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RESEARCH ARTICLE

THE IMPACT OF ONLINE TEACHING ON LANGUAGE LEARNING IN IRAQ DURING COVID19

*Batool Dahham Al-Ali

Al Basra University for Oil and Gas Engineering, Department of Oil and Gas Engineering - Iraq

ARTICLE INFO	ABSTRACT
<i>Article History</i> Received 19 th November, 2024 Received in revised form 17 th December, 2024 Accepted 26 th January, 2025 Published online 28 th February, 2025	The whole world was taken in by surprise with the Covid 19 pandemic, Iraq and its educational institutions are no exception. During that period most institutions closed and tried to implement some kind of Distant Learning, Online Learning or Blended Learning to avoid the spread of the pandemic. This study tries to explore the impact online teaching had on the learners' outcome by comparing the overall results of students in the first official exam (Intermediate) before Online Learning and after online learning during the pandemic. It also explores the problems the learners and the teachers faced in the neurona (2010, 20) in implementations.
Keywords:	 in the pandemic year (2019-20) in implementing "Blended Learning", which is a mix of Distance Education (DE) and classroom teaching. This study proposes Online Learning as a foreseen solution
Blended Learning, Online Learning, Covid19 and Iraq, Distant Education	to problems, especially like the ones we faced during the pandemic. Proper DE programs should be prepared, and teachers and learners have to be trained to use this type of education. It is now time to step back and examine how we might integrate the potential of online learning with the traditional strengths of face-to-face learning if we want to modernize our education. In a questionnaire administered to both the learners and the teachers, we will explore the problems they faced during the pandemic period in the hope that we can be aware of them in the future. Problems such as lack of
*Corresponding author: Batool Dahham Al-Ali	training, electricity, internet, etc.

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INTRODUCTION

Over a billion children were reportedly absent from school when the Covid19 crisis initially began in early 2020.As a result, the majority of countries throughout the world suspended their educational institutions to stop the virus's spread, according to the United Nations. The speed and extent of the disruption to education were unprecedented, and they ran the risk of aggravating the learning crisis in some places, especially in countries like the Middle East and North Africa (MENA), where access to schools was already hard for a variety of reasons.

The Solution: Online Learning Implementation: Online Learning is referred to as "instruction at a distance; it takes place when a teacher and a student are physically separated, and technology is used to bridge the instruction gap" (1). Willis claims that these technologies serve as the "organizational framework and procedure for delivering instruction remotely."The researcher will write on the solutions suggested by the authorities during the pandemic because Iraq is her primary area of interest. If education stakeholders are to "build back better," lessen the learning loss brought on by the pandemic, and provide all students in Iraq

with access to high-quality education, it is crucial to establish what makes learning feasible for everyone. The factors that enable learning-including teacher development, effective leadership, and data systems-are access (to schools, learning platforms, and/or technology tools), engagement (facilitated by learner-centered content, competent instruction, and supportive connections), and an enabling environment. For onsite education, access to learning platforms, technological tools (such computers, tablets, and smartphones), as well as an internet connection, and/or learning materials for remote learning are all necessary. These can also be utilized in the right combinations for hybrid learning. Student participants Engaged parents/caregivers who provide both support and feedback, effective teachers (whose approach is centered on the learners), and learner-centered activities and/or materials support the development of social-emotional and life skills as well as foundational skills in engaged learners. A supportive environment that permits the continuous delivery of learning that satisfies the needs of every learner must include effective initial teacher preparation, ongoing professional development for teachers (including skills for effective online/hybrid teaching), effective leadership and management (including clear communication with stakeholders), and strong monitoring and evaluation systems (including learning

assessment). The pandemic-related school closures prevented many children from experiencing learning because of disruptions in access (especially for those lacking the tools and/or connectivity required for online or hybrid learning), increased difficulty in engaging in learning (as a result of disrupted relationships with teachers and lack of experience with online teaching and learning), and supportive environments. This thesis examines the impact of the pandemic on the learning outcomes all over Iraq.

Definition of Blended Learning (BL): Blended learning is a type of formal education where students get teaching and content at least partially online while still having some degree of control over their learning environment in terms of timing, location, and speed. Face-to-face classroom approaches are integrated with computer-mediated activities while students are still enrolled in "brick-and-mortar" schools (2). The ability to collect data and the ability to tailor training and evaluation are seen as two of the main advantages of blended learning, according to its proponents (3). In order to improve students' outcomes, educational institutions using blended learning models may also decide to reallocate resources (4). Online learning can be just as effective as traditional classroom settings, according to some studies on the topic of online education that looked at general test scores or academic performance (5) (6) (7) (8) (9) (10) (11). In a study conducted in Iraq following the Covid 19 pandemic (Alhamdawee) indicates that online learning in Iraq was a complete failure due to a number of variables that this study will go over in more detail (12). The internet, power, and a lack of highly competent teachers and students are all blamed.

Statement of the Problem: The UNICEF report from 2022 is the most significant and complete study available on the issue of online education in the Middle East, including Iraq. According to the report, there is an urgent need for additional research to try to understand the issues that educational institutions experienced during the pandemic and how these issues might be resolved using educational technologies and the internet. The main research question in this study is if, based on the sample data, there were any differences in official results between online and conventional classroom instruction in Iraq. This comparison of the outcomes should indicate whether online instruction was more effective than traditional classroom instruction. First of all, as was already mentioned, when schools and universities are closed for any reason, students can make up the time by working from home and interacting with their classmates and teachers while using communication and information technology (CIT). Second, the use of online learning in the Blended Learning strategy is supposed to boost both instructors' and students' motivation (13). Since some universities have successfully implemented online learning both inside and outside of Iraq, why can state schools and universities in Iraq be different? It increases the opportunities for teacher-learner interaction, which encourages both students and instructors to contribute more to the learning process.

Purpose of the Study: A lot of administrators, parents and students complained that online learning was not practical for Iraqi schools. This study seeks to provide an answer to that issue, looking into the official results before during and after the pandemic and will offer solutions to the problem.

Significance of the Study: This study will supplement the few prior studies that have been done on the impact of the COVID 19 pandemic on schooling, particularly in Iraq. This study will specifically examine the impact of blended learning (BL) on students' performance on official exams in Iraq. The findings will then be compared with those of a few other studies (like Alhamdawee) to develop an understanding of DE or BL and how they can be used to address issues that arose in Iraq when officials attempted to implement anything in the absence of traditional classroom learning. Whatever the outcome, it can be claimed that all educational institutions should be prepared for everything that might occur by thoroughly researching and comprehending the entire DE or BL procedures in order to execute them with at least some degree of success. This could happen after the evaluation of the results reported by this and similar studies.

Hypotheses and Research Questions of the Study

- Despite the claim of its ineffectiveness, what impact did BL have on Iraqi education?
- How can we address the issues that instructors and students in Iraq during the epidemic faced when utilizing DE, as reported by Alhamdawee?

LITERATURE REVIEW

Distance education (DE) is a method of providing education and training to students who are not physically present in a traditional environment, such as a classroom, sometimes on an individual basis (14). It is a formal interaction that employs one or more technologies to deliver instruction to students who are geographically separated from the instructor and that fosters consistent and substantive interaction between the students and instructor using technologies like the internet, fiber optics, satellite, wireless communication devices, etc.(15). In today's environment, when the negative consequences of globalization are growing, educational institutions face the challenge of activating e-learning tools. According to Zinina et al., "the leading countries of the globe give special emphasis to education in the production and accumulation of human capital at this time"(16). Many nations' educational systems have switched to distance learning, which has compelled the development of new models and standards while also posing difficulties for teachers in carrying out the teaching and learning process remotely. According to Olentsova, one of the difficulties is that students can not properly engage in online discussions and debates with lecturers the way they can do in traditional classes (17). This is the reason why BL was promoted to try to benefit from mixing these two approaches. Although it has already occurred globally, blended learning is regarded as the future trend for higher education systems (18). A more flexible ecosystem is required to convert traditional classrooms into settings that provide new learning models because of the many options for qualified student-content, student-teacher, and student-content interactions that come with technology change (19). The scholarly literature claims that the new system combines the finest practices from both new and conventional models onto a single platform. Now, non-traditional learners can benefit from face-to-face (f2f) interaction and classroom instruction when they can enjoy the flexibility of on line learning. In today's

environment, when the negative consequences of globalization are growing, educational institutions face the challenge of activating e-learning tools. According to Zinina et al., "the leading countries of the globe give special emphasis to education in the production and accumulation of human capital at this time"(16). Many nations' educational systems have switched to distance learning, which has compelled the development of new models and standards while also posing difficulties for teachers in carrying out the teaching and learning process remotely. Furthermore, according to Ibrahim and Nat, BL is currently popular among institutions due to its beneficial effects on students' motivation and performance (20). Through BL, teachers can involve students in active learning activities that foster most of the abilities that lead to the capacity to use digital technology for a variety of reasons, such as creativity, communication, teamwork, and information literacy. If effectively implemented, BL can make HEIs more adaptable and agile so they can quickly adjust to changing circumstances, even at a reasonable cost (21). Blended learning can be approached in a variety of ways these days due to the extensive use of technology in teaching and learning. Some examples include flipped learning, gamification, rotation models, flex models, and enriched virtual models.

In an article, Wu et al conclude that their participants' oral proficiency improved as a result of employing an online learning community in the flipped instructional design (22). They reported that pre-course tasks and in-class activities effectively motivated the participants to participate more and apply what they had learned in genuine settings. In a study carried out on medical students in Kurdistan (Iraq), Mosa et al complained that E-learning was unsuccessful in the beginning because of weakness or unavailability of internet in some areas on one hand and lack of electricity on the other (23). These problems were reported earlier by Alhamdawee in Iraq whofoundthat Inadequate instruction, lack of internet and electricity, little experience and low attendance are just some of the problems that their students face in online learning in Iraq (13). Mosa et al concluded that online learning has a bad impact on students' performance be it spoken or written. Their data analysis which they collected in a mixed method (quantitative and qualitative) showed that the biggest problem for most of the students in Iraq was that electricity and internet were not available all the time. They recommended that the best solution is to go back to classroom teaching or face to face communication.

METHODOLOGY

To check the effectiveness of E-learning on Iraqi education, especially language learning, the researcher followed the following steps.

The Research Design: The present research study employs a mixed method design. The researcher uses both qualitative and quantitative methods to examine the effect of Covid19 on education in general in Iraq, especially on English language learning. I compared the scores of the intermediate official exam all over Iraq to check them before, during and after the pandemic. The students and teachers werealso interviewed to explain the changes in scores (if there is any). Descriptive research intends to describe the existing condition of an

identified variable. It is utilized to provide systematic information about a phenomenon (24) This research study is descriptive for it describes the effects of Covid 19 on education in Iraq. It is also exploratory, the data collection process is descriptive, and the methodology of data analysis is explanatory. Finally, teaching implications were drawn by summarizing the analyzed data on research questions and hypotheses in the last chapter of the research. The last part of the research study, causal-comparative research, defines the causes for the existing differences between scores over the period covered (3 years). Semi-structured interviews were conducted with 6 students of all levels and 2 teachers in order to provide a clearer understanding and explanation of the phenomena under investigation. The qualitative approach helps in providing definite conclusions to the results obtained from the questionnaires.

Settings and Participants: This study took place in Iraq, and it considered the overall official results in Iraq before, during and after the pandemic in the 2 levels (intermediate and preparatory). The English proficiency level of the students ranged from low intermediate to intermediate. The students' proficiency levels in all subjects were collected from their official exam results.

Research Instruments: In this study, the grades of the school in all subjects were collected over three years and numbers were analyzed quantitatively. Moreover, semi-structured interviews were held with some students and teachers to analyze the data qualitatively in support of the quantitative analyses. The researcher informed the teacher participants about the purpose of the study, and introduced the questionnaire. Teachers were informed about their voluntary participation in the study, and about the confidentiality of the data collected and their identity. The interview included a set of prompt questions that can lead to discussion and further responses from the part of the interviewee. Each interview took around 30 minutes to complete, and it entailed topics related to teachers' educational background, teaching experience, their preferred modes of teaching in EFL classroom, and their views about the match between learning styles and teaching approaches. Three students from different schools were interviewed to examine their response to online learning.

Data Analysis: The present study used a mixed method design; the data analysis also used an exploratory strategyas presented by Cres well. He explained this strategyas "the collection and analysis of quantitative data followed by the collection and analysis of qualitative data" (25). Hence, the qualitative data in this research comprised students' and teachers' interview recordings and transcripts. The present study used Braun and Clarke framework to analyse the data (interviews).Braunand Clarke (26) provided a six-phase frame work, which can be used as a guide to analyze qualitative data. These phases can be applied in a flexible manner, and one can shift back and forth through hout the phases as needed.

The Results: The purpose of this study was to explore the impact of the Coved 19 pandemic over education in Iraq in general and on English language learning in particular. The data collection and analysis were done to find answers to the research questions mentioned earlier. This section presents the

quantitative and qualitative findings. The quantitative data collected from the students' scores were analyzed and the results were gathered for discussion.

Quantitative Findings: The table below summarizes the percentage of success in Iraq in both levels: intermediate and preparatory (i.e equivalent to Bacc 2) The table above shows the development of scores in the intermediate and Bacc 2 official exams from the academic year 2017/18 (before) 2019/20 (during) and 2021/22 and 2022/23 (after the pandemic).

Table 1. Iraqi official exam results in all sections before, during and after pandemic

2017/18	2018/19	2019/20	2020/21	2021/22	2022/23	Class
67.31	66.6	98.1	62.9	70.8	86.52	Intermed
48.83	50.3	63.4	47.6	55.2	59.5	Bacc2 Bio
47.7	50.5	55.2	44.8	50.44	57	Bacc 2 eco
59.2	57.2	77.2	52.2	60.3	66.2	Humanity

Iraq was using online teaching during 2019/20. In that Year, the percentage of success increased significantly in both levels despite the fact that all Iraqi educational institutions and the public were complaining about the uselessness of online teaching. In the intermediate level, the success percentage went up from 66.6% to 98.1%, an increase of 31.5% which is unbelievingly high, in the preparatory level (Biology) from 50.3 to 63.4%, an increase of 13.1%, in the preparatory (economics) from 50.5 to 55.2, an increase of 4.7%, and in preparatory (Humanities) from 57.2 to 77.2, an increase of 20%. All these increases in percentages in one year are usually unacceptable. So how did this happen when everyone was complaining about the uselessness of online teaching? The answer will come along in the qualitative analysis. Looking at the 2 academic years on the chart before the pandemic (2017/18 and 2018/19) and the 2 academic years after the pandemic (2020/21 and 20212/22), we recognize that the official results were nearly similar. This means that the results were exceptionally high only during the pandemic and they settled back after the pandemic. The chart below explains the results.

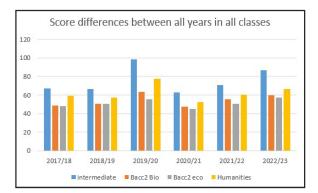


Chart 1. The differences between scores of all classes before, during and after Covid19

Qualitative findings: The qualitative data was driven from the semi-structured interviews that were conducted with a number of student and teacher participants in order to gain an in-depth clarification on their responses.

Qualitative Data from Student Participants: Since the previous section tackled the quantitative results, this section presents the qualitative data. It presents insights into the

opinions of the interviewees who volunteered and were chosen for the interviews. The section also answers some of the research questions set for the study. In answer to question 1 (tell us about your experience in online learning), student one (S1) provided the following answer:

I enjoyed online learning because it was much easier and funny than classroom face to face learning. Your friends and brothers and sisters help you. At the same time, you can eat, drink and play during the sessions. Really we did not learn a lot; in classroom you learn better and easier..

Student Two (S2) provided a similar answer:

I was happy with online learning more than face to face teaching. Also, I could eat and drink and sometimes sleep while I was online. I enjoyed learning from my bedroom. But we never heard of online learning before so learning was difficult. We never heard of platforms and zoom and teams, etc.. so we had to know about them and use them in a short time.

Student Three (S3) had a different point of you. He said: I did not enjoy online learning; it was time wasting. We did not learn much. The teachers found it difficult to use platforms and teach online because they did not do it in their lives before. Also, students never knew about online learning before the pandemic so everything was new to us.

Most of the students' answers were nearly similar, and they agreed that online learning was fun and a waste of time for them.

Qualitative Data from Teachers: When the two English teachers were interviewed, they nearly provided the same answers. The first teacher (T1) provided the following comment:

We were taken by surprise by the pandemic, and we never heard or used online learning before. We knew it was used by some universities but not in schools. The Ministry of Education (MOE) trained us quickly albeit improperly how to teach online, and we had to teach the students ourselves and introduce online learning to them.We did everything quickly because the pandemic obliged us to do so. In Iraq, we had no electricity, no net, no knowledge about online teaching and how to implement it. We just had to do it to stop the spread of the pandemic.

In answer to question 2 (do you think the students learnt as usual in online learning?), the answer was the following:

I don't think the students learnt much during the year (2018/19 and 2019/20) in all subjects not just English, and that will show in their grades in future.

When T2 was asked about his experience in online teaching, he provided the following answer:

We never knew anything called online teaching in schools in our country. We only heard that it was implemented a few universities. I personally knew nothing about it, and all of a sudden we were told we had to use it to avoid the spread of the pandemic, so we had to move quickly and learn something about it to finish the program in that academic year. Everything was done quickly, and honestly nobody knew what they were doing in the beginning.

In response to question 2, the answer of T2 did not differ much from the answer of T1. They both agreed that the students did not learn much. He said:

The students did not learn much for several reasons: first, they did not take their learning tasks seriously; some were playing, eating or sleeping while online. Second, the teachers were not prepared for teaching online. We had no proper teaching materials or proper testing or assessment.

When the teachers were asked about the rate of success and how it went higher during the pandemic, their answers were as follows:

We think that teachers and MOE were soft with the students. The questions were easier than before the pandemic and the teachers were compassionate with the students. Also, may be the teachers had to give high grades to cover up for their poor attempts to implement on line teaching. So the teachers, parents and friends helped the students. The examination boards made the questions easier than previously done and they passed the majority of their students with high grades. Since there was no proper teaching, there was no proper testing and assessment.

So it can be concluded that nothing was done properly during the pandemic. This of course was reflected after the pandemic. The lower scores in 2019/2020 and 2020/2021 explained and summarized the whole story. The level of learners dropped in these years because students did not learn during the pandemic.

CONCLUSION AND RECOMMENDATIONS

The results over the examined three academic years showed that the percentage of success in the official exams in all subjects, especially in English were higher during the pandemic year 2019/2020 (98.1) than the year before the pandemic 2018/19 (66.6). Then this percentage dropped dramatically the following year 2020/2021 (62.9), a difference of (-35.2). This result goes in line with the scores before the pandemic, so the grades settled the years after the pandemic. So in the short run during the pandemic year the grades boosted for the reasons explained above but in the long run the effect of online learning was poor since it went down from 67.3 in the year 2017/18(before the pandemic) to 62.9 in the year 2020/21 (after the pandemic)

Hypothesis 1: The results did not support this hypothesis since the percentage of success increased during the pandemic. However, the negative impact of the pandemic was shown in the two academic years after the pandemic.

Hypothesis 2: Despite the complaint about online teaching, the results showed that percentage of success was higher during the pandemic which means that the impact of the pandemic was not that bad on education in Iraq. However, the negative impact showed itself in the two following years.

Hypothesis 3: If implemented properly, online teaching could have had the good results. Online teaching has its principles that have to be implemented properly if good results are

expected. Distance education and traditional learning environments are not polar-opposite concepts. A review of most educational courses would reveal that the basic methodology of presenting information to the learners, offering skill building assignments, creating interactive learning opportunities between teachers and learners and learners and content, and evaluating student progress is at the foundation of these courses. So blended learning is a more fitting term for describing the act of merging the best of distance and traditional education methodologies and technologies. Certainly faculty developers, administration and instructional designers have to consider Blended Learning as a coherent approach and develop specific techniques for designing blended learning courses. What happened in Iraq is that unqualified teachers took the responsibility of teaching leaners who knew nothing about Online or Blended Learning. For full details about Online teaching and guidelines see Garrison and Vaughan. Evaluating online discussions demands a clear set of criteria consistent with the desired outcomes. Based on their work, Garrison and Vaughan offer the following list of criteria for evaluating online discussions (26). Contributions should

- Be clear
- Be factually correct; cite assigned readings
- Offer critical thinking and analysis
- Be respectful
- Inspire further discourse; develop the scope of the discussion
- Contribute to the thread of the discussion

These criteria represent a starting point, depending on the nature of the discourse and the discipline. Online learning has flourished within distance education institutions whose tradition and mandate are to make education accessible. For the campus-based institution, the challenge is to resist using new media to replicate deficient practices of the past. It is now time to step back and examine how we might integrate the potential of online learning with the traditional strengths of face-to-face learning. For Iraq and other countries, Online Learning should be put a priority for the future since we are threatened with pandemics and other conditions that might call for school closures at any time. This time we must be prepared and well trained as teachers and learners to use Online and/or Blended Learning properly to avoid having the same problems again, and only then education does not worsen in any crisis.

Achievement of the potential of Blended or Online Learning will require a critical rethinking of what we do and why. The focus must be on training teachers to use the technology and properly designed courses and helping students create or understand knowledge structures (schema) that encourage deep and meaningful learning.

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REFERENCES

1. Willis, B.(1992), *Effective Distance Education: A primer* for faculty and administrators, Monograph series in Distance Education 2.

- Strauss, S., & Ziv, M. (2012). Teaching is a natural cognitive ability for humans. Mind, Brain and Education, 6(4), 186-196
- 3. Caperton, H, I., (2012). Before We Flip Classrooms, let's Rethink What We're Flipping To. Edutopia. https://www.edutopia.org/blog/rethinking-theflippedclassroom-idit-harel-caperton retrieved on 14/11/2024
- 4. Jacobs, J. (2001). What is the future for post-secondary occupational education? Journal of Vocational Education Research, 26(2), 172-205.
- Arbaugh, J.B., (2000). Virtual Classroom Characteristics and Student Satisfaction with Internet-Based MBA Courses. Journal of Management Education. 24. 32-54. 10.1177/105256290002400104.
- Blackley, J. A., & Curran-Smith, J. (1998). Teaching community health nursing by distance methods: Development, process, and evaluation. Journal of Continuing Education for Nurses, 29(4), 148-153.
- Fallah, M.H. & Ubell, R. (2000) Blind scores in a graduate test: Conventional compared with web-based outcomes. *ALN Mgazine*, 4(2).
- Freeman, M. A., & Capper, J. M. (1999). Exploiting the web for education: An anonymous asynchronous role simulation. *Australasian Journal of Educational Technology*, 15(1). https://doi.org/10.14742/ajet.1849
- Johnson, S. D., Aragon, S. R., Shaik, N., & Palma-Rivas, N. (2000). Comparative analysis of learner satisfaction and learning outcomes in online and face-to-face learning environments. Journal of Interactive Learning Research, 11(1), 29-49.
- Maki, R.H., Maki, W.S., Patterson, M., & Whittaker, P.D. (2000). Evaluation of a web-based introductory psychology course. *Behavior Research Methods*, *Instruments, & Computers*, 32, 230-239.
- 11. Samans, A. (2003). The impact of web-based technology on distance education in the United States. WWW Journal for Online Education. Available at
- 12. http://www.nyu.edu/classes/keefer/waoe/samans.html
- 13. Alhamdawee, N. O., (2023). Online learning in iraq: challenges and opportunities. *European Journal of Humanities and Educational Advancements*, 4(1),1-7. https://scholarzest.com/index.php/ejhea/article/view/3089, retrieved on 20/12/2024.
- 14. Simpson, O. 2008. "Motivating Learners in Open and Distance Learning: Do We Need a New Theory of Learner Support?" Open Learning: The Journal of Open and Distance Learning 23(3): 159–170.
- 15. Honeyman, M & Miller, G. (1993). "Agriculture distance education: A valid alternative for higher education?". *Proceedings of the 20th Annual National Agricultural Education Research Meeting*: 67–73.

- 16. Guide to Evaluating Distance Education and Correspondence Education: A Publication of the Accrediting Commission for Community and Junior Colleges Western Association of Schools and Colleges. 2012 p: 2.
- 17. Zinina, A, Kotov, A, Arinkin, N. & Zaidelman, L. (2023). Learning a foreign language vocabulary with a companion robot, Cognitive Systems Research, Volume 77, PP 110-114, ISSN 1389-0417, https://doi.org/10.1016/j.cogsys.2022.10.007.
- 18. Olentsova, J. A.,(2020). *Phys.: Conf. Ser.* **1691** 012219**DOI** 10.1088/1742-6596/1691/1/012219.
- 19. Duarte, A. (2016). Blended learning: Institutional frameworks for adoption and implementation. Theses & Dissertations, 9.
- Orakci, S. & Gelisli, Y. (2017). Learner autonomy scale: A scale development study. Malaysian Online Journal of Educational Sciences 5 (4), 25-35, 2017. 40, 2017.
- 21. Oakley, B., Poole, D., & Nestor, M. (2016). Creating a Sticky MOOC. Online Learning,20,13-24. https://doi.org/10.24059/olj.v20i1.731
- 22. Ibrahim, M.& Nat, C. (2019). Blended learning motivation model for instructors in higher education institutions. International Journal of Educational Technology in Higher Education. 16. 12. 10.1186/s41239-019-0145-2.
- 23. Wu, J. H., Tennyson, R. D., & Hsia, T. L. (2010). A study of student satisfaction in a blended e-learning system environment. Computers & Education, 55(1), 155-164. doi: 10.1016/j. compedu.2009.12.012
- 24. Mosa A. A., Ibrahim S.V., Naqid I. A., Hawezy D. J., Al-Jaf S. M., Hussein N., R. (2025). The Impact of SARS-CoV-2 Pandemic on Medical Students: Knowledge, Attitudes, and Practices towards E-Learning: An Online Cross-Sectional Study in the Kurdistan Region, Iraq. Galician med. https://ifnmujournal.com/gmj/article/view/E20231. Retrieved on 18/12/2024.
- 25. Creswell, J. (2012). Educational research: Planning, conducting, and evaluating quantitative and qualitative research.
- 26. Braun, V. and Clarke, V. (2006) Using thematic analysis in psychology. Qualitative Research in Psychology, 3 (2). pp. 77-101. ISSN 1478-0887 Available from: http://eprints.uwe.ac.uk/11735
- Garrison, D. & Vaughan, Norman. (2008). Blended Learning in Higher Education: Framework, Principles, and Guidelines. 10.1002/9781118269558.
