

Impact of Pandemic COVID-19 on Higher Education in Iraq

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Doi: 10.23918/ijsses.v9i1p78

Abstract: During the covid-19 outbreak in Iraq, the higher education sector faced many obstacles, and this research examined how remote learning and other relevant technologies, platforms, and other internet ramifications helped to keep this vital sector going during the new standard era. Students and lecturers will also be given a look at ways to overcome the drawbacks of using these technologies in this paper. The Corona pandemic (COVID-19) had a significant impact on Iraqi education, which was transformed through the implementation of e-learning in an effort to reduce the risk of the coronavirus infecting students. Remote learning and its associated technologies, platforms, and other online consequences helped sustain Iraq's vital higher education industry during the covid-19 pandemic while also providing insight into the issues encountered by the sector during the new normal era. This paper will also address the difficulties, benefits, and drawbacks of educators and students using these technologies, as well as possible solutions.

Keywords: Challenges, Benefits, and Downsides of Online Learning, Higher Education, (Covid -19)

1. Introduction

Covid-19 is now a severe hazard to public health worldwide, having been declared a pandemic by the World Health Organization on March 11th, 2020 (World Health Organization, 2020). The Merriam-Webster Dictionary classifies an outbreak of a disease as a pandemic when it affects a high proportion of the population over a wide geographic area. The Covid-19 Pandemic profoundly affected all parts of life, including education (Chakraborty & Maity, 2020; Rashid et al., 2020). In terms of public health disasters, this is often considered to be the worst of this century and the greatest threat to humanity since World War II.

A series of medical tests confirmed that the virus had spread quickly from one person to another and then from one country to another (Paules, Marston, & Fauci, 2020). There have been a number of measures implemented to limit the spread of the virus, including lockdowns, mandatory social isolation, travel restrictions, the cessation of sporting events, and commercial shutdowns.

Received: January 11, 2022

Accepted: February 26, 2022

Serin, H. (2022). Impact of Pandemic COVID-19 on Higher Education in Iraq. *International Journal of Social Sciences and Educational Studies*, 9(1), 78-90.

Schools around the world have switched all of their academic programs online to save education and extend the school year. However, they weren't quite ready for such a drastic change from traditional classroom instruction to a totally online curriculum in the first place (Budur et al., 2021). As noted by the researcher, many of them lacked a robust technical infrastructure and intelligent methods (Zhang et al., 2020).

Numerous educational technology advancements have occurred over the last few decades and have shown to be extremely beneficial in these trying times like Covid-19 (Dhawan, 2020, Peters et al., 2020). Additionally, there have been a number of helpful online education platforms developed. Despite this, educational institutions have a tough time charting their instructional techniques in an online world. They've had to cope with a wide range of difficulties, from logistical to scientific and economic.

2. Literature Review

The Covid-19 outbreak necessitates the use of digital education in academic institutions. Students' ambitions for adequate services during the normal education time should be taken into consideration by institutions while upgrading and creating a new system in which they shouldn't face any obstacles are important considerations in this respect. Non-academic employees, on the other hand, should be trained to use efficient facilities and deliver high-quality instruction.

Additionally, the institution, teachers, and departments must make high-quality resources available to students and instructors. Lecturers' and students' impressions of online education are strongly influenced by the applications, programs, or networks through which they connect with one another. Martin et al. (2019) concluded that in addition to efficient online class administration, students want an online help desk where they can swiftly resolve connectivity or login concerns.

When it comes to developing positive perspectives, researchers found that pupils' behavioral control aspects are crucial (e.g., theory of planned behavior; normative beliefs, subjective norms, and perceived behavior control). At least one study found that offering helpful information, taking into account students' developmental stages, and utilizing user-friendly software greatly influenced students' outlooks toward future improvement (Cheon et al., 2012).

Personal, institutional, training and technology, and cost/benefit are four types of impediments to adapting online education at universities. These obstacles were described in (Lloyd, Byrne, & McCoy, 2012). It was found that educating professors about anticipated problems made the transition to the new system and structure go more smoothly. For online education to be effective, they stated that instructors and lecturers must have had previous experience with remote education.

