Development of a Web-Based E-Learning Platform for the Study of Ancient Iraqi Civilizations

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Article's Information	Abstract
  	E-learning has become widespread in the educational community, especially due to recent advances in information technology and communications and the integration of technology into our daily lives. Still, most major e-learning platforms are generalized and not tailored to a specific subject. In this paper, we address this issue by developing a prototype of a web-based e-learning platform specifically tailored for the study of ancient Iraqi civilizations. This will raise awareness about the major contributions of Iraq's civilizations to the rest of the world, such as the invention of writing, urbanization, timekeeping, and farming techniques. The proposed platform leverages modern web technologies to provide an engaging and immersive learning experience to the students, and it offers a responsive design for cross-device displays. Key features for the teachers include managing civilizations and lessons, supporting multimedia files, managing a question bank, and a dynamic testing system for the students with real-time feedback for both students and teachers. This prototype represents a groundwork, as it is built with future scalability in mind, such as integrating artificial intelligence, virtual reality, and augmented reality, to enrich the study of Iraq's civilizations.

1. Introduction

Commonly referred to as the cradle of civilizations, Mesopotamia, or ancient Iraq, introduced to the world the first step towards evolution, preserving history, and facilitating communication through the invention of writing [1]. This single invention represents the first step that humanity took toward intellectual development, similar to when the first man landed on the moon represented the first step towards space exploration and interstellar travel. Writing is essential for studying the history of any civilization and learning about historical facts and achievements, as without it, no preserved record would exist for us to read. Another key contribution that ancient Iraqi civilizations (AIC) made to the world was urbanization, which is the concept of the city-state, the invention of the wheel, which was a turning point in transportation, and the invention of timekeeping, which is the basis for our 60-minute hour, they also contributed to the Agricultural sector by developing farming and irrigation techniques, other contributions are pottery and ceramics techniques, Theology, and artworks [2-10]. Despite all the major contributions of AIC to almost every aspect of human civilization's development and intellectual growth, traditional learning approaches using textbooks and in-person lectures still cannot capture the full attention and interaction of students for the mentioned topic. In this paper, we address this gap by leveraging twenty-first-century technology for the study of AIC. By utilizing the recent developments in information and communications technology (ICT), we proposed the development of a prototype for a web-based e-learning platform that is designed specifically for the study of AIC, the development will include both back-end database design and front-end user interface. Also, there will be different user

interfaces for the students and the teachers with different privileges. This platform aims to bring an immersive experience to the students and keep them focused and interested in knowing more about AIC, by utilizing web-based technologies and multimedia resources to keep their attention engaged rather than the conventional textbooks. Another benefit of our proposed platform is that it is web-based. The student can access it through multiple devices such as computers, tablets, and smartphones, making it available to them at their convenience any time they want to access it. The suggested platform aims to make a positive impact on the way AIC is taught to the world. The remainder of this paper is organized in the following order: Section two describes the related work of e-learning that has been done. Section three mentions our objectives. Section four details the methodology used for developing the platform. In section five, we discuss the challenges and solutions we faced during our work. Finally, section six is the conclusion of our study and the mention of some future development that can be done to the platform.

3. Related Work

The shift toward e-learning rather than traditional learning has been extensive in recent years, especially with the continuous development of ICT and the fact that we live in the digital age. The main focus for many researchers was on developing e-learning platforms that can capture students' attention. For instance, [11] referred to the current generation of learners as 'digital natives' because they use digital devices even before learning how to walk. Rasha Eldeeb [12] studied the perceptions of students to e-learning and concluded with a positive attitude and perceptions from the students towards e-learning and also shed the light on the availability, flexibility, and convenience of e-learning similar to the findings of [13]. S Goyal highlighted his study on the significance of e-learning in modern studying methods and suggested the possibility that e-learning will soon replace conventional textbooks with smart touchscreen tablets [14]. SR Harandi found that students in higher education are more motivated to engage and study in an e-learning environment than in traditional learning methods; this was concluded by using an 18-question questionnaire on all the active students of Tehran Alzahra University [15]. Al-Rawashdeh has analyzed the effectiveness of e-learning to students by collecting data from questionnaires answered by students from Ajman University who were randomly selected; the study revealed that 81% of students found e-learning provides interesting studying material, and 80% of students stated that e-learning increased the possibility of collaboration between them and the teacher [16]. Ayu studied that some universities are using e-learning to facilitate the student's learning process, the study concluded with the possibility of using hybrid learning in higher education, in which e-learning and traditional learning are combined [17]. The major event that affected many aspects of our lives, such as the credibility of social media news [18,19], and significantly affected the educational sector as the whole world was forced to shift towards e-learning, was COVID-19, during that difficult time and forced social distancing, e-learning was the only possible solution for the universities and schools to continue teaching their students, [20] studied e-learning's challenges and opportunities from students perspective during the pandemic, the students agreed that e-learning provided them with a safe and comfortable learning approach, but their biggest obstacle was when the internet service is bad or down. [21] examined e-learning tools used during COVID-19 in higher education, the author found a correlation between the use of e-learning tools and the pandemic. According to 612 students who participated in his survey, they were very interested in using e-learning tools even after the pandemic. [22] suggested an adaptive approach to the e-learning environment in higher education to increase student engagement and attention, [23] added the use of multimedia resources to e-learning by using multiple formats of media files to match each student's unique learning style, by using Canva [24] which is a web-based graphic design tool that is very popular and easy to use, educators can use it to create visually appealing multimedia content to their students to keep them engaged and match their learning style. There are many open-source learning management systems (LMS) [25-29]. The most used one is Moodle, which is used as the main e-learning platform by many universities. Those platforms are easy to use by both teachers and students, but the main limitation they have is that they are generally purposed and not tailored to a specific subject, as they require many configurations and modification before using it. In this paper, we address those limitations by developing an e-learning platform that is specifically designed to study AIC, the suggested platform can be used immediately by teachers and students without any further modification or configuration. Also, it is fully independent and not built on top of any kind of open-source LMS, as it is designed and developed from the ground up.

4. Objectives

The main objective of this project is to design and develop an e-learning web-based platform that is specifically tailored to the study of AIC, this platform aims to capture the attention of students while they study the many achievements of ancient civilizations of Iraq. The specific objectives of the platform are the following:

i. Enhance student engagement

By providing an interactive user-friendly interface, facilitating the use of multimedia files by teachers to keep their students engaged and interacting with them, and also by providing them with interactive quizzes, they will get an interesting testing method rather than the conventional one. Furthermore, they will get their results immediately after completing the test.

ii. Provide a comprehensive learning experience

By providing detailed, well-organized content for the many civilizations of ancient Iraq, the students can explore this information at their paste, and not feel overwhelmed by the sight of a very large textbook that is commonly used in the conventional learning method.

iii. Assist teachers with powerful tools

By providing them with an easy-to-use platform where they can easily add their lectures and other learning materials in different multimedia formats, and they can easily create tests for their students and not worry about the manual grading process, as the platform offers them automatic grading, also they can easily track the progress of their students and all their information in the platform.

iv. Ensure accessibility and usability

Since the platform is web-based, the students and teachers can access it from any smart device, and they are not limited to accessing it from a computer only.

v. Preserve and promote the cultural heritage of Iraq

By using this platform to shed light on the rich cultural achievements of AIC, and raise awareness about the many significant contributions that AIC gave the world, also the platform can be made available not only to the students but to anyone who wants to learn about the civilizations of ancient Iraq.

5. Methodology

In this section, we will mention the details of the overall methodology that was used to develop our web-based e-learning platform for the study of AIC. This will cover the design approach, tools and technologies, backend development, and frontend development.

5.1. Design Approach

The development method followed a user-centered approach, this involved researching the most common problems that are faced by e-learning platforms and ensuring all the needs of the students and teachers were met in our design by providing them with all the tools and technologies that they needed to use the platform and facilitate their study of AIC, as further explained in the development steps below.

5.2. Tools and Technologies

We used the following modern web technologies to develop the platform:

- Hypertext Markup Language (HTML): for building the platform page's structure.
- Cascading Style Sheets (CSS): This is used to style and make the platform more visually appealing, add responsiveness, and make it accessible from any screen size, allowing students and teachers to access the platform from any smart device.
- JavaScript (JS): for making the platform interactive with the users, and implementing several other functionalities.
- Active Server Pages Network Enabled Technologies (ASP.NET) Web Forms: for containing all the above client-side technologies into the ASP.NET framework.
- C# programming language: to handle the server-side backend process.

5.3. Backend Development

The platform's backend was designed specifically to manage and serve the educational content of Iraq's ancient civilizations. A relational database was implemented using Microsoft SQL Server. The database design includes multiple tables that handle the many aspects of the educational materials and the platform's functionalities.

5.3.1. Schema

The primary table, 'Civilizations', will contain the main information about each civilization. The secondary table, 'Lessons', will store the lessons related to each civilization. 'Attachments', will store the multimedia files for each lesson. Other tables such as 'QuestionBank', 'Results', and 'Users' are used to support the platform's workflow. The table 'QuestionBank' is used to store the questions entered by the teacher for each lesson, the 'Results' table stores the results of students when taking tests on a specific lesson, and finally 'Users' table contains student and teacher's information and credentials. Table 1 further explains the structure of each mentioned database table.

Table 1. Schema

Database Table	Key Constraints and Attributes
Civilizations	**Primary Key:** CivilizationID. **Attributes:** CivilizationName, Description, TimePeriodFrom, TimePeriodTo, MultimediaResources.
Lessons	**Primary Key:** LessonID. **Foreign Key:** CivilizationID. **Attributes:** LessonTitle, Content, MultimediaResources.
Attachments	**Primary Key:** AttachmentID. **Foreign Key:** LessonID. **Attributes:** File, FileType, Description, size.
QuestionBank	**Primary Key:** QuestionID. **Foreign Key:** LessonID. **Attributes:** QuestionType(MCQ/T-F), QuestionText, OptionA, OptionB, OptionC, OptionD, CorrectAnswer.
Results	**Primary Key:** ResultID. **Foreign Key:** UserID, LessonID. **Attributes:** Score, CompletionDate.
Users	**Primary Key:** UserID. **Attributes:** Email, HashedPassword, FirstName, SecondName, ThirdName, Role (Student/Teacher).

5.3.2. Description of Relationships

Below is a detailed description of the relationships between the tables and how each relationship will assist in the workflow of the platform:

- **Civilizations to Lessons:** a one-to-many relationship where each civilization could have multiple lessons.
- **Lessons to Attachments:** a one-to-many relationship where each lesson could have multiple attachments.
- **Lessons to Question Bank:** a one-to-many relationship where each lesson could have multiple questions in the question bank table.
- **Users to Results:** a one-to-many relationship where each student could have multiple results.
- **Lessons to Results:** a one-to-many relationship where each lesson could have multiple results.

5.3.3. Entity Relationship (ER) Diagram

Figure 1 is a visual representation of the schema focusing on the relationship between the entities.
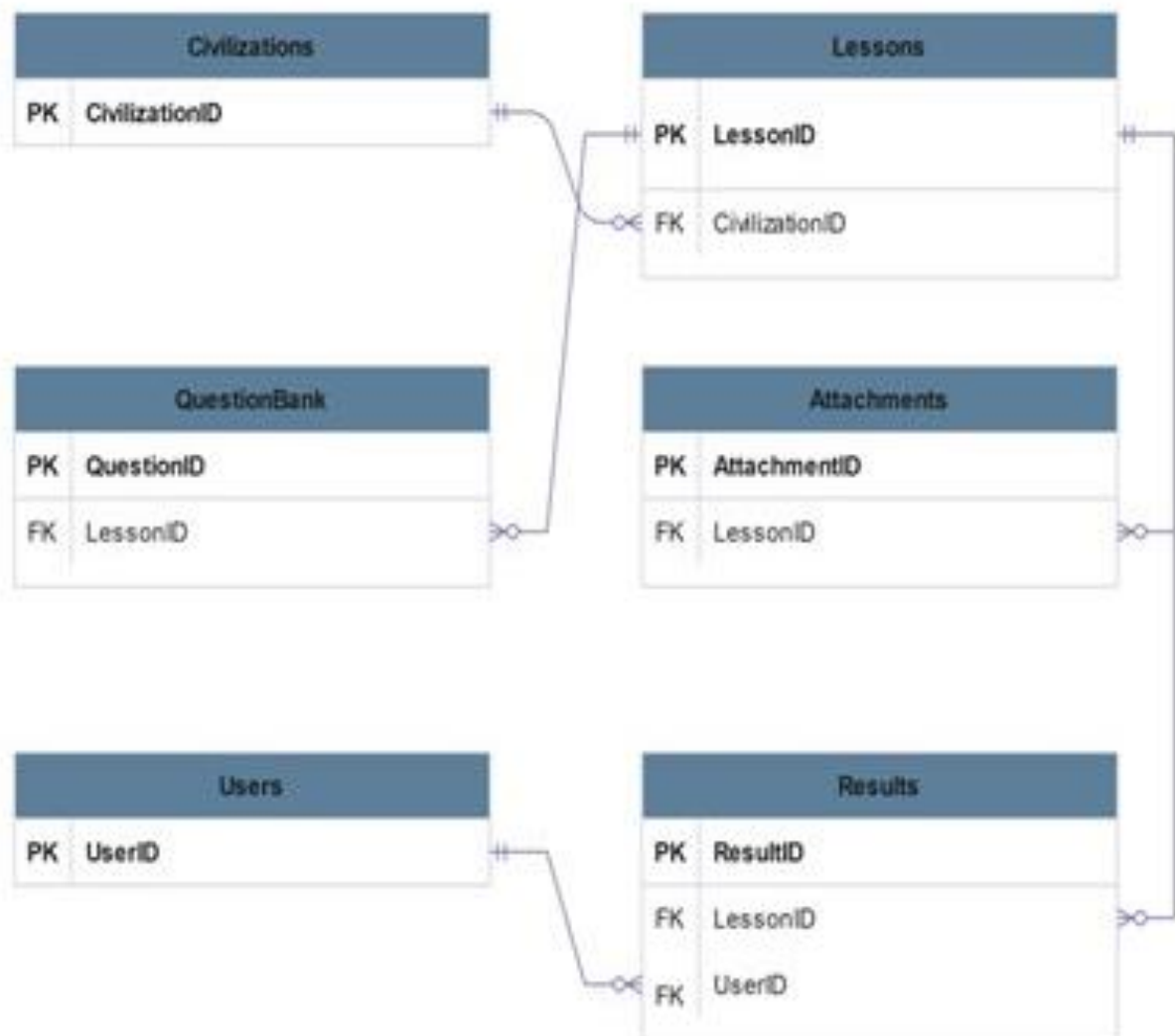
Figure 1. ER Diagram.

5.3.1. Role-Based Access Control Diagram
Figure 2 is an illustration of the Role-Based Access Control for the teacher and student roles.

5.1. Frontend Development
The frontend development is the main part of the development process that can make or break the success of our platform's objectives, the platform must be easy to use by both students and teachers, and it must keep the students engaged and interacting when they use it. Also, the platform must be accessible by any smart device, all of this was taken into account when developing the user interfaces (UI), as further explained below for the teachers and the students:

5.1.1. User Interface for Teachers
Teachers have multiple functionalities to manage the platform and monitor their student's progress. The main components of the teacher's interface are mentioned below.

5.1.1.1. Add/Modify Civilizations
As showcased in Figure 3, teachers can add or modify civilizations. The Input fields for civilizations include the main picture of the civilization, name, period, and description. The right side of the figure is the teacher's navigation bar, where they can navigate to their multiple forms in the platform.
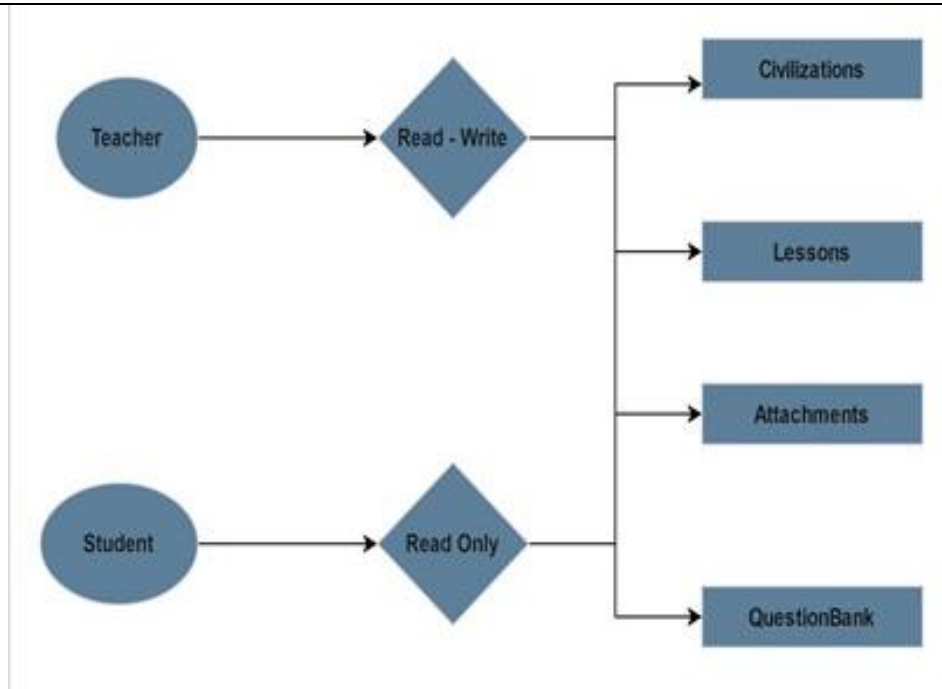
Figure 2. Role-Based Access Control Diagram.

5.1.1.2. Add/Modify Lessons and Attachments

Figure 4 illustrates the form where teachers can Add/Modify the lessons for each civilization. First, they select the civilization, and then insert the lesson information, which includes the main picture, name, and content.

Figure 3. UI for teachers (add/modify civilizations).

Figure 4. UI for teachers (add/modify lessons).

Each lesson could have multiple multimedia files attached to it, and the students can access those files, as shown in Figure 5, the teacher's form to upload attachments to the lessons.

Figure 5. UI for teachers (add/modify attachments).

5.1.1.3. Add/Modify Questions to the Question Bank

Teachers can build a question bank and test the students on each lesson. Figure 6 showcases the teacher's form for adding multiple-choice questions (MCQs) with the correct answer and four choices.

Figure 6. UI for teachers - add/modify (MCQ).

Figure 7 illustrates the form where teachers can add True/False questions to the question bank with the correct choice, as we can observe the platform supports two types of questions (MCQ and T/F), and those types of questions have been chosen to allow the platform to automate the grading process and have the results of the students displayed immediately after completing the tests.

Figure 7. UI for teachers - add/modify (T/F).

As shown in Figure 8, the teacher can check/modify all the added questions in the question bank for each lesson.

Figure 8. UI for teachers (question bank).

5.1.1.4. Monitor student's progress

Teachers can monitor their student's progress and keep track of their scores for each completed test, as shown in Figure 9, the platform's scores are graded on a scale of 0 to 100.

Figure 9. UI for teachers (monitor student's progress).

5.1.2. User Interface for Students

The students have multiple functionalities to access the platform, facilitate their learning, and track their progress. The main components of the student's interface are mentioned below.

5.1.2.1. Display Civilizations and Lessons

The main page the students see when accessing the platform is the civilization's display page, as shown in Figure 10, the right side of the figure is the student's navigation bar, where they can navigate to their multiple forms in the platform.

Figure 10. UI for students (display civilizations).

When clicking on any civilization, the students will be redirected to the civilization view form, as shown in Figure 11. This form is designed to show the students the main information of the selected civilization in a visually appealing form.

Figure 11. UI for students (view civilization).

When the student clicks on any lesson, they will be redirected to the lesson view form, as shown in Figure 12. This form will display the full content of the lesson. Also, the students will see the associated attachments for this lesson, and they will have the option to complete a quiz for the lesson after finishing reading it.

Figure 12. UI for students (view lesson).

The uploaded multimedia files for the lesson will be displayed as shown in Figure 13. Students can see the full information of the multimedia file before they decide to download it. Such information will include the file description, file name, file size, and file upload date.

Figure 13. UI for students (view attachments).

5.1.2.2. Participating in a Quiz

Students have the option to start a quiz by clicking on (Start the quiz for this lesson), as illustrated in Figure 13; they will be redirected to the quiz form, as shown in Figure 14. This form will randomly select ten questions from the question bank for the selected lesson; as mentioned before, there are two types of questions; the first one is the True/False question that is displayed in the mentioned figure. The other type of question is the MCQ, shown in Figure 15.

Figure 14. UI for students – quiz form (True/False).

Figure 15. UI for students – quiz form (MCQ).

Once the student completes the quiz, the result will be displayed immediately, as shown in Figure 16.

Figure 16. UI for students (quiz result).

5.1.2.3. View Quiz Results

Students have the functionality to view all their previously taken quizzes, as shown in Figure 17, where they can view the association of each quiz to the civilization and lesson. Also, they will see the score and quiz date. The main difference between this form and the teacher's form is that each student can view only his information, whereas the teacher can see the information of every student.

Figure 17. UI for students (quizzes results).

6. Challenges and Solutions

The development of an e-learning platform for studying AIC has many challenges, ranging from design approach and technical issues to security concerns and minimizing downtime. Below are the main challenges and solutions:

6.1. Ensuring Cross-Device Responsiveness

The platform needs to work on any smart device, and this will require that it be displayed correctly on any screen size, as the screen size of smart devices ranges from small phones to large tablets.

To overcome this challenge, we have implemented a responsive design for all the platform's UI, leveraging CSS in our front-end development to automatically adapt the layout to different screen sizes. Finally, we tested the platform on many smart devices to ensure that it is responsive to them.

6.2. Managing Complex Data Relationships

The platform requires complex data management between the tables 'civilizations', 'lessons', 'attachments', 'questionbank', and 'users', to work efficiently and perform all the functionality.

To handle this challenge, we implemented a normalized design for the database schema, with a clear relation between the tables, using primary and foreign keys to eliminate redundancy, enforce integrity, and finally, leverage efficient SQL queries for data retrieval.

6.3. Providing Real-Time Feedback and Results

The platform needs to provide the students' results immediately after completing the test, and the teachers also need to see their students' results.

To accommodate this requirement, we developed a real-time, auto-grade quiz system that fetches random questions from the question bank to ensure that each student gets a different question when taking the quiz to eliminate any cheating possibility. Also, the system will keep a score for each answer, as the correct answer is available in the question bank, and the final score will be displayed to the student and recorded in the database when completing the quiz so that the teachers can monitor the progress of their students.

6.4. Security Concerns

Since the platform is web-based, it has many security concerns, such as keeping the user's credentials private, protecting the integrity of the data, and securing the platform from any cyber-attack.

We implemented many security measures to handle this challenge, such as encrypting user's credentials by storing the hashed passwords of the user's in the database instead of the plaintext, and ensuring the data transmission between the client and the server is secure by using Hypertext transfer protocol secure (HTTPS) and leveraging the built-in security features available within the ASP.NET framework such as passing the values the users enter in the web form to the database as parameters instead of passing them directly within the SQL query, this will protect against SQL Injection attacks, and also by using a feature in the ASP.NET Web-form called (Event-Validation) that ensure the integrity of the web-page and the HTML source code has not been modified by the users when they access the platform and use the inspect feature in the browser, and finally we implemented a coded authentication and authorization in our platform to ensure that each user accesses his functionality only such as students cannot access teachers interface after they login to the platform.

7. Conclusions and Future Work

The development of a web-based e-learning platform for the study of AIC represents a breakthrough in leveraging current web technologies for educational purposes and raising awareness about the significant contributions of the Iraqi civilizations to the rest of the world. The platform employed front-end and back-end technologies to deliver an interactive and engaging learning experience to students and anyone who wants to read about the inventions and achievements of Iraq's civilizations while solving the many challenges that face any web-based application, from accessibility to security concerns and providing real-time results to the students and teachers. The platform has been designed with scalability in mind, as our current platform represents the groundwork for the possibility of many future functionalities to be added to it, such as developing a mobile application for easier access from smart devices, integrating artificial intelligence by linking a large language model such as ChatGPT through the use of Application Programming Interface to automate the task of question generation within the platform to save the time and effort of the teacher, incorporate more multimedia technologies such as virtual reality and augmented reality to provide a more immersive learning experience, introduce motivational elements for students such as badges and rewards to be displayed next to their name in the platform, and Finally, add a discussion forum to encourage collaboration among the students and build a community learning environment.

Conflicts of Interest: The authors declare no conflict of interest.

References

[1] Woods, C.; "The Earliest Mesopotamian Writing". In Visible Language: Inventions of Writing in the Ancient Middle East and Beyond; University of Chicago Press: Chicago, USA, pp. 33-84, 2010.

[2] Algaze, G.; "Ancient Mesopotamia at the Dawn of Civilization: The Evolution of an Urban Landscape"; University of Chicago Press: Chicago, USA, 2009.

[3] Darwish, M.A.E.; "Technology Artistic of Casting the Reproductions Metals in Ancient Iraq from the Old Period to the End of the Sumerian Era". Aca. Int. J. Soc. Sci. H., 2(4): 13-23, 2023.

[4] Mutasher, E.H.; Al-Asadi, A.H.A.; "Ancient Iraq's Pottery and Ceramics Techniques". Migration Letters, 20(11): 528-538, 2023.

[5] Sissakian, V.; Ahad, A.A.; Al-Ansari, N.; Knutsson, S.; "Geology of the Archeological Hills and Monuments: Examples from Iraq". J. Earth Sci. Geotech. Eng., 6(2): 1-28, 2016.

[6] Chyad, R.J.; Jurd, H.S.; "Theology and humanity in ancient Iraqi pottery". Neuro Quantology, 20(10): 776-793, 2022.

[7] Nissen, H.J.; Heine, P.; "From Mesopotamia to Iraq: A concise history"; University of Chicago Press: Chicago, USA, 2009.

[8] Ur, J.; De Jong, L.; Giraud, J.; Osborne, J.F.; MacGinnis, J.; "Ancient cities and landscapes in the Kurdistan Region of Iraq: The Erbil Plain Archaeological Survey 2012 season". Iraq, 75: 89-117, 2013.

[9] Ur, J.; "The archaeological renaissance in the Kurdistan region of Iraq". Near East. Archaeol., 80(3): 176-187, 2017.

[10] Al-Ameri, T.K.; Jasim, S.Y.; Al-Khafaji, A.J.S.; "Middle Paleolithic to Neolithic Cultural History of North Iraq". Arab J Geosci, 4: 945–972, 2011.

[11] Parkes, M.; Stein, S.; Reading, C.; "Student preparedness for university e-learning environments". Internet High. Educ., 25: 1-10, 2015.

[12] Eldeeb, R.A.; "Students' Perceptions to e-learning". IOSR J. Res. Method Educ., 4(3): 33-36, 2014.

[13] Al-Arimi, A.M.; "Distance learning". Procedia-Soc. Behav. Sci., 152: 82-88, 2014.

[14] Goyal, S.; "E-Learning: Future of education". J. Educ. Learn., 6(4): 239-242, 2012.

[15] Harandi, S.R.; "Effects of e-learning on Students' Motivation". Procedia-Soc. Behav. Sci., 181: 423-430, 2015.

[16] Al Rawashdeh, A.Z.; Mohammed, E.Y.; Al Arab, A.R.; Alara, M.; Al-Rawashdeh, B.; "Advantages and disadvantages of using e-learning in university education: Analyzing students' perspectives". Electron. J. E-Learn., 19(3): 107-117, 2021.

[17] Ayu, M.; "Online learning: Leading e-learning at higher education". J. Engl. Lit. Educ., 7(1): 47-54, 2020.

[18] Yousif, S.A.; Jehad, R.; "Classification of Covid-19 Fake News Using Machine Learning Algorithms". In: Proceedings of the Fifth International Conference of Mathematical Sciences (ICMS 2021), Istanbul, Turkey, 2021.

[19] Jehad, R.; Yousif, S.A.; "Fake News Classification Using Random Forest and Decision Tree (J48)". Al-Nahrain J. Sci., 23(4): 49–55, 2020.

[20] Maatuk, A.M.; Elberkawi, E.K.; Aljawarneh, S.; Rashaideh, H.; Alharbi, H.; "The COVID-19 pandemic and E-learning: challenges and opportunities from the perspective of students and instructors". J. Comput. High. Educ., 34(1): 21-38, 2022.

[21] Stecuła, K.; Wolniak, R.; "Influence of COVID-19 pandemic on dissemination of innovative e-learning tools in higher education in Poland". J. Open Innov. Technol. Mark. Complex., 8(2): 89, 2022.

[22] El-Sabagh, H.A.; "Adaptive e-learning environment based on learning styles and its impact on development students' engagement". Int. J. Educ. Technol. High. Educ., 18(1): 53, 2021.

[23] Lau, R.W.; Yen, N.Y.; Li, F.; Wah, B.; "Recent development in multimedia e-learning technologies". World Wide Web, 17: 189-198, 2014.

[24] Pedroso, J.E.; Sulleza, R.S.; Francisco, K.H.; Noman, A.J.; Martinez, C.A.; "Unlocking the Power of Canva: Students' Views on Using the All-In-One Tool for Creativity and Collaboration". J. Digit. Learn. Distance Educ., 2(2): 443-461, 2023.

[25] Costa, C.; Alvelos, H.; Teixeira, L.; "The use of Moodle e-learning platform: a study in a Portuguese University". Procedia Technol., 5: 334-343, 2012.

[26] Athaya, H.; Nadir, R.D.; Indra Sensuse, D.; Kautsarina, K.; Suryono, R.R.; "Moodle implementation for e-learning: A systematic review". In: Proceedings of the 6th

International Conference on Sustainable Information Engineering and Technology, Malang, Indonesia, 2021.

[27] Akhmedova, Z.; Rahmatova, N.; "LMS (Learning Management System) Learning Management System Features". Sci. Innov. Educ. Syst., 3(1): 85-94, 2024.

[28] Abidin, N.L.F.; Dwiningsih, K.; Jehwae, P.; Sari, C.K.; "Leveraging Technology to Improve Learning Independence in Chemistry: A Study on Moodle Integration". Indon. J. Learn. Adv. Educ., 6(3): 365-386, 2024.

[29] Manurung, A.A.; Syafrayani, P.R.; "Web-based Interactive Distance Learning Design with Moodle". Aksaqila Int. Humanit. Soc. Sci. J., 3(1): 20-25, 2024.