



Education Quarterly Reviews

Şahin, M. (2022). The Problems and Opportunities of Hybrid Education for School Management. *Education Quarterly Reviews*, 5(4), 96-103.

ISSN 2621-5799

DOI: 10.31014/aior.1993.05.04.575

The online version of this article can be found at:

<https://www.asianinstituteofresearch.org/>

Published by:
The Asian Institute of Research

The *Education Quarterly Reviews* is an Open Access publication. It may be read, copied, and distributed free of charge according to the conditions of the Creative Commons Attribution 4.0 International license.

The Asian Institute of Research *Education Quarterly Reviews* is a peer-reviewed International Journal. The journal covers scholarly articles in the fields of education, linguistics, literature, educational theory, research, and methodologies, curriculum, elementary and secondary education, higher education, foreign language education, teaching and learning, teacher education, education of special groups, and other fields of study related to education. As the journal is Open Access, it ensures high visibility and the increase of citations for all research articles published. The *Education Quarterly Reviews* aims to facilitate scholarly work on recent theoretical and practical aspects of education.



ASIAN INSTITUTE OF RESEARCH
Connecting Scholars Worldwide



The Problems and Opportunities of Hybrid Education for School Management

Münir Şahin¹

¹ Tokat Gaziosmanpaşa Üniversitesi Erbaa Sosyal ve Beşeri Bilimler Fakültesi, Erbaa/ Tokat Turkey.
ORCID: 0000-0001-5722-496X / Email: munir.sahin@gop.edu.tr

Abstract

The teaching model in which students and teachers come together in a physically surrounded school environment face to face was the only teaching model until the 1990s. Technological developments first showed their effects in higher education in the 1990s and online teaching method started to become widespread. Today, it is not possible to ignore the benefits of face-to-face education in schools, but almost all educational institutions, from primary schools to universities, have switched to online distance education very quickly with the Covid-19 epidemic. Hybrid teaching is a teaching model that combines face-to-face and online teaching into a single whole. About half of the classroom sessions are held in classrooms at school, while the other half has students working online. While this sounds good, hybrid teaching requires a lot of planning to work properly. In this paper, the problems and opportunities of hybrid education for school management are studied under the light of literature. Although hybrid education has many benefit on the part of students and teachers as well as administrators, It also brings some problems that administrators have to tackle with. The literature about hybrid education forces education administrators to plan about technical needs, human sources, students and parents.

Keywords: Hybrid Education, Education Administrators, Face to Face Teaching, Online Education

1. Introduction

The teaching model in which students and teachers come together in a physically surrounded school environment face to face was the only teaching model until the 1990s. Technological developments first showed their effects on higher education in the 1990s and online teaching methods started to become widespread. Students could complete their online lessons simultaneously without physically coming to the classroom (Jones, 2019). In this period, education administrators saw that online teaching was more economical for students and could replace face-to-face education, and by the mid-1990s, more online courses began to be given. However, online education was not as effective as expected, as it was seen as a passive activity (Schaer, et al., 2010; Jones. 2019). Over time, a third teaching method, the hybrid teaching model, has emerged.

The Covid-19 epidemic, which started in China in 2019 and spread to all countries of the world and turned into a global epidemic, has brought some disruptions and confusion in education. However, during the epidemic, it encouraged all educational institutions to make faster decisions on hybrid learning, and accelerated the merging

of teaching and technology. As educators can predict, such rapid digitalization of learning has brought great opportunities and some significant disadvantages (Şahin, 2021). Considering the epidemic period when full-time face-to-face education is not possible, hybrid learning and distance education have emerged as a solution to continue education. We see that hybrid learning is becoming widespread in universities and other educational institutions day by day (Solihati & Mulyono, 2017).

When schools closed with the threat of the epidemic in late 2019, educators had to teach a group of students face-to-face while simultaneously teaching many of them remotely at home. In order to do this, they had to benefit from a blended learning model combining traditional face-to-face education methods with digital resources (Caulfield, 2011; Kiddle, Farrel, O'Leary & Mavridi, 2020). The hybrid education model is a method in which many education models are applied together and the advantages of different models are evaluated together to obtain a more successful education output. The hybrid learning model, which is generally included in the literature as blended education, appears as the use of online and face-to-face education (Vedubox, 2021). It is possible to see this model being implemented in Turkey and many other countries, especially at the primary education level in the 2021 academic year. By allowing students to take lessons in more diluted classes, it was ensured that they kept their distance, and on the other hand, face-to-face education was supported by online methods to achieve the objectives of education.

Although it is not possible to ignore the benefits of face-to-face education in schools, almost all educational institutions, from primary schools to universities, have switched to online distance education very quickly with the Covid-19 epidemic (Kemp & Grieve, 2014; Singh & Matthees, 2021). Hybrid teaching is a teaching model that combines face-to-face and online teaching into a single whole. About half of the classroom sessions are held in classrooms at school, while the other half has students working online. While this sounds good, hybrid teaching requires a lot of planning to work properly. But with good planning, we can take advantage of the strengths of the two teaching models. Hybrid education, blended education has different meanings from each other. While there is 50% face-to-face teaching in hybrid education, 50% virtual teaching continues. However, in blended teaching, most of the teaching activities take place face-to-face (Siegelman, 2019). In online teaching, online activities constitute the whole of the education, however, in the internet supported mixed teaching model, mostly face-to-face education is provided, and online education is included to a lesser extent.

Table 1: Online Learning Environments (adapted from College of Dupage, 2022, p. 2)

Face-to-Face Training Model	Internet Supported / Blended Education Model	Hybrid Teaching	Online Education Model
It is an education done entirely in the classroom environment.	Model used mostly in face-to-face education with little online activities	The teaching model in which teaching is conducted in equal proportions face-to-face and online (50 to 50)	The teaching model in which almost all of the teaching activities are done by online methods.



School administrators need to plan how both methods will feed each other in the long term, as well as how to benefit more from face-to-face and online methods in hybrid teaching.

Even if teachers and education administrators have foreseen this digitalization in education, it is not easy to answer the question of how much the training of teachers and the pedagogical approaches that need to be developed have supported and benefited the learning of students in this period. Although it does not seem possible for any model to replace face-to-face education, a strategic learning approach based on the effective use of educational technologies can support students' participation and provide achievement of objectives and help teachers and administrators overcome the problems they experience in the process of education.

Considering that issues such as digital inequality and inadequacy in student participation are the problems that remained during the epidemic period, the use of an integrated approach on a digital ground that prioritizes classroom learning activities may be beneficial for the effective continuation of educational activities. Indeed, there are simultaneous distance learning and classroom teaching opportunities for educators that provide high-quality teaching and learning opportunities, engaging students in learning inside and outside the classroom.

2. Method

This study aims to find out the benefit and problems of hybrid education which is getting widespread on the part of school administrators. The study is literature review research. As more and more schools are having distance education programs and hybrid education which have advantages for students, teachers and school administrators, the literature about hybrid education especially the advantages and problems arising on the part of school administrators are needed to be searched and tried to get together to have a holistic picture.

3. Benefits of Hybrid Education for School Management

It should be said that the hybrid teaching model, as an application that will relieve the physical competence of the school, makes significant contributions to school administrators. In terms of school management, it is seen that the physical planning of the school, the quality and quantity of the classrooms and laboratories to meet the needs, the lesson planning of the teachers are mostly proportional to the number of classrooms, that is, physical facilities. In this respect, hybrid teaching can reduce student density at school by supporting the physical infrastructure of the school (College of Dupage, 2022) as half of the courses will be held online. This means less physical environment is needed for school management and also means reducing financial expenses. Waste of resources in school cleaning, cleaning materials, lighting and heating expenses can be avoided.

Considering that education in hybrid education continues on two different platforms, using the advantages of both platforms stands as an important practice in terms of school management in helping the school to achieve learning goals of students. The school administrator is also responsible for the success of the school. From this point of view, the contribution of hybrid teaching to the success of the school has very important benefits for students and teachers. The following topics include the benefits of hybrid teaching for students and teachers.

3.1. Benefits of Hybrid Learning for Students

Hybrid learning helps students develop different self-learning skills. In this model, the student can develop himself/herself about what kind of information he/she needs and how he/she can find it (Vedubox, 2021). Hybrid learning has some benefits for students. Studies show that hybrid learning has significant advantages over face-to-face or completely online learning activities (Graham, 2019; Harding et al., 2005; Liu et al., 2016; Woods et al., 2004). It provides students with the opportunity to have a more intellectually satisfying and interesting learning experience (Woods et al., 2004), reinforces the concepts learned from textbooks in the classroom (González-Gómez et al., 2015), enables students to remember information longer and have more fun in lessons (Alvarez et al., 2013), improves students' motivation and commitment to the lesson (Ahmed & Osman, 2020), provides students with a great deal of independence in the learning process (Hung, 2015), improves interaction between teacher and students, and can easily reach the teacher and ask what they want to ask (Makhdoom et al., 2013).

In hybrid education, the student learns how to learn and takes a decisive role in his own learning. It provides an opportunity for personalized and independent learning. Using the beneficial aspects of face-to-face online teaching increases student success (O'Byrne & Pytash, 2015). In this education model in which classroom education and online education are carried out together, students acquire basic knowledge and skills at school. Online learning opportunity, on the other hand, gives students the opportunity to develop these knowledge and skills in accordance with their own learning pace. Online resources are richer than teaching resources that can be provided in the classroom. Considering the individual learning differences of the students, each student will have the opportunity to progress at their own pace and teachers will enable their students to develop their own learning skills.

Time management is an important issue in an individual's life. Effective use of time and achieving the desired success often depend on how you use your time. The hybrid learning model can help students use time more effectively with online education as they will not be at the school in some days. Time management is of vital importance, especially in adult education. Lifelong learning activities depend on the individual's effective use of time. In a traditional classroom, students spend most of their time by watching videos, taking notes, and reading texts. However, in hybrid teaching, such activities are given as online assignments and they can be used to analyze students' time at school more effectively, to explore and develop the subject in depth (College of Dupage, 2022).

The individual, who spends a significant part of his time working in the business environment, also benefits from educational activities in terms of his personal development depends on his effective use of time. For this reason, hybrid learning provides students with flexible time and space opportunities. It increases students' interactions with each other (Alayyar, Fisser & Voogt, 2012; Woods, Baker, & Hopper, 2004). Thus, students are provided with access to information and educational materials whenever they want. Students are no longer required to attend school five days a week. Students can also share their own content much more quickly thanks to Web 2.0 technology, and by creating online project groups with their peers, they can do more effective work beyond just reading texts or doing exercises.

Another benefit of hybrid learning for students is that there is no pressure from teachers or peers in face-to-face education for students to actively participate (Chin & Lin, 2008). Students often prefer to remain silent in face-to-face education because of the attitudes of their peers or the attitudes of their teachers. However, since there is no such pressure in online education, it is possible for students to participate more comfortably. In addition, some studies have reported that students' success increased in the hybrid teaching model (Kendall, 2002).

3.2. Transition to Hybrid Learning for Teachers

What is the state of hybrid learning now? Where should educators position themselves to be effective in hybrid learning activities? It is useful to answer such questions. Especially with the epidemic, we can say that many teachers had problems regarding the effective use of technology in education. Many teachers had trouble adjusting to the new situation. The lack of classroom-centered education revealed that traditional methods are no longer valid.

Educators put in a tireless effort in this process. They had to adapt to hybrid education and struggle with ever-changing conditions. In this sense, IT and school administrators had to support teachers' adaptation efforts, maintain computers and materials, find solutions to technical problems and ensure the continuation of education at the end of the day. However, on the other side of the coin, there were students who lacked technological tools, computers and knowledge. Also teachers had problems in accessing information technologies (Şahin, 2021). Only 20% of the world's population had access to broadband broadcasts. 30% of the students who provided access also experienced fatigue and learning difficulties. In addition, there were problems with the content of the materials to be used in online education (UNICEF, 2022).

Educators need to fully understand the wealth of reliable educational technologies and rely on this technology that supports them in many areas even before the pandemic. Teachers and students routinely used digital materials provided by educational technologies even before the epidemic (Kessler & Hubbard, 2017). However, the richness that educational technologies add to educational activities and the value they add to classroom activities became more noticeable during the epidemic period. Instead of resisting educational technologies and innovations, educators, that is, teachers, can use educational technologies that will support their lessons and increase the motivation of students by combining them with their experiences. Teachers obtained new tools and educational materials with educational technologies. While this gives them the opportunity to organize more effective teaching activities, it allows them to create opportunities to tackle issues such as problems in accessing educational technologies, inequality, and to ensure that students continue to receive high-quality education.

With the Covid-19 pandemic, teachers, school administrators and policy makers in charge of education globally had to make structural changes in learning environments, teacher and student roles, responsibilities and educational

organization. The transition to a hybrid learning environment or fully online education has required dedicated work for teachers and school administrators. Teachers had to renew themselves and take a position suitable for the new situation in order to maintain their educational activities and to communicate effectively with parents and education administrators in educational institutions located in villages and rural areas, where most of them have reached retirement age and where opportunities such as the internet are limited.

4. Challenges of Hybrid Education for School Management

In order to create an environment suitable for hybrid learning, studies carried out to maintain educational activities in compulsory situations such as epidemics and war require teachers and school administrators to work with devotion as well as students and produce solutions to many different unforeseen problems. Today, there is a demand for the creation of more hybrid learning environments and it is seen that this demand is increasing day by day. The opening of distance education programs by more universities and the continuation of some courses in universities with distance education and face-to-face methods can be considered as a result of demands from students. We see that educators trust educational technologies more than ever before (Şahin, 2021). However, do teachers, administrators and students in educational institutions really have enough awareness? Have teachers received adequate training on how to support students remotely online? It may be useful to consider the problems that school administrators have to find solutions for under three different headings: technical infrastructure, training and harmonization of human resources, and problems with students and parents.

4.1. Technical and Financial Issues

A good planning and cooperation are required for the effective use of hybrid teaching education technologies. Apart from these, national and international developments may affect education and training processes. For example, the Covid-19 epidemic, which broke out at the end of 2019, affected educational activities in all countries of the world (Korucu and Kabak, 2020). However, even during the epidemic period, countries had to continue education. Many countries have had to replan their education processes. For this reason, school administrators need to make good planning and cooperate with teachers, families and other stakeholders on technical issues. It has been observed that especially private schools, which have digital infrastructure, sufficient technical materials and employees and teachers who can maintain them, continued the education process by moving their educational activities to online platforms in this period (Alpago, 2020; Şahin, 2021).

The adaptation of educators and students to the new situation that emerged with the epidemic caused flexibility in teachers and students. In this new situation that occurred due to the epidemic, the use of previously untested methods and materials has been brought to the agenda (Borenstein et al., 2020). School administrators have important duties in adapting the school, teachers and students to new situations. Establishing the technical infrastructure that will serve as a bridge between the teacher and the student, the computer, the internet, the planning of the classroom environments or studios where the lessons will be held, and the provision of appropriate materials, while using limited resources, can become important problems that school administrators have to deal with.

Although the epidemic and the transformation of education to distance education have brought many problems, it has increased the use of the hybrid method after the epidemic. In this sense, school administrators have an important role in the maintenance of technical materials needed in schools, their purchase, the training of teachers regarding their use, the development of materials suitable for the new system and the planning. However, it does not seem possible for the investments made by education administrators with limited financial resources to find a response in the society and to provide the financing of education without the support of the state or parents in private schools. For this reason, education administrators need to find financial support in order to solve technical infrastructure problems. Although it was planned to make the schools open to the public by considering the use of school areas for public benefit activities for financial support, it must have been foreseen that this would bring a financial burden to schools and educational institutions rather than financial support in a short time, so this project was shelved before it was put into practice. In addition, apart from epidemics and students with special needs, the laws are for face-to-face education in public schools.

4.2. Human Resources and Effective Material Issues

When the curriculum given in the education faculties of the universities that have undertaken the task of training teachers is examined, it is seen that there are generally courses with Computer and Communication Technologies or similar names. However, when the contents of these courses are examined, it is seen that there are courses for the use of some purely technical programs at a basic level. In addition to these courses, it is seen that another course called material development or material design is given to teacher candidates. Although it is thought that the teachers who graduated from the faculty of education have knowledge about basic-level distance education systems, it is seen that they are not given training on using the distance education system purchased in a school where hybrid education is provided or the programs in which online synchronic lessons are taught. The teacher candidates are also lack the ability to plan their lessons in a hybrid education model.

It is necessary for teachers and related employees to receive in-service training on the use of materials and educational technologies to be used in hybrid teaching, to have a computer programmer responsible for solving the problems that may be encountered in the school, and to organize seminars regularly for the development of the technical infrastructure of both teachers and students. It will be beneficial for teacher candidates to receive practical training on educational technologies in providing appropriate human resources. Teachers are the visible face of the school and it is the school administrator's responsibility to provide the technical infrastructure that shows them well.

Hybrid education and face-to-face education should be planned to complement each other. Students' participation in online activities can only be achieved with entertaining and motivating teaching materials that will appeal to them. Coming to the classroom by reading only the books or materials given in the virtual environment will not be much different from the teaching in the classroom. For this reason, Miller (2012) offers some suggestions to increase the effectiveness of online materials. First, collaborative study groups and virtual classroom meetings can be beneficial and motivating for the students. Sometimes virtual classroom meetings are held and the teacher can present all the content. Students can watch the videos of these recorded virtual lessons whenever they want. In addition, student groups can be formed and joint studies can be carried out in cooperation. In order for these studies to be effective, they must be meaningful to the students.

Miller (2012) suggests creating learning needs in order to enable students to participate more effectively in hybrid education. Students should need information while working on the project in authentic projects face-to-face or in virtual classrooms. This will enable them to do the given materials and assignments, and to search for the information. It is recommended that students be asked to reach certain goals for online activities, and that they can use mobile learning tools to benefit more from hybrid learning. However, in order to design different materials from the usual materials of the traditional classroom environment, teachers need to learn to prepare virtual materials through in-service training.

The Ministry of National Education is trying to prepare teachers and students for a hybrid learning environment with the course contents prepared. The Education and Informatics Network (EBA) continues to develop the course material that could be used by teachers in both in face-to-face education and in distance education. On the other hand, we can see that some private schools support face-to-face education with online materials with programs they have developed or purchased.

4.3. Student and Parent Problems

It should not be forgotten that hybrid education has a student and parent dimension beyond the school dimension. No matter how ready the school is for hybrid education, it is possible to encounter problems when hybrid education is not properly explained to students and parents. Families should be supported technically against hybrid education, especially at the basic education level. Technology literacy levels of students are also an important factor to be considered. In order for students to access online course content, there must be sufficient technological infrastructure from their homes, parents must be willing to prepare this infrastructure or the school must provide this infrastructure to the family. Many families may insist that their children's academic education be limited to

school. It may be necessary to persuade these families, to explain the benefits of hybrid teaching and the flexibility it will provide.

Depending on their age group, students may have problems using basic communication tools and online materials. In this sense, family members who will guide them at home should have sufficient knowledge and skills about hybrid teaching and the materials used.

5. Conclusion and Suggestions

Hybrid classroom instruction should not replace virtual activities as part of the learning environment or as a substitute for face-to-face classroom sessions. Instead, in hybrid teaching, virtual environments and online materials should be used as a support for students to learn better. First of all, for teachers, virtual environments should be seen as auxiliary pedagogical tools that students can use to acquire target behaviors. Flexibility in online activities allows students to learn continuously and at their own pace. Constant access to online materials helps students benefit from flexible learning.

The hybrid classroom application benefits teachers and students in two ways: First, it facilitates the sharing of teaching and learning materials with students prior to the classroom activity. Before participating in face-to-face training, students access and read the materials online and come prepared to the lesson by getting information about the course content. This helps to complete many time-consuming activities during the lesson in advance. Another benefit for teachers is that they save time by giving homework online and providing feedback via online methods.

In the information and internet age of the 21st century, in which technological developments are experienced very rapidly, educational technologies, information and communication systems are constantly developing. Concepts such as distance education, hybrid learning, and blended education, which emerge as a result of the adaptation of technology to education, enrich learning environments and bring with them some administrative problems. It is beneficial for educational institutions, teachers and education administrators to be more flexible in adapting to the developing technology. While the hybrid teaching model is an advantage for teachers who can easily adapt to change, it can be described as a new and unnecessary invention for traditionalist teachers and administrators who do not want to chase change.

References

- Ahmed, A. M. & Osman, M. E. (2020). The Effectiveness of Using Wiziq Interaction Platform on Students' Achievement, Motivation and Attitudes. *Turkish Online Journal of Distance Education*, 21 (1), 19-30. DOI: 10.17718/tojde.690112
- Akran, S.K. (2021). Öğretmen Adaylarının “Hibrit Eğitim” Kavramına İlişkin Algılarının Belirlenmesi: Bir Metafor Analizi Çalışması. *International Journal of Humanities and Education*, 7(16), 432-463.
- Alayyar, G. M., Fisser, P. & Voogt, J. (2012). Developing technological pedagogical content knowledge in pre-service science teachers: Support from blended learning. *Australasian Journal of Educational Technology*, 28(8). <https://doi.org/10.14742/ajet.773>
- Alvarez, A., Martin, M., Fernández-Castro, I., & Urretavizcaya, M. (2013). Blended traditional teaching methods with learning environments: Experience, cyclical evaluation process and impact with MAgAdI. *Computers & Education*, 68, 129–140 <https://doi.org/10.1016/j.compedu.2013.05.006>
- Caulfield, J. (2011). *How to design and teach a hybrid course*. Sterling: Stylus Publishing, LLC.
- Chen, J. And Lin, T.-F. (2008). Class attendance and exam performance: A randomized experiment, *The Journal of Economic Education*. 39(3), 213–227, <https://doi.org/10.3200/JECE.39.3.213-227>
- College of DuPage (2022). *Introduction to Hybrid Teaching* (retrieved on October 5, 2022) from <https://www.codlearningtech.org/PDF/hybridteachingworkbook.pdf>.
- González-Gómez, D., Airado, D., Cañada-Cañada, F., & Su-Jeong, J. (2015). A comprehensive application to assist in acid-base titration self-learning: An approach for high school and undergraduate students. *Journal of Chemical Education*, 92(5), 855–863. <https://doi.org/10.1021/ed5005646>

- Graham, C.R.(2019). Current research in blended learning. In M. G. Moore & W.C. Diehl (Eds). Handbooks of distance learning (4th Ed. Ss. 173-188). New York NY: Routledge.
- Harding, A. Kaczynski, D., & Wood, L. (2005). Evaluation of blended learning: Analysis of qualitative data. September Paper Presented at teh UniServe Science Blended Learning Symposium.
- Hung, H.-T. (2015). Flipping the classroom for English language learners to foster active learning. *Computer Assisted Language Learning*, 28(1), 81–96. <https://doi.org/10.1080/09588221.2014.967701>
- Jones, S. (2019). The Implications of Blended Learning in Today’s Classroom: A Look into the History, Views, Impacts, and Research Look into the History, Views, Impact and Research. *Educational Technology Commons*.
- Makhdoom, N., Khoshhal, K. I., Algaidi, S., Heissam, K., & Zolaly, M. A. (2013). Blended learning’ as an effective teaching and learning strategy in clinical medicine: A comparative cross-sectional university-based study. *Journal of Taibah University Medical Sciences*, 8(1), 12–17. <https://doi.org/10.1016/j.jtumed.2013.01.002>
- Kemp, N., & Grieve, R. (2014). Face-to-face or face-to-screen? undergraduates’ opinions and test performance in classroom vs. online learning. *Front. Psychol*, 5, 1278. <https://doi.org/10.3389/fpsyg.2014.01278>
- Kendall, M. (2002). Teaching online to campus-based students: The experience of using WebCT for the community information module at Manchester Metropolitan University. *Education for Information*,19(4) 325–346, 2001. <https://doi.org/10.3233/EFI-2001-19404>
- Kessler, G., & Hubbard, P. (2017). Language teacher education and technology. *The handbook of technology and second language teaching and learning*, 277-291.
- Kiddle, T. Farrel. C. O’Leary, J.G.& Mavridi, S. (2020). A survey of instances of, an attitude to hybrid learning in language teaching organisations around the World as a response to the Covid-19 pandemic. International House World Organisation. https://www.eaquals.org/wp-content/uploads/2020-Vision_-Hybrid-Learning-survey_final_111220.pdf (18.09.2022).
- Korucu, A. T.& Kabak, K. (202). Türkiye’de hibrit öğrenme uygulamaları ve Etkileri: Bir meta analiz çalışması. [Hybrid learning practices and effects in Turkey: A meta-analysis study]. *Bilgi ve İletişim Teknolojileri Dergisi/Journal of Information and Communication Technologies*, 2(2), 88-112
- Liu, Q., Peng, W., Zhang, F., Hu, R., Li, Y., & Yan, W. (2016). The effectiveness of blended learning in health professions: Systematic review and meta-analysis. *Journal of Medical Internet Research*, 18(1), 1-19. <https://doi.org/10.2196/jmir.4807>
- Miller, A. (2012, Oct. 12). Blended learning: Strategies for engagement." *Edutopia*. Erişim: May 18, 2022 from <http://www.edutopia.org/blog/blended-learning-engagementstrategies-andrew-miller>
- O’Byrne W. I. & Pytash, K. E. (2015). Hybrid and Blended Learning. *Journal of Adolescent and Adult Literacy*, 59(2), 137–140, 2015. <https://doi.org/10.1002/jaal.463>
- Schaber, P., Wilcox, K. J., Whiteside, A. L., Marsh, L., & Brooks, D. C. (2010). Designing learning environments to foster affective learning: Comparison of classroom to blended learning. *International Journal for the Scholarship of Teaching and Learning*, 4(2), 1–20. <https://doi.org/10.20429/ijstl.2010.0402>
- Siegelman, A. (2019). Blended, hybrid, and flipped courses: What’s the difference? <https://teaching.temple.edu/edvice-exchange/2019/11/blended-hybrid-and-flipped-courses-what%E2%80%99s-difference>.
- Solihati, N.& Mulyono, H. (2017). A Hybrid Classroom Instruction in Second Language Teacher Education (SLTE): A Critical Reflection of Teacher Educators. *International Journal of Emerging Technologies in Learning*, 12(5), 169-180. <https://doi.org/10.3991/ijet.v12i05.6989>
- Singh, J. & Matthees, B. (2021). Facilitating interprofessional education in an online environment during the COVID-19 pandemic: A mixed method study. *Healthcare*, 9(5), 567. <https://doi.org/10.3390/healthcare9050567>.
- Şahin, M. (2021). Opinions of university students on effects of distance learning in Turkey during the Covid-19 pandemic. *African Educational Research Journal* (9)2 536-543.
- UNICEF (2022). Monitoring hybrid learning: A Short guide <https://www.unicef.org/media/123226/file/Short%20guide%20to%20monitoring%20hybrid%20learning%202B.pdf> Retrived: 29.09.2022.
- Vedubox (Ocak, 11, 2021). Hibrit eğitim modeli: Nedir, faydaları nelerdir? <https://www.vedubox.com/hibrit-egitim-modeli-nedir-faydaları/> (28.09.2022).
- Woods, R., Baker, J. D.& Hopper, D. (2004). Hybrid structures: Faculty use and perception of web-based courseware as a supplement to face-to-face instruction. *The Internet and Higher Education*, 7(4) 281–297, <https://doi.org/10.1016/j.iheduc.09.06.2022>.