Professors' participation in strategic plans through the use of online learning has been found by the researcher (Cheon et al., 2012). In this regard, researchers emphasized the significance of faculty members' desire to participate in online education as a way to improve competitive advantage (Cutri & Mena, 2020). Researchers claimed that professor expertise has an enormous impact on online education efficacy, in accordance with this (Martin et al., 2019). Researchers say that online education's success is attributed to its ability to engage and boost student participation and its capacity for effective communication. A functional online course, according to this researcher, should include the following features: clear

objectives, clear assignments, clear assessments, and clear content as well as clear ways for students to connect and engage with one another (Darabi, Sikorski, & Harvey, 2006).

The researchers concluded that the ability to adapt to a new environment depends on an organization's willingness to change (Budur et al., 2018). Furthermore, faculty or departments who are prepared for an online education system will benefit their lecturers, classrooms, students, and overall happiness with it. Lockdowns in the nations affected by the Covid-19 pandemic have accelerated this adaptation. Research in this area has focused on the elements of technology, human resources, money, and infrastructure as they relate to online education preparedness (Azimi, 2013). In another study, the researcher focused on three key dimensions: change valence, efficacy, and contextual factors (Lokuge et al., 2019). (Culture of the organization) The same researcher used three characteristics of character traits, structural factors, and a level analysis (individual and organizational) to evaluate readiness for change in their literature review (Holt & Vardaman, 2013).

It was also termed as modern digitalization by the researcher, who noted that modern methods are cost-effective and better suited to connect diverse stakeholder groups that reduce the obstacles to innovation (Lokuge et al., 2019; Celik, 2019). So, the organization's potential to innovate rests on its ability to be sensitive, flexible, and adaptable in the face of fast-changing conditions, as well as its ability to make quick decisions. A similar criterion for assessing whether or not students are ready for online learning has been employed by the models in this regard. There is no free or alternative for colleges in the pandemic process. The use of an online education system was being pushed on private educational institutions in particular by external forces. The Researcher is hence a better idea for assessing whether or not institutions are ready for environmental changes and innovation, respectively (Lokuge, Sedera, Grover, & Dongming, 2019).

3. World Educational Systems as a Result of Covid-19

Several educational institutions have been forced to close their doors due to the COVID-19 outbreak. The temporary shutdown of educational institutions around the world in an effort to contain the spread of the COVID-19 virus has affected almost 60% of the world's student population. Many countries have embraced the concept of "localized".

Thousands more extra students will be affected by the closures. Around 1.725 billion students will be impacted by school closures as a result of the pandemic as of May 24th, 2020. More than 98.6 percent of the world's student population is being affected by the closures in 153 nations and 24 countries, according to UNICEF monitoring. Currently, schools are open in ten different nations (Al-Abdali, 2016).

Institutions are relying more and more on online education as a lifeline in the fight against community transmission (Murphy, 2020). In addition to traditional textbooks, technological advancements allow educators and students to access a variety of specialized resources in various media and across time zones. Since the COVID-19 pandemic has led to the use of videotelephony software like Zoom and Google Classroom, Free Conference Call, and Telegram in numerous schools throughout the world, including in Iraq.

4. The Educational System in Iraq

It is believed that classes in Iraqi colleges are still unable to employ technology because of a variety of issues that the country is currently facing (Ghareb, & Mohammed, 2017). In comparison to other Arab countries, Iraq was late to the game when it comes to implementing e-learning technologies (Ameen et al., 2019). Despite the fact that colleges in Iraq are interested in online learning, they have just lately begun to implement it.

5. Electronic Learning (E-learning)

In recent years, traditional learning methods have not been the only option for students (Wang et al., 2007). Currently, ICT (Information and Communication Technology) plays an important role in society. Several industries utilize information technology to undergo digital transformation and implement digitization in their operations around the world, and education is one of these industries. "E-Learning" can be defined as the use of information technology in the learning process (Ameen, and Willis, 2017); it includes the use of ICT in educational facilities such as schools and universities, where the beneficiaries have access to a wide range of learning materials at any time, as well as the use of ICT in other settings such as businesses.

5.1 E-Learning in Iraq

Recently, and particularly during the Covid-19 Pandemic period, the "E-Learning system" has been widely adopted in Iraqi educational institutions; however, a number of obstacles stand in the way of this new learning approach, including a lack of infrastructure and a general lack of understanding (Ameen et al., 2019). A great deal of effort has been made in Iraq to adopt an E-learning approach, particularly from universities and other small companies, even though the country was one of the most behind the times in terms of adoption (Sabr, Dhyaa, & Ali, 2017). In recent years, the learning process has altered as a result of the use of new free technologies to improve the efficiency of teaching (Mahmod et al., 2017).

When the Iraqi Ministry of Higher Education and Scientific Research launched an e-learning strategy, one of its most important efforts was to develop the Avicenna center, which has since extended throughout the country. The Opatel project, designed by the United Nations and UNESCO, is another example was another step in supporting this plan. Non-educational government activities, such as the University of Kufa's targeting of students and the Ministry of Oil targeting their employees, both of which provided an e-learning system platform for management and training of their personnel, were also involved in this strategy (Learning Center, 2020).

There are a few other notable examples of E-learning platforms in Iraq; the first is "e-madrassa," which is supported by the ministry of education and is built on the intranet infrastructure of Earthlink Co., the leading internet service provider in Iraq. The second example is "e-madrassa," which is supported by the ministry of education and is built on the intranet infrastructure of Earthlink Co., the leading internet service provider in Iraq. Later on, Earthlink officially released its E-learning platform to serve primary and secondary schools, which was last updated.

The second example is a MOOC site called Kufa Open Online Courses, which stands for Kufa Open Online Courses (KOOC). As of March 2012, it was being used at the University of Kufa, and it is

considered to be the world's first open online learning platform. It targets the general public with short videos in the local language that are organized into courses on a variety of interesting topics, such as educating people about information technology, archeology, cultural heritage, and other social issues. The following is the structure of the paper: The second section examines the internet issues in Iraq, the third section details the study methodology, and the fourth section explains the findings and the analysis of the results. Section five concludes with an explanation of the conclusions and the future work.

5.2 E-Learning and Crisis Management (COVID-19_ COVID-20) in Iraq

As the second wave of corona pandemic erupted, new strains of (COVID-20) emerged, and many medical organizations struggled to find solutions and treatments to save people all over the world as the COVID-19 and COVID-20 viruses were combined into one virus that caused two diseases as a second wave of corona pandemic (Chen, Zou, & Xie, 2020).

E-learning academics, particularly those in educational institutions, have written extensively about the corona pandemic and the role that e-learning has played in helping them combat it. Even in the midst of the Corona Pandemic's terrible living conditions, the field of education and learning has continued to achieve substantial progress with the use of electronic learning and multi-e-tools distributed over numerous platforms (Park, 2009).

It's also possible for students and teachers to communicate with one another via social media technologies that can be accessed at no cost for free access to online classrooms. E-learning plays an important part in this transition, especially when it comes to corona pandemics (COVID-19 and COVID-20) crises (Tawafak et al., 2020). Students are becoming more adept at using a variety of electronic platforms to access their courses, making it easier for them to complete their studies more efficiently, whether synchronously or asynchronously, and better prepare for any upcoming e-exams scheduled for the next year. In addition, many countries, such as China, Turkey, and Iraq, are currently using electronic learning to continue their research by utilizing electronic learning via multi-platform forms like Course and Moodle in campus settings that are considered to be among the most advanced electronic learning platforms in the world (Khamparia & Pandey, 2020).

E-learning in Iraqi universities is helping the country's educational system catch up with the world's best, allowing all higher learning institutions to improve and thrive. As a result, all Iraqi universities have set up e-control rooms to oversee online exams and lectures for students all around the nation.

5.3 The Benefits of Online Learning System

Covid-19 may mark a turning point for higher education's ability to offer courses and programs to students throughout the world via the internet. Online learning possibilities for so-called "large courses open" cannot be ignored any longer. Covid-19 may mark a turning point for higher education's use of online learning. For the so-called "massive open online courses," it is no longer viable to deny the necessity for online learning opportunities. There is a possibility that online education will replace traditional schooling as a viable option. Student digital proficiency needs to be improved; therefore, this option is more cost-effective than others.

Virtual education has the ability to alter higher education since today's students are better at using technology and electronic portals. It is possible to diversify the curriculum and develop an interaction that ensures the attention of learners, gives timely feedback, fosters involvement with other learners and the teacher, and provides a digital culture for learners with an online learning system. Some students may benefit from taking online courses because of the convenience and non-classroom environment they give (Buheji & Buheji, 2020a).

Teachers, colleges, and departments in Iraq's Ministry of Higher Education will all have to think about how they will present the curriculum in the classroom versus how they will present it online as a result of the expected requirement that they accept online learning as part of the teaching process. Online learning has brought many advantages to Iraqi institutions following their closure, including completing the curriculum using Google classroom (in most universities) or Moodle (at Kufa University) and avoiding missing the academic year, particularly for students in their final years of university.

Covid-19 could be a watershed moment for online education in higher education. "Large course" online learning opportunities can no longer be disregarded. Benefits of Distance Learning Covid-19 could be a turning moment in the use of online learning in higher education. Because of "massive open online courses," it is no longer possible to dismiss the need for online learning options. Traditional schooling may have to be replaced by online education in the near future. This solution is more cost-effective than others because it will help students enhance their digital abilities.

Accordingly, we expect Iraq's Ministry of Higher Education to recognize online learning as a part of the teaching process, which in turn will lead to the consideration of which elements of the educational curriculum will be delivered in the classroom and which parts will be delivered online.

5.4 Online Learning System Drawbacks

There are some downsides to online learning, despite its numerous advantages. A lack of certification and low quality, as well as little or no face-to-face connection, an intense need for self-discipline, and an even more extreme need for self-direction are just a few of the drawbacks of online education. Internet education is currently underdeveloped and underutilized in developing nations like Iraq for the following reasons:

1. Reducing the level of expertise and training required to carry out this complex technological task.
2. There are a large number of students and instructors who do not have access to email.
3. Power outages and weak or non-existent internet service are common in many parts of the country.
4. Attendance in class is required, and the study relies on direct memory in the presence of an instructor and a receiving student (Buheji & Buheji 2020a).

6. Uses for Online Education

For COVID-19, it is necessary to evaluate the effectiveness of online technologies in terms of advantages and disadvantages with regard to teaching and learning by a wide range of stakeholders. Therefore, this research will look at the challenges, benefits, and drawbacks of online learning systems, related tools, and applications from the perspective of university faculty and students.

6.1 The Advantages and Disadvantages of E-Learning Applications

6.1.1 The Advantages of a Platform for Google Classrooms

The free online learning platform Google Classroom has a number of advantages for students and teachers alike. Examples include, but are not limited to, the ease of use and accessibility from all platforms, effective communication and sharing, speeding up the assignment process and effective feedback, and no need for paper (Serin & Khabibullin, 2019).

Students learn about an online learning environment in the classroom. Students are now expected to take at least one online class as part of their degree requirements at many colleges and universities. Students who are exposed to Google Classroom may find it easier to adapt to other learning management systems used in higher education, such as Blackboard or Canvas. In addition, students can collaborate via a variety of ways in Google classroom. Within the Classroom, teachers can organize online discussions and develop group projects.

Students can also work together on Google documents that the teacher has shared with them. Digital natives are more likely to take responsibility for their education through technology since they are more familiar with it. Numerous options are available to make classroom instruction more engaging and teamwork-oriented. It allows teachers to tailor projects, including videos and online sites, into courses and set up collaborative group activities. With an Arabic-language version of the platform and an app for smartphones that facilitates access to students and instructors at colleges across the Middle East, the Google classroom platform has been a success in most Arab nations, including Iraq (Ali & Ghazi, 2019). Before Covid-19, online education in Iraq was limited, but many instructors now use it to provide lectures to undergraduate and graduate students easily. In contrast, students have found this platform more user-friendly after originally finding it difficult to navigate through. On this platform, there were also several multidisciplinary virtual workshops.

6.1.2 Problems with Google's Classroom Software

There are a few limitations to using Google Classroom, such as the need to manage several accounts, restricted integration options, lack of automatic updates, difficulty in distributing lessons among students, editing concerns, and a lack of automated quizzes and evaluations (Barzani, 2021).

6.2.1 Zoom Meeting Application

Students and instructors can both utilize Zoom, which is free to use, to hold high-quality meetings and share files, as long as everyone has their own personal account on the platform. To name just a few, it allows for two-way audio and video communication over the internet, as well as the ability to display educational content in any format, whether it's in the form of an educational presentation in the form of PowerPoint, Word, or a video, or even a screen like a blackboard that can be explained and written on.

It's possible to join the meeting remotely through the internet, and you have the choice of muting or allowing other participants to speak simultaneously while you're there. A fourth feature is recording a video of the session and sharing it afterward on any social media network.

Zoom has been extensively used in the last four months to organize virtual global meetings, conferences, and scientific lectures at the majority of universities. It was because of this program that scientists from around the world were able to transcend their social isolation and create a secure communication channel (Barzani, 2021).

6.2.2 Problems with Zoom's Meeting Software

Zoom, like many other applications, has several drawbacks, such as a 40-minute limit on video meetings in the free version and the fact that you pay for Zoom by the host. Nonencrypted communication, cloud security flaws, and the threat of hacking all contribute to poor and unreliable audio and video (Barzani, 2021).

6.3 How Can Developed Countries Overcome the Drawbacks of Online Education

Some students find the isolated nature of online learning complicated since they are social creatures who crave companionship. The course can be isolating if you don't have a fellow student to share it with. To combat this, many courses encourage students to share their thoughts and ideas on various elements of the subject matter, either in a general discussion forum or a section-specific section.

Posting your views and opinions in the forums of courses where community mentors or teaching assistants respond to student posts might help lessen these feelings of loneliness. In addition, students and instructors both may benefit from allowing thousands of instructors to use online learning platforms, airing study themes on a specialized television channel, and supporting an Internet platform that hundreds of thousands of students may use. Finally, providing students with free access to the Internet is another option worth considering. Because PBL programs can be deployed rapidly and without compromising educational or training objectives, this is the appropriate solution (Buheji & Buheji, 2020b).

Discussion participation can be lacking in some classes. The student discussion boards are a good place to start if you get students talking to each other online. Students are more inclined to interact with you if you've commented on multiple topics in the same course. It's possible that replies will take days to appear, so please exercise patience.

7. The Most Three Models Implemented of Education after Covid-19 Pandemic

Online education was the only option for universities, schools, and colleges after Covid-19 was dispersed over the world. While this abrupt and unexpected shift was unprepared for by many educational institutions' infrastructure, it was welcomed by educators and students alike. After that, massive efforts were made to steer education back in the direction it should have gone. Technology was necessary for any model to be adopted. Virtual teaching could be supported by technology and be of significant importance in education, but it cannot totally replace face-to-face teaching and accomplish its aims. Teaching virtually, according to the researcher, may not meet the demands of all types of learners (Keshavarz, 2020; Serin, 2015).

7.1 Online Learning

Advances in technology have made virtual schooling more accessible (McBrien, Cheng, & Jones, 2009). These rapid developments have opened up a wide range of educational opportunities. There is a common denominator among the different phrases used to define the model of teaching, which is to utilize a computer connected to a network, which offers us the freedom of studying anywhere, at any time, and with whatever manner we desire (Cojocariu et al., 2014).

Away or online education, according to the researchers, means that students are apparently/physically distant from the teachers and claim a transference type/method (Wang & Liu, 2019). Researchers found that while conventional methods of instruction were practical, their efficacy has waned due to technological advancements in education (Keshavarz, 2020). Despite its benefits, there are some drawbacks to this type of teaching and learning strategy.

Any number of problems, such as a lack of a working connection or a faulty transfer, can arise over the course of using this service. Both individual attention and student involvement are key issues in online education. An advantage of online teaching is that students prefer a two-way exchange of information. The learning is not possible unless the students practice what they are being taught, and most online content is theoretical and does not provide the opportunity for practice. According to the study's findings, online learning is hampered by a lack of community, technological issues, and difficulties interpreting instructions (Song, Singleton, Hill, & Koh, 2004).

7.2 E-Learning

Until Covid-19, the pandemic that triggered the worldwide shift to electronic teaching, it had never been widely regarded and recognized as a real learning or formal educational paradigm (Mahajan & Kalpana, 2018). Students, as mentioned by the researcher, are responsible for the materials they need to prepare for any evaluation criteria of the course (Keshavarz, 2020). It's important for those who participate in E-learning to be aware of the challenges that come with implementing and managing it in various settings, but there are several benefits for those who do so.

There is no substitute for this type of education. Students and teachers can only communicate electronically and through writing in this type of education because they don't meet face-to-face that way. It's no longer a matter of distance or time that prevents people from obtaining an education; rather, it's a matter of a lack of immediate feedback and a strong feeling of commitment to online learning that is among the most common problems to overcome.

7.3 Blended Learning

The term "blended learning" refers to a method that combines face-to-face classroom instruction with distance learning over the internet. If you're looking for an overall definition of what "blended learning" entails, it refers to courses that incorporate both online and offline learning activities.

It's important to note here, according to, that this approach differs from others in that it incorporates both traditional on-campus instruction and online instruction (Buheji & Buheji, 2020b). Previous studies have

shown blended learning to provide superior student engagement, passion, commitment, and achievement than other virtual education methods (Wang & Liu, 2019). In addition to traditional schooling, this approach encourages students to take an active role in their own education by teaching them how to learn on their own.

8. Conclusions and Recommendations

Today's college students face a slew of more complicated challenges than ever before (Mpaata, 2017). Online learning at higher education institutions during the epidemic of covid-19 was examined in this review study with a special focus on Google Classroom and Zoom Meeting as the most frequently used platforms. There is still a long way to go, especially in industrialized countries, when it comes to online education.

For the scientist, online learning is currently being studied for its usability, cost-effectiveness, and learner satisfaction (Dash, 2019). She said that Google classroom on mobile phones was favored overusing PCs for critical technological components. Millions of individuals throughout the world are being affected by the covid-19 pandemic, which has disrupted the industry and thrown economies into disarray.

Universities have been compelled to lock their doors, move their operations to the internet, and plan for an uncertain future in the higher education industry. One of the many takeaways from the global financial crisis for higher education is the necessity of online platforms.

5. The importance of international mobility and university collaborations.
6. The importance of nature in the college experience.

Finally, it's essential to have the most current technologies.

It is important to understand the significance of belonging to a group.

The last point to make is that in times of global pandemics like the avian influenza virus (HIV), online learning systems and the platforms and applications they support are critical. In several Arab and underdeveloped nations, this form of learning has met numerous difficulties and needs to be overcome. Furthermore, these programs have some drawbacks, and the software developers need to address and fix these issues so that more students and instructors can benefit from using it. Research of the percentage of university students in Arab and developing countries that use online learning, as well as the obstacles these students face, is necessary.

References

- Al-Abdali, A. (2016). The Role of Online Internet-Cam Chat in Providing EFL Freshmen with Opportunities to Interact with the Target Language Community as an Authentic Environment to Develop Communicative Language Skills. *British Journal of English Linguistics*, 4(4), pp.46-59
- Ali, M. I., & Ghazi, A. B. (2019). The Effect of Using Google classroom on the Achievement of Computer Department Students in Image Processing Subject and their Attitudes Toward e-Learning. *International Journal of Research in Educational Sciences*, 2(2), 123-170.

- Ameen, N., & Willis, R. (2017). The use of e-learning of students in Iraqi universities: potential and challenges.
- Ameen, N., Willis, R., Abdullah, M. N., & Shah, M. (2019). Towards the successful integration of e-learning systems in higher education in Iraq: A student perspective. *British Journal of Educational Technology*, 50(3), 1434-1446.
- Azimi, H. M. (2013). Readiness for implementation of e-learning in colleges of education. *Journal of Novel Applied Sciences*, 2(12), 769-775.
- Barzani, S. H. H. (2021). Students' perceptions towards online education during COVID-19 pandemic: An empirical study. *International Journal of Social Sciences & Educational Studies*, 8(2), 28-38.
- Budur, T., Demir, A., & Cura, F. (2021). University Readiness to Online Education during Covid-19 Pandemic. *International Journal of Social Sciences and Educational Studies*, 8(1), 180-200.
- Budur, T., Rashid, C. A., & Poturak, M. (2018). Students perceptions on university selection, decision making process: A case study in Kurdistan Region of Iraq. *International Journal of Social Sciences & Educational Studies*, 5(1), 133-144.
- Buheji, M., & Buheji, A. (2020a). Planning competency in the new Normal-employability competency in post-COVID-19 pandemic. *International Journal of Human Resource Studies*, 10(2), 237-251.
- Buheji, M., & Buheji, A. (2020b). Characteristics of 'problem-based learning 'in post-COVID-19 workplace. *Human Resource Management Research*, 10(2), 33-39.
- Celik, B. (2019). A comparison of form-focused and meaning-focused instruction types: A study on Ishik University students in Erbil, Iraq. *International Journal of English Linguistics*, 9(1), 201-228
- Chakraborty, I., & Maity, P. (2020). COVID-19 outbreak: Migration, effects on society, global environment and prevention. *Science of the Total Environment*, 728, 138882.
- Chen, X., Zou, D., & Xie, H. (2020). Fifty years of British Journal of Educational Technology: A topic modeling based bibliometric perspective. *British Journal of Educational Technology*, 51(3), 692-708.
- Cheon, J., Lee, S., Crooks, S. M., & Song, J. (2012). An investigation of mobile learning readiness in higher education based on the theory of planned behavior. *Computers & Education*, 59(3), 1054-1064.
- Cojocariu, V. M., Lazar, I., Nedeff, V., & Lazar, G. (2014). SWOT analysis of e-learning educational services from the perspective of their beneficiaries. *Procedia-Social and Behavioral Sciences*, 116, 1999-2003.
- Cutri, R. M., & Mena, J. (2020). A critical reconceptualization of faculty readiness for online teaching. *Distance Education*, 41(3), 361-380.
- Darabi, A. A., Sikorski, E. G., & Harvey, R. B. (2006). Validated competencies for distance teaching. *Distance Education*, 27(1), 105-122.
- Dash, S. (2019). Google classroom as a learning management system to teach biochemistry in a medical school. *Biochemistry and Molecular Biology Education*, 47(4), 404-407.
- Dhawan, S. (2020). Online learning: A panacea in the time of COVID-19 crisis. *Journal of Educational Technology Systems*, 49(1), 5-22.

- Ghareb, M. I., & Mohammed, S. A. (2017). The future of technology-based classroom. *UHD Journal of Science and Technology*, 1(1), 27-32.
- Holt, D. T., & Vardaman, J. M. (2013). Toward a comprehensive understanding of readiness for change: The case for an expanded conceptualization. *Journal of change management*, 13(1), 9-18.
- Keshavarz, M. H. (2020). A Proposed Model for Post-Pandemic Higher Education. *Budapest International Research and Critics in Linguistics and Education (BirLE) Journal*, 3(3), 1384-1391.
- Khamparia, A., & Pandey, B. (2020). Association of learning styles with different e-learning problems: A systematic review and classification. *Education and Information Technologies*, 25(2), 1303-1331.
- Learning Center MoO, (2020) available at: www.elearningmoo.com/
- Lloyd, S. A., Byrne, M. M., & McCoy, T. S. (2012). Faculty-perceived barriers of online education. *Journal of Online Learning and Teaching*, 8(1).
- Lokuge, S., Sedera, D., Grover, V., & Dongming, X. (2019). Organizational readiness for digital innovation: Development and empirical calibration of a construct. *Information & Management*, 56(3), 445-461.
- Mahajan, M. V., & Kalpana, R. (2020). A study of students' perception about e-learning. *Indian Journal of Clinical Anatomy and Physiology*, 5(4), 501-507.
- Mahmod, M. A., Ali, A. B. M., Shah, A., & Seman, M. S. A. (2017, November). E-learning in Iraqi universities: A review. In *2017 International Conference on Computing, Engineering, and Design (ICCED)* (pp. 1-4). IEEE.
- Martin, F., Budhrani, K., & Wang, C. (2019). Examining Faculty Perception of Their Readiness to Teach Online. *Online Learning*, 23(3), 97-119.
- McBrien, J. L., Cheng, R., & Jones, P. (2009). Virtual spaces: Employing a synchronous online classroom to facilitate student engagement in online learning. *International Review of Research in Open and Distributed Learning*, 10(3).
- Mpaata, A. K. (2017). Youth personality development and the ultimate character: The neglected role of educators. *International Journal of Youth Economy*, 1(1), 105-118.
- Murphy, M. P. (2020). COVID-19 and emergency eLearning: Consequences of the securitization of higher education for post-pandemic pedagogy. *Contemporary Security Policy*, 41(3), 492-505.
- Park, S. Y. (2009). An analysis of the technology acceptance model in understanding university students' behavioral intention to use e-learning. *Journal of Educational Technology & Society*, 12(3), 150-162.
- Paules, C. I., Marston, H. D., & Fauci, A. S. (2020). Coronavirus infections—more than just the common cold. *Jama*, 323(8), 707-708.
- Peters, M. A., Wang, H., Ogunniran, M. O., Huang, Y., Green, B., Chunga, J. O., & Hayes, S. (2020). China's internationalized higher education during COVID-19: Collective student autoethnography. *Postdigital Science and Education*.
- Rashid, C. A., Salih, H. A., & Budur, T. (2020). The Role of Online Teaching Tools on the Perception of the Students during the Lockdown of Covid-19. *International Journal of Social Sciences & Educational Studies*, 7(3), 178-190.

- Sabr, D. S., & Neamah, A. F. (2017, September). Notice of Violation of IEEE Publication Principles: Challenges and Opportunities of E-Learning in Iraq. In *2017 International Conference on Computer and Applications (ICCA)* (pp. 259-265). IEEE.
- Serin H., & Khabibullin A. (2019). Flipped classrooms in teaching method courses at universities. *International Journal of Academic Research in Business and Social Sciences*, 9(1): 573-585. <http://dx.doi.org/10.6007/IJARBSS/v9-i1/5459>
- Serin, H. (2015). The Role of technology in whole-class teaching. *International Journal of Social Sciences & Educational Studies*, 2(1), 25-27.
- Song, L., Singleton, E. S., Hill, J. R., & Koh, M. H. (2004). Improving online learning: Student perceptions of useful and challenging characteristics. *The Internet and Higher Education*, 7(1), 59-70.
- Tawafak, R. M., Romli, A. B., bin Abdullah Arshah, R., & Malik, S. I. (2020). Framework design of university communication model (UCOM) to enhance continuous intentions in teaching and e-learning process. *Education and Information Technologies*, 25(2), 817-843.
- Wang, R., & Liu, C. (2019). The relation of dental students' learning styles to their satisfaction with traditional and inverted classroom models. *BMC Medical Education*, 19(1), 1-8.
- Wang, Y. S., Wang, H. Y., & Shee, D. Y. (2007). Measuring e-learning systems success in an organizational context: Scale development and validation. *Computers in Human Behavior*, 23(4), 1792-1808.
- World Health Organization, (2020). <https://www.who.int/dg/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19-2020-11-march-2020>
- Zhang, W., Wang, Y., Yang, L., & Wang, C. (2020). Suspending classes without stopping learning: China's education emergency management policy in the COVID-19 outbreak. *Journal of Risk and Financial Management*, 13(3), 55.