

The Reality of Applying the E-learning Experience at Al Nahda University College from the Point of View of Students and Faculty Members

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واقع تطبيق تجربة التعليم الإلكتروني بكلية
النهضة الجامعية من وجهة نظر الطلاب وأعضاء
هيئة التدريس



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Abstract:

Objectives: The study aimed to explore the reality of implementing e-learning at Al-Nahda University College from the perspectives of faculty members and students. It also sought to uncover the obstacles to e-learning usage at the college, as seen by these groups.

Methods: The researchers adopted a descriptive method. The study involved 250 faculty members and 800 students. A stratified random sample was selected including 42 faculty members (representing 44% of the study population) and 187 students. The researchers relied on the questionnaire as the main tool for collecting information.

Results: The study concluded with several key findings: e-learning techniques are effective and cover all aspects of the curriculum, and there is a smooth transition from traditional to electronic education. Faculty members are convinced of the value of e-learning and find the assessment methods diverse and appropriate.

Conclusions: the researchers recommend that the college should prioritize the technical aspects related to the electronic infrastructure, such as enhancing network strength and servers, to improve internet speed. There is also a need to introduce a course across all faculties and a specialization that includes key electronic applications used in e-learning and emphasizes its importance. The Ministry of Higher Education is encouraged to formally adopt and support the e-learning system. Finally, there is a necessity for a high-efficiency technical support system to develop and manage these systems effectively.

Keywords: E-learning; Al Nahda University; Educational technology; Higher education.

الملخص:

الأهداف: هدفت الدراسة إلى استكشاف واقع تطبيق التعلم الإلكتروني في كلية جامعة النهضة من وجهة نظر أعضاء هيئة التدريس والطلاب. كما سعت إلى الكشف عن العقبات التي تعيق استخدام التعلم الإلكتروني في الكلية، كما يراها هذان الفريقان.

المنهجية: اتبع الباحثين المنهج الوصفي التحليلي، وتكون مجتمع الدراسة من (250) عضو من أعضاء هيئة التدريس و (800) طالبًا، حيث تم اختيار عينة عشوائية طبقية عن طريق المعاينة النسبية قوامها (42) عضو هيئة تدريس والتي تمثل بنسبة (44%) من مجتمع الدراسة، و (187) طالب، اعتمد الباحثين على الاستبيان كأداة رئيسة لجمع المعلومات.

النتائج: خلصت الدراسة إلى مجموعة من النتائج أهمها: التقنيات المتبعة في التعليم الإلكتروني فعالة وتغطي كافة جوانب المقرر وأن هناك سلاسة في الانتقال من التعليم التقليدي إلى التعليم الإلكتروني، قناعة أعضاء هيئة التدريس بتوظيف التعليم الإلكتروني وأن أساليب التقويم المتبعة مناسبة وتتم بطرق متنوعة.

الخلاصة: أوصى الباحثين بضرورة اهتمام الكلية بالجانب الفني المتعلق بالبنية التحتية الإلكترونية من مقويات للشبكة وسيرفرات لأن ذلك يساهم في زيادة سرعة الإنترنت، ضرورة أن يتم القيام بإضافة مقرر يدرس لكل الكليات وكل التخصصات يتضمن أهم التطبيقات الإلكترونية المستخدمة في عملية التعليم الإلكتروني وتوضيح أهمية التعليم الإلكتروني، حث وزارة التعليم العالي على أن تتبنى نظام التعليم الإلكتروني واعتماده بصورة رسمية، ضرورة العمل على توفير منظومة للدعم الفني ذات كفاءة عالية تعمل على تطوير وإدارة النظم بما يضمن لها الفاعلية في الأداء.

الكلمات المفتاحية: التعلم الإلكتروني؛ جامعة النهضة؛ تكنولوجيا التعليم؛

التعليم العالي.

Citation

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1 Introduction

Over the past few decades, the world has witnessed significