on her friends in answering their activities: *“... natutunan ko ang hindi mag depende sa barkada ko ... Pero ngayon proud ako sa sarili ko na nasasagutan ko yung mga pinapagawa kahit wala mga barkada ...”*

#### Theme 3: Online Learning Broadens Academic Horizons

Online learning is an opportunity for students who want to pursue their education while doing other tasks. As reported by the participants, they are not just given the chance to listen to their teachers but also access different educational websites. This access gave them the chance to read and to understand the different articles related to their topics. Internet-based sources' availability made it possible for students to understand and even get a wider view in their academic areas (Self-directed

science learning, 2021). Using information from the internet helps in developing skills and attitudes of inquiry, which are basic elements in good learning (Akpen et al., 2024; Sui, Yen & Chang, 2023). Participants shared that they do not just depend on the module given by their teachers, but they usually visit educational websites that will help them to broaden their knowledge.

Participant 3 shared that online learning also has an advantage for her, which helped her to understand the topics. She stated that: *"...may oras kami na magbasa sa mga websites ... marami ako natutunan na hindi nakasulat sa module ... kaya for me maganda rin online learning kahit papaano sir."* Participant 5 shared that the module given to them is limited, but online learning gave him the advantage of reading other materials on the internet. He said: *"...pede kami mag google ... May mga module ... pero limited ... nagbabasa ako sa google sir, kasi parang mas may naiintindihan ako dun kaysa sa module."*

#### **Theme 4: Online Learning Improves Academic Performance**

Online Learning opened an opportunity for students to explore different learning websites as tools for pursuing their degree amid the crisis. Educational websites keep students informed about the world of education. Those websites deliver the vast world of education and the necessary facts to their computer screen. This is a fantastic effect of today's globalization. As a result, educational websites are extremely important to students. They keep students aware, notify them, and provide information about a variety of educationally relevant topics to students, helping to strengthen their studies.

Online learning amidst the pandemic is difficult for Filipino students, most especially in the province of Isabela. This is the first time that this approach implemented as a response to the continuity of learning. Yet, this online learning also brought positive changes to the academic performance of students as reported by the participants. They shared that in online learning, they received a higher score compared to face-to-face learning. Most of the assessments conducted by the teachers, students get an almost perfect score, as reported by the participants. This is because of having access to learning websites, which helped them to improve their performance. The use of

online learning tools was one of the factors that brought about better academic performance, since students were able to learn at their own speed and get back to the materials whenever needed. Research shows that online learning can result in better academic performance provided the students are actively involved with the content (Abu Bakar et al., 2023; Zhen et al., 2021).

Participant 6 expressed that in online learning, she performed efficiently as compared to face-to-face learning. She stated that: *"mas tumaas yung mga iskor na nakukuha ko sir sa online learning kaysa sa face to face ... dahil sa pagbabasa narin sa google at panonood ng educational videos ... kaya para sa akin yan advantage ng online learning sir"*. Participant 4 shared that he almost got a perfect score during the examination in an online learning approach. He shared: *"halos napeperfect ko yung exams namin ... Dahil yun sir sa natutunan kong mag aral sa sarili ko ... kaya basa ng basa ako sa google"*. Participant 7 also shared his idea on the advantage of online learning. He said: *"... kahit mahirap kinakaya ko, tamang basa lng sa modules at paghawak phone tamang google lng sir basa ng basa ... kaya yan yung advantage"*.

#### **Theme 5: Online Learning Offers Students the Accessibility of Time**

Students in face to face learning approach must follow their schedules and must attend on time with their subject professors. In this setup, they have to focus on their subject and must listen carefully. Yet, the pandemic brought changes to this setup by giving the students more access to their time while attending online learning. Students in online learning are facing struggles, yet they cannot deny the fact that this setup of learning gave more opportunities or advantages on their part. There are many changes to their routines, just like there is no need to wake up early in the morning and travel for an hour just to attend their classes. They have more access to their time by just opening their phone and laptop to attend an online discussion. They don't need to leave their house to continue their education amid the pandemic. As reported by the participants, they can do other things while attending to their subject professors. They go back to their previous topics by recording their virtual discussion. Flexible scheduling was a major factor for students who were able to organize their time wisely, constituting a good balance between academic and personal

activities. Time flexibility in online learning supports better work-life balance and can reduce stress, leading to improved academic outcomes (Chow & Shi, 2022).

Participant 1 shared that online learning gives her a chance to listen to their discussion many times their discussion through a recorded video lecture. She said: “...pede namin balikan ung mga lecture namin kasi pede i-record yung discussion ... kaya pede panoorin yung lecture namin sir from time to time lalo na pag math ... need ko panoorin ng paulit-ulit”. Participant 3 described the difference between face-to-face learning into online learning. He said: “...sa online learning, tamang open lang ng cellphone ok na ... kaya parang hawak ko oras ko sir. ... para sa akin advantage talaga yan.”

#### **Theme 6: Opportunity to Pursue a Degree While at Home**

Online learning gives an opportunity to the students to pursue their degree while staying at home. This online learning opened the door for those who are not able capable to study in face to face set up of learning. In fact, some respondents shared that they are not financially capable of attending school for face-to-face, but since online is the mode of teaching, this allows them to pursue a degree while at home. Online education has been a continuous option for students, mainly those living in the countryside, who could relocate but did not have to, thus making higher education more reachable in general. Access to online education breaks geographical barriers, providing opportunities for students to pursue degrees irrespective of location (Madhurima et al., 2022).

Participant 2 shared that the online setup of learning gave him a chance to continue his degree in college. He reported that: “...pede ako tumulong sa parents ko habang nag aaral ako sa college. ... hindi kami kayang pag aralin ng parents namin sabay sabay sa kolehiyo”. Participant 5 expressed that she has to help her parents amid the pandemic that's why online learning allows her to study while helping her family. She said: “though financially mahirap mag aral ngayong pandemic sir ... Pero dahil sa online learning sir eh I can help na rin parents ko habang nag aaral ako sa college”. Participant 7 also shared that: “isang opportunity rin yung online sir, kasi pede ko kunin yung kurso na gusto ko sa college kahit nasa bahay lang ako ganun sir.”

#### **CONCLUSION**

The research findings revealed that students gained a lot from the online and modular teaching methods. One of the main benefits was self-directed learning that facilitated students' taking responsibility for their own studies and at the same time, developing a more profound and critical way of thinking. Students got rid of the time-consuming habits of always depending on teachers and classmates, thus becoming more independent and resilient academically. The use of educational websites widened the extent of one's academic knowledge, as students were incited to go beyond the modules; meanwhile, the use of online tools and resources facilitated the learning process of students, as they were allowed to learn at their own pace and, after that, to review what they had learned.

Furthermore, online learning not only opened up but also, time-wise, made it easier for the students to manage their lives better. They could easily change their schedule, take care of their studies and personal life simultaneously, and thus minimize stress. To continue one's education without physically attending classes was a good thing, as it eliminated the locational and financial barriers and so made higher learning easier. In conclusion, the students regarded online learning as a good method of teaching that brought about independence, participation, and knowledge access, thus proving to be a powerful tool in the learning process in flexible and self-directed ways.

#### *Recommendations*

1. Self-directed learning programs should be developed. In order to facilitate students in acquiring independent learning skills, school authorities and instructors should hold workshops and training sessions.
2. Academic independence should be promoted. Teachers and curriculum designers could develop activities and evaluations that stimulate problem-solving and less dependency on classmates.
3. The availability of online educational resources should be ensured- School libraries, IT departments, and teachers should aggregate and disseminate trustworthy websites, e-books, and learning platforms to students.
4. The use of online learning tools should be integrated to enhance performance. Teachers

and educational technology coordinators should involve the students through interactive modules, quizzes, and digital platforms, thereby improving the learning outcomes.

5. Flexible schedules and recorded lessons should be implemented. School administrators and teachers should make sure that students can access online lectures and resources, and can thus learn at their own pace.
6. Technical and financial support for remote learners should be organized. The school administration and the local government units should setup programs for internet access, provide loaned devices, or give subsidies to students studying at home.
7. Blended learning methods should be encouraged. Educational developers and school administrators should opt for a combination of online and face-to-face learning methods so that flexibility, autonomy, and accessibility are retained.

## REFERENCES

- Adedoyin, O. B., & Soykan, E. (2020). COVID-19 pandemic and online learning: The challenges and opportunities. *Interactive Learning Environments*, 31(2), 863–875.
- Akpen, C. N., Udoh, E. E., & Asuquo, E. P. (2024). Impact of online learning on students' engagement and performance. *Education and Information Technologies*, 29, 1231–1249.
- Allen, I. E., & Seaman, J. (2019). *Digital learning compass: Distance education enrollment report 2019*. Babson Survey Research Group.
- 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.
- Bawa, P. (2020). Retention in online courses: Exploring issues and solutions—A literature review. *Sage Open*, 10.
- Bernard, R., Abrami, P. C., Lou, Y., et al. (2018). How does distance education compare with classroom instruction? A meta-analysis of the empirical literature. *Review of Educational Research*, 74(3), 379–439.
- Bond, M. (2021). Emergency remote teaching: A systematic mapping review of the research literature and future directions. *Educational Technology Research and Development*, 69, 1–24.
- Borres, C. C., & Monteroso, C. R. (2024). Students' experience in modular learning and motivation to achieve academically: The mediating effect of pedagogical content knowledge of teachers. *International Journal of Innovative Research and Multidisciplinary Education*, 3(11), Article 2.
- Bozkurt, A., & Sharma, R. C. (2020). Emergency remote teaching in a time of global crisis due to CoronaVirus pandemic. *Asian Journal of Distance Education*, 15(1), i–vi.
- Broadbent, J., & Poon, W. L. (2015). Self-regulated learning strategies and academic achievement in online higher education learning environments: A systematic review. *Internet and Higher Education*, 27, 1–13.
- Cabuquin, J. C. (2022). Modular and online learning satisfaction in mathematics amid COVID-19: Implications for new normal teaching practices. *American Journal of Multidisciplinary Research and Innovation*, 1(6), 30–40.
- Chavan, R. (2025, January 10). Maharashtra teen launches free online learning platform to help people of all ages. *The Times of India*. <https://timesofindia.indiatimes.com/city/nagpur/maharashtra-teen-launches-free-online-learning-platform-to-help-people-of-all-ages/articleshow/122783102.cms>
- Dinamling, S. K. E. (2020). Advantages of modular learning in adolescent mathematics education. In *Proceedings of the 3rd International Conference on Research in Teaching and Education* (pp. 1–6).
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5–22.
- Fiock, H. S. (2020). Designing a community of inquiry in online courses. *International Review of Research in Open and Distributed Learning*, 21(3), 1–20.
- Frontiers in Education. (2023). Systematic review of online learning during the COVID-19 pandemic. *Frontiers in Education*, 8, 1–15.
- Garrison, D. R., Anderson, T., & Archer, W. (2000). Critical inquiry in a text-based environment: Computer conferencing in

- higher education. *The Internet and Higher Education*, 2(2-3), 87-105.
- GDFI. (2024). Online or modular class? Understanding the benefits and challenges. *GDFI Insights*.
- Hodges, C., Moore, S., Lockee, B., Trust, T., & Bond, A. (2020). The difference between emergency remote teaching and online learning. *EDUCAUSE Review*.
- Iglesias-Pradas, S., Hernández-García, Á., Chaparro-Peláez, J., & Prieto, J. (2021). Emergency remote teaching and students' academic performance in higher education during the COVID-19 pandemic: A case study. *Computers & Education*, 170, Article 104224.
- Kabilan, M. K., et al. (2022). Online teaching during COVID-19 pandemic: Lessons learned and implications for the future. *Frontiers in Education*, 7, Article 923400.
- Klusmann, B., et al. (2022). Providing emergency remote teaching: Lessons from the field. *Education and Information Technologies*, 27, 1-20.
- Kohan, N. (2017). Self-directed learning barriers in a virtual environment. *Journal of Educational Technology Systems*, 46(2), 239-251.
- Mavroudi, A., & Patrikakou, A. (2022). A case study on how distance education may inform post-pandemic practice. *International Review of Research in Open and Distributed Learning*, 23(2).
- Means, B., Toyama, Y., Murphy, R., Bakia, M., & Jones, K. (2015). *Evaluation of evidence-based practices in online learning: A meta-analysis and review of online learning studies*. U.S. Department of Education.
- Moore, M. G. (1993). Theory of transactional distance. In D. Keegan (Ed.), *Theoretical principles of distance education* (pp. 22-38). Routledge.
- Mithhar, Agustang, A.A., Arlin, A., Upe, A. (2021) Online Learning and Distortion of Character Education in the Covid-19 Pandemic Era. *Special Issue on Computing Technology and Information Management*, (18), 566-580.
- Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *MERLOT Journal of Online Learning and Teaching*, 11(2), 309-319.
- OECD. (2020). *The impact of COVID-19 on education — Insights and responses*. OECD Publishing.
- Piccoli, G., Ahmad, R., & Ives, B. (2001). Web-based virtual learning environments: A research framework and a preliminary assessment of effectiveness in basic IT skills training. *MIS Quarterly*, 25(4), 401-426.
- Richardson, J. C., Maeda, Y., Lv, J., & Caskurlu, S. (2017). Social presence in online learning: Multiple methods, multiple perspectives. *The International Review of Research in Open and Distributed Learning*, 18(6).
- Roque, J. P. (2023). Modular distance learning in the area of education during the new normal: A systematic review. *AIDE Interdisciplinary Research Journal*, 3(1), 66-82.
- Salmon, G. (2004). *E-moderating: The key to teaching and learning online* (2nd ed.). RoutledgeFalmer.
- Santiago, C. S. Jr. (2021). Flexible learning adaptabilities in the new normal. *International Journal of Learning, Teaching and Educational Research*, 20(3), 45-58.
- Schmid, R. F., et al. (2023). A meta-analysis of online and blended learning effectiveness: Recent evidence and implications. *Educational Research Review*, 36, 100512.
- Si, J., et al. (2022). Critical e-learning quality factors affecting student satisfaction: Evidence from higher education. *Education and Information Technologies*, 27, 1-18.
- Sun, P.-C., Tsai, R. J., Finger, G., Chen, Y.-Y., & Yeh, D. (2008). What drives a successful e-Learning? An empirical investigation of critical factors influencing learner satisfaction. *Computers & Education*, 50(4), 1183-1202.
- Tallent-Runnels, M. K., et al. (2006). Teaching courses online: A review of the research. *Review of Educational Research*, 76(1), 93-135.
- Talidong, K. J. B. (2021). Mobile learning grounded on universal design principles during COVID-19. *Journal of Digital Education and Technology*, 1(2), 45-60.
- Ulum, H. (2021). Effects of online learning on academic success: A meta-analysis.



*Education Research International*, 2021, 1–9.

University of Central Florida Online. (2024).

*Benefits of online learning.*

<https://www.ucf.edu/online/student-resources/benefits-of-online-learning>

Van Dijk, J. (2006). *The network society: Social aspects of new media* (2nd ed.). Sage.

Xu, X., Zhang, Y., & Li, H. (2024). Self-directed learning in health professions education during online study. *BMC Medical Education*, 24, 1–10.

Zafitsara, J., et al. (2022). Impact of the COVID-19 pandemic on higher education teaching and the emergency shift online. *Research in Learning Technology*, 30, Article 2673.