Original Paper

Hybrid Learning Here to Stay!

Maurice E. Abi Raad¹ & Hamad. Odhabi²

¹ Rabdan Academy (Vocational Affairs Division), Abu Dhabi, United Arab Emirates

² Abu Dhabi University, Al Ain Campus, United Arab Emirates

Received: April 15, 2021	Accepted: May 1, 2021	Online Published: May 17, 2021
doi:10.22158/fet.v4n2p121	URL: http://dx.doi.org/10.22158/fet.v4n2p121	

Abstract

The pursuit of knowledge is a defining factor for the current civilization. Hybrid learning represents an evolution of this pursuit since it involves delivering learning through in-person and remote instruction simultaneously. Hybrid learning is here to stay due to its benefits that facilitate education delivery in modern contexts while focusing on meeting learning objectives. However, it suffers from some drawbacks and shortcomings that impact its adoption. However, through a variety of viable approaches, it is possible to address the said drawbacks and shortcomings and increase the adoption of hybrid learning in the future. Consequently, hybrid learning holds great promise for the future of education as it exploits advancements made in the recent past to meet the needs of learners in a variety of contexts without compromising the attainment of desired objectives.

Keywords

hybrid learning, online learning, digital education, distance learning

1. Introduction

Humankind has always endeavored to gain knowledge and skills since civilization. Learning is one of the ways that humankind has adopted to attain the stated objective. It essentially comprises studying and being taught by qualified individuals. Currently, learning is mostly conducted through in-person instruction, where teachers provide instruction to learners in a physical classroom. This teaching method has also been used extensively for the past decades. Nevertheless, in recent years, instruction delivery began shifting from a purely face-to-face classroom method to a combination of in-person instruction and distance learning. Distance learning refers to a teaching method where the teacher and learner are physically apart during course delivery (Kentnor, 2015). The introduction of distance learning resulted from the need to ensure students' participation and enable learners to acquire education from anywhere by eliminating geographical boundaries, thereby leading to increased flexibility. Distance learning has grown globally since learners from different nations can study in

educational institutions located outside their countries. The growth of distance learning has further benefitted from the advancement of digital technologies. There are several tools that learners and educators can use to facilitate course delivery. The combination of distance learning and in-person instruction is often referred to as hybrid learning. Essentially, instructors utilize a combination of both face-to-face and online instruction to facilitate course delivery. Hybrid learning is here to stay since it holds a promising future for institutions, including schools, universities, and training institutes, learners, educators, and other relevant stakeholders due to its several benefits that outweigh its drawbacks and critiques, the recent experiences witnessed in the wake of the Coronavirus (Covid-19) pandemic, and the rapid advancement of technology, including artificial intelligence (AI): therefore, all stakeholders should adapt to promote the effectiveness of hybrid learning in course delivery and improving student outcomes.

2. The Evolution of Distance Learning

Comprehending the evolution of distance education is key to understanding hybrid learning. Distance learning is not a new trend. Instead, it has evolved over the past years to its current state. Distance education dates back to the early 18th century, when correspondence education emerged (Kentnor, 2015). On March 20, 1778, Caleb Phillips advertised his shorthand lessons in the Boston Gazette (Kentnor, 2015). In his advertisement, he offered to teach interested applicants the art of shorthand. Interestingly, he sought to teach them this art by sending them weekly lessons through postal service as long the applicants were within Boston (Kentnor, 2015). The intent to use postal service marked the early traces of correspondence education. However, critics have argued that Caleb Philips intent to teach shorthand through postal service was not an accurate reflection of correspondence education since there was no evidence of two-way communication (Kentnor, 2015). Nevertheless, correspondence education took root in the 1800s. In 1840, Isaac Pitman started teaching shorthand in England by mailing postcards containing instructions to his students and instructing them to return the postcards through the post for assessment and correction (Kentnor, 2015). This teaching method established the advent of distance learning since the instructor, Isaac Pitman, and his students were physically apart during course delivery. As the years progressed, correspondence education became more pronounced. For instance, the Phonographic Correspondence Society and the Society to Encourage Studies at Home in Boston were established in the years 1843 and 1873, respectively (Kentnor, 2015). In the late 1800s, correspondence courses also began to emerge at institutions of higher learning. In 1892, for instance, the University of Chicago, through William Harper Rainey, introduced correspondence courses at the college-level (Kentnor, 2015). Therefore, the evolution of distance learning began in the early 18th century through the advent of correspondence education that was characterized by the physical separation of the teacher and learner.

Technological advancement further altered distance learning methods in the late 1800s and throughout the 1900s. The advent of the radio resulted in educational broadcasting. For instance, professors at the

University of Wisconsin began to broadcast educational materials through their wireless station in 1919 (Kentnor, 2015). More academic institutions also procured broadcast licenses in the 1920s to deliver their courses through radio stations. Other than the introduction of the radio, the advent of the television in the public domain facilitated visual educational broadcasting. The University of Michigan, Kansas State University, and American University are some of the institutions that adopted television broadcasting in course delivery (Kentnor, 2015). Despite these advancements, the delivery of course instruction through radio and television faced some major challenges. Firstly, the radio and television courses were poorly structured. They did not encourage student participation. Instead, educators merely read notes to their learners. Therefore, students found it difficult to be attentive and make significant contributions. As a result, distance education through radio and television began dwindling. Therefore, in the late 1800s and throughout the 1900s, distance education took the form of radio and television transmission to facilitate course delivery.

The advent of computers and the internet in the late 1900s marked a significant shift in distance learning since they drastically improved distance education and led to its remarkable growth that is currently evident. In 1989, the University of Phoenix introduced its online educational program using CompuServe (Kentnor, 2015). Other education and training institutions followed suit in the late 1990s and 2000s. They began introducing online classes for students who were unable to attend in-person classes. However, the introduction of online classes faced various challenges. Educators did not understand that online learning requires a different pedagogy (Kentnor, 2015). They were also not conversant with online teaching methods. Nevertheless, online course delivery has constantly evolved to overcome these hurdles. Today, many educational and training institutions, especially colleges, universities, and tertiary institutions, have incorporated distance learning into their course delivery methods. For instance, massive open online courses have become more common and popular in delivering college instruction (Kurzman, 2013). However, distance learning is more pronounced among institutions of higher education rather than schools. Nevertheless, these higher education institutions still maintain in-person instruction. This combined approach has led to the development of hybrid learning. Therefore, technological advancement facilitated the growth of distance learning and the subsequent development of hybrid learning.

3. What Does Hybrid Learning Entail Exactly?

Various definitions and descriptions have been coined to define hybrid learning. As a result, there is varying information about what hybrid learning entails exactly. Therefore, it is imperative to adopt a specific description. As stated, hybrid learning combines both in-person instruction and distance learning. Distance learning involves educators teaching learners through remote-instruction since both parties are physically apart. However, the issue is whether both in-person and remote instruction are applied simultaneously, or they are asynchronous. The simultaneous application of both in-person and remote instruction at

the same time. Thus, some learners are physically present in the classroom, while others join the classroom virtually through various means, such as conferencing platforms. On the contrary, the asynchronous application of both in-person and remote instruction means that educators principally teach students in a physical classroom by way of face-to-face instruction, and then they supplement in-person instruction through online learning activities. For instance, an instructor may first teach students about a given concept before sending them a recorded instruction through the web for further clarification. An educator may also give learners online activities, such as quizzes or assignments, to submit online. Accordingly, the educator may also use online channels to provide feedback and correction. Indeed, the asynchronous application of both in-person and remote instruction is very common today in higher education institutions. Many colleges and universities, for instance, have virtual environments that supplement face-to-face instruction. Blackboard, Edmodo, and Moodle are common virtual learning management systems that institutions have adopted (Alokluk, 2018). These platforms facilitate collaboration between instructors and students, and even among learners. Apart from such virtual environments, other single-purpose tools, such as GoogleDocs, facilitate online instruction in the asynchronous context (Alokluk, 2018). Given these illustrations, it is essential to note that hybrid learning is the simultaneous application of in-person and remote instruction to teach learners. Therefore, the asynchronous integration of in-person and remote instruction that many institutions have been practicing does not signify the presence of hybrid learning. To this end, hybrid learning entails the application of in-person and remote instruction simultaneously.

4. Distinction between Hybrid Learning and Blended Learning

Hybrid learning and blended learning are often used interchangeably to mean the same thing. For instance, Boora et al. (2010) use hybrid and blended learning simultaneously since both methods involve a combination of in-person instruction and online activities. However, this position is not entirely accurate. Hybrid learning involves the simultaneous application of in-person and remote instruction, while blended learning is the asynchronous application of both. Indeed, what most educational institutions have been practicing is blended learning. Therefore, hybrid and blended learning are distinct.

5. Discussion

Hybrid learning has several benefits over the traditional teaching method that involves only in-person instruction. Firstly, hybrid learning leads to increased student participation in the learning process. This benefit emerges from the fact that hybrid learning integrates innovative approaches into the learning process. These approaches subsequently promote a learner's engagement with course content, thereby enabling them to become active participants. Some of the innovative approaches include the efficient and more appropriate use of audiovisual material. As opposed to educators simply asking students to write notes or watch a certain video, hybrid learning requires instructors to share information in a

compelling and informative manner. Another innovative approach is that hybrid learning allows students to benefit from the best practices of both in-person and remote instruction (Ilgu & Jahren, 2015). Therefore, hybrid learning promotes student participation since it integrates innovative approaches into the learning process.

Another benefit of hybrid learning is that it provides learners and educators with flexibility. According to Ilgu and Jahren (2015), hybrid learning allows students to have fewer contact hours with their instructors. Therefore, they can engage in other activities without undermining their education schedule. Hybrid learning is particularly beneficial to part-time learners engaged in other activities, such as employment, or those who commute. It allows them to attend classes virtually from anywhere. Hybrid learning also allows international students to study in institutions beyond their nation's borders without having to travel. Educators further benefit from the flexibility associated with hybrid learning. They can easily balance their duties through this teaching method (Ilgu & Jahren, 2015). Therefore, hybrid learning gives both educators and students flexibility.

Hybrid learning also increases access to education for most learners. Besides eliminating geographical boundaries, hybrid learning facilitates education since it reduces educational costs and associated inconveniences. Hybrid learning is more cost-effective than the traditional learning approach (Ilgu & Jahren, 2015). For instance, institutions can accommodate more learners in smaller classrooms since some students will virtually join the class. Therefore, educational and training institutions can make their hybrid courses or programs more affordable. Subsequently, more students can enroll in these courses. Additionally, hybrid learning eliminates the inconvenience associated with student accommodation. Under this model, learners are not necessarily under pressure to search for accommodation close to their institution due to reduced contact hours between them and their instructors. They can indeed minimize their accommodation costs by looking for relatively affordable places to live, notwithstanding how far they are located from school. Therefore, hybrid learning increases access to education by eliminating geographical boundaries, reducing educational costs, and mitigating associated inconveniences.

Hybrid learning also leads to improved pedagogy. It does so in various ways. Firstly, it allows educators to easily balance their duties, thereby preventing them from compromising the quality of instruction they deliver to students (Ilgu & Jahren, 2015). Secondly, hybrid learning improves learning outcomes among students due to the incorporation of innovative approaches, as noted. For instance, educators in elementary, primary, and secondary schools can increase their use of video tutorials to help learners at different levels (Shand & Farrelly, 2018). Thirdly, hybrid learning facilitates peer engagement among students. Therefore, students can learn from each other. They can also empower one another. These interactive efforts facilitate their comprehension of course concepts. Lastly, hybrid learning improves learners' focus and reduces student absenteeism. Therefore, students can benefit the most from the course. To this end, hybrid learning improves pedagogy through several ways, such as preventing educators from compromising their quality of instruction, incorporating innovative

approaches that will enhance student outcomes in the learning process, facilitating peer engagement, improving learners' focus, and reducing student absenteeism.

6. The Drawbacks and Critiques Against Hybrid Learning

There are various drawbacks and critiques against hybrid learning, and they particularly relate to the distance learning aspect. Concerning drawbacks, hybrid learning may result in the loss of interaction between educators and students (Ilgu & Jahren, 2015). Since distance learning does not require the student and instructor to be at the same place, both parties, especially learners, may feel out of touch and isolated. Additionally, online communication is less efficient in comprehending verbal and bodily cues, which educators often use during in-person instruction. Another drawback is that distance learning is vulnerable to technical issues. These issues take various forms, such as downtimes and network errors. Technical issues can easily disrupt the learning process and undermine the quality of instruction delivered. The other major challenge is that hybrid learning is susceptible to a disastrous element of managed education that involves adhering to business logic rather than sound pedagogy (Snart, 2010). In essence, institutions may place too much emphasis on making the hybrid model profitable instead of making it efficient and capable of meeting student outcomes and improving the learning process. Therefore, hybrid learning is vulnerable to various drawbacks.

Various critiques have been leveled against distance education and, subsequently, hybrid learning. One of the most prominent is that hybrid learning impedes students pursuing more practical academic education. In some disciplines, such as sciences, learning involves a combination of oral instruction and hands-on activities meant to instill practical knowledge and skills. Hybrid learning presents significant challenges in meeting such a requirement fully due to both time and logistical constraints (Raes et al., 2020). Another critique is that hybrid learning may fail to equip students with the necessary social skills to navigate life. Hybrid learning limits physical interactions between learners, and these interactions are necessary for students' social development (Raes et al., 2020). A wholesome education should instill cognitive and social skills in learners since they are both needed to address life's challenges and exploit its opportunities. Therefore, the stated critiques question the effectiveness of hybrid learning in achieving learning outcomes.

7. Addressing the Drawbacks and Critiques of Hybrid Learning

Stakeholders can address the drawbacks of hybrid learning through the following approaches. Firstly, educators should principally adopt active learning methods, such as group discussions, instead of simply dictating course material and asking learners to take notes. This approach will promote interaction and collaboration between the instructor and learners. Secondly, educational and training institutions should use the most practical and efficient hardware and software to implement hybrid learning. These hardware and software should also align with the students' level and needs. For instance, in their study, Apergi et al. (2015) discovered that the Web 2.0 Google Drive Tool was

efficient in delivering instruction to 6th graders from different elementary schools in Germany. Thirdly, stakeholders should adopt the right pedagogies to implement hybrid learning. Therefore, there are potential solutions to address the drawbacks of hybrid learning.

There are also viable approaches to addressing the critiques leveled against hybrid learning. The first approach is to allocate sufficient time to in-person interactions to allow for practical and hands-on sessions that are essential in technical and scientific disciplines. Appropriate time allocation will enable learners to participate satisfactorily in practical sessions and meet learning outcomes despite receiving some of their instruction online. Time allocation should also consider a student's need for social development. Learning institutions should schedule a time for social activities to compensate for the lack of physical interaction in distance learning (Hwang, 2018). The second approach is to provide additional learning centers for distance learners to address the logistical challenge of conducting practical sessions. When students are close to a facility where they can engage in practical lessons, it is possible to meet the desired objectives even for distance learners. Therefore, the stated approaches address the critiques against distance learning.

8. The Impact of Covid-19 on Learning

Covid-19 has had a significant effect on society. It has impacted almost all dimensions of people's lives, including the education sector. Many learning institutions across the world had to halt in-person instruction. For instance, in the United Arab Emirates (UAE), the government directed all schools, including elementary, primary, and secondary schools and universities, to close their operations and facilities from March 2020 (Erfurth & Ridge, 2020). At the time, there was much uncertainty, and thereby it was best to protect both students and educators from contracting Covid-19. Indeed, around 191 national governments had halted their schools' operations by mid-April 2020 (Erfurth & Ridge, 2020). The closure of schools initiated the need to search for alternatives to ensure that learners do not lose the whole of 2020. Accordingly, many educational institutions and academic professionals worldwide have adopted distance learning to facilitate course delivery. Higher learning institutions have had an easier time transitioning to distance learning than elementary, primary, and secondary schools since many of them already had the basic infrastructure to support distance education in place. Nevertheless, elementary, primary, and secondary schools have undertaken various initiatives to implement distance education. For instance, public schools in the UAE are now using a smart learning platform, while private schools have adopted existing eLearning tools, such as Zoom and Microsoft teams (Erfurth & Ridge, 2020). Therefore, Covid-19 has led to a significant shift from in-person instruction to distance learning.

The increased use of distance learning has generated positive experiences despite the associated challenges. Through distance learning, educational institutions and academic professions have minimized the risk of Covid-19 transmission significantly. Learners have also benefitted since they are now able to continue with their education. However, distance learning has had various challenges.

Teachers have had a difficult time transitioning into the virtual environment. They have also found it challenging to tailor distance learning to suit learners' needs. This difficulty is particularly evident in science and technical courses (Al Darayseh, 2020). Nevertheless, these challenges primarily emerge from the fact that many educators are yet to understand that distance learning requires a different pedagogy from the traditional approach. Accordingly, they should adopt the most practical, relevant, and useful online teaching practices. Nevertheless, many educational institutions and academic professionals are working toward improving the efficiency and outcomes of distance learning. Thus, distance learning will improve in the recent future. To this end, it is evident that distance learning has largely generated positive experiences, and there is still room for growth and improvement.

Given the preceding illustrations, educational institutions and academic professionals need to adopt hybrid learning. Covid-19 has illustrated firsthand the need for distance education. Therefore, adopting distance learning will mitigate the negative effects of such events in the education sector. At the same time, there is also a need to preserve in-person instruction in the future to facilitate course delivery in science and technical courses. Thus, a combination of in-person and remote instruction holds a promising future for the education sector. To this end, hybrid learning should be adopted since it has the potential to improve learning outcomes while minimizing the negative impacts of unfortunate occurrences, such as Covid-19.

9. Introducing Hybrid Learning in Future Education

Due to its benefits, hybrid learning holds great potential for the future of education. In this regard, it is prudent to consider some of the possible approaches for its introduction into educational initiatives of the future. One such approach is to adopt appropriate pedagogies for hybrid learning to maximize its strengths while minimizing its shortcomings (O'Byrne & Pytash, 2015). Appropriate pedagogies include promoting active learning through good instructional design, maximizing personal interactions through in-class time design, and augmenting learning activities with technology to provide timely feedback. The goal can be achieved by training teachers to tailor education to students' needs and exploit the unique opportunities offered by hybrid learning (Linder, 2017). For instance, instructors in schools and universities can undergo training on how to exploit existing technologies, such as online testing platforms and virtual labs, to enhance the learning experience. In the specific case of lower learning institutions, such as elementary schools, where social interactions form a crucial part of the learning process, instructors can learn how to schedule appropriate activities to maximize learning through social interactions. They can also learn how to utilize virtual technologies to simulate social environments with great success. Thus, it is possible to introduce hybrid learning into educational endeavors of the future by adopting appropriate pedagogies for the medium and training instructors on how to get the most out of existing resources.

Another approach is to prepare institutions to cope with hybrid learning requirements, thereby increasing their suitability in providing education through the medium and maximizing positive outcomes. Institutions can improve their preparation in two major ways. Firstly, they can adopt technologies and acquire resources necessary for delivering hybrid learning in various contexts (Nguyen, 2015). This requirement is especially important in elementary, primary, and high schools where distance learning has not been a focus in the past years. The success of exploiting the medium in the future rests on the ability of learning institutions to supply necessary resources for optimal delivery of education. Secondly, stakeholders have to consider curriculum changes that focus on meeting the desired learning objectives in a different context (Linder, 2017). For instance, student assessment approaches should be modified to include online participation as a significant contributor to learners' overall outcomes. Existing assessment methodologies may fail to provide an objective evaluation of students' progress, thereby hindering the attainment of desired learning objectives. Thirdly, educational institutions should play a more active role in evaluating and refining instructional strategies in hybrid learning to guarantee their continuous improvement. Since hybrid learning has technology as one of its key components, institutions can collect data on its implementation and evaluate progress to make necessary and regular improvements. Thus, stakeholders can introduce hybrid learning for future educational endeavors by preparing institutions to meet the essential requirements.

10. Why Hybrid Learning Will Improve in the Future

Hybrid learning is set to improve in the future due to several factors. Firstly, the current experience has proved successful in delivering instruction under challenging environments. Distance education has particularly facilitated the progress of learning activities in the current Covid-19 context. Secondly, there have been significant improvements in technologies devised to deliver hybrid learning. These technologies include video conferencing platforms, virtual labs, and platforms to access materials and deliver assignments online. Besides, the increased competition among companies producing these technologies indicates that there will be a variety of affordable tools to support hybrid learning. Thirdly, hybrid learning has found favor with the current generation. Thus, learners will be more willing and prepared to adopt it in the future. Additionally, guardians and parents have become more welcoming toward distance learning. They have also gained various skills from their interaction with distance learning. Thereby, they will be more accepting and supportive of distance learning. Scholars and stakeholders in the sector have also shown interest in investigating hybrid learning as a reliable medium for delivering education in the future. As a result, there is a wealth of scientific material and information to support implementation in the future. Furthermore, educational content will become more interactive to enable learners to conduct practical experiments individually and collectively while delivering instant results. Lastly, advancements made in AI will be beneficial to hybrid learning. AI will help meet individual student needs through machine learning that tracks students' activities and progress to yield valuable insights into their learning outcomes. Thus, hybrid learning has a promising future as a medium for delivering education.

11. Conclusion

Hybrid learning represents a modern way of delivering education through both in-person and online instruction simultaneously. Its inception and evolution result from technological improvements. These technologies allow learning to occur both physically and virtually. Hybrid learning has several benefits. They include increased student participation, enhanced learning flexibility, increased access to education, and improved pedagogy. However, hybrid learning suffers from various drawbacks, such as loss of interaction between students and the educator, vulnerability to technical issues, lack of efficiency in the comprehension of bodily and verbal cues, and potential bias toward business profitability rather than sound pedagogy. It is also associated with various criticisms, including reduced practical learning capabilities and poor social skills development due to reduced interactions. Nevertheless, it is possible to address the said drawbacks and shortcomings, thereby maximizing positive benefits. Additionally, the benefits of hybrid learning outweigh the drawbacks and critiques. Thus, hybrid learning has a place in future education. Nonetheless, introducing hybrid learning in future education will not decrease the importance of schools and teachers. Instead, it will shift their roles from that of being the source of learning material to being the facilitators and motivators. Time spent at school will still be crucial since it will allow students to gain practical skills and participate on-the-ground to gain social skills that will contribute to a holistic hybrid learning experience.

References

- Al Darayseh, A. S. (2020). The impact of Covid-19 pandemic on modes of teaching science in UAE schools. *Journal of Education and Practice*, *11*(20), 110-115.
- Alokluk, J. A. (2018). The effectiveness of blackboard system, uses and limitations in information management. *Intelligent Information Management*, 10, 133-149. https://doi.org/10.4236/iim.2018.106012
- Apergi, A., Anagnostopoulou, A., & Athanasiou, A. (2015). E-learning for elementary students: The web 2.0 tool Google Drive as teaching and learning practice. *World Journal of Education*, 5(3), 1-8. https://doi.org/10.5430/wje.v5n3p1
- Boora, R., Church, J., Madill, H., Brown, W., & Chykerda, M. (2010). Ramping up to hybrid teaching and learning. In F. L. Wang, J. Fong, & R. C. Kwan (Eds.), *Handbook of research on hybrid learning models: Advanced tools, technologies, and applications* (pp. 406-449). Information Science Reference. https://doi.org/10.4018/978-1-60566-380-7.ch025
- Erfurth, M., & Ridge, N. (2020). The impact of Covid-19 on education in the UAE (Strategic Report No. 01). Sheikh Saud bin Saqr Al Qasimi Foundation for Policy Research. Retrieved from https://f.hubspotusercontent10.net/hubfs/5081768/Report%2001%20-%20EN.pdf?_hstc=789530 35.dafff03804716e97eb90de10230cd4ab.1605133731535.1605133731535.1605133731535.1&______hssc=78953035.1.1605133731535&_hsfp=3117873686&hsCtaTracking=9771e5e5-7950-449f-b e04-42d4de0529a6%7C24d634be-aa28-4957-88e5-cdf3b84c3962

Published by SCHOLINK INC.

- Hwang, A. (2018). Online and hybrid learning. Journal of Management Education, 42(4), 557-563. https://doi.org/10.1177/1052562918777550
- Ilgu, A. K., & Jahren, C. T. (2015, June 14-17). Faculty perspectives on benefits and challenges of hybrid learning [Paper presentation]. 122nd ASEE Annual Conference & Exposition, Seattle, Washington. Retrieved from https://www.asee.org/public/conferences/56/papers/11902/download
- Kentnor, H. E. (2015). Distance education and the evolution of online learning in the United States. In D. J. Flinders, & C. M. Moroye (Eds.), *Curriculum and teaching dialogue* (Vol. 17, pp. 21-34). Information Age Publishing, Inc.
- Kurzman, P. A. (2013). The evolution of distance learning and online education. *Journal of Teaching in Social Work*, 33, 331-338. https://doi.org/10.1080/08841233.2013.843346
- Linder, K. E. (2017). Fundamentals of hybrid teaching and learning. *New Directions for Teaching and Learning*, 2017(149), 11-18. https://doi.org/10.1002/tl.20222
- Nguyen, T. (2015). The effectiveness of online learning: Beyond no significant difference and future horizons. *Journal of Online Learning and Teaching*, *11*(2), 309-319.
- O'Byrne, W. I., & Pytash, K. E. (2015). Hybrid and blended learning: Modifying pedagogy across path, pace, time, and place. *Journal of Adolescent & Adult Literacy*, *59*(2), 137-140. https://doi.org/10.1002/jaal.463
- Raes, A., Detienne, L., Windey, I., & Depaepe, F. (2020). A systematic literature review on synchronous hybrid learning: Gaps identified. *Learning Environments Research*, 23(3), 269-290. https://doi.org/10.1007/s10984-019-09303-z
- Shand, K., & Glassett, S. (2018). The art of blending: Benefits and challenges of a blended course for preservice teachers. *Journal of Educators Online*, 15(1). https://doi.org/10.9743/JEO2018.15.1.10
- Snart, J. A. (2010). The perils and promise of blending online and face-to-face instruction in higher education. Praeger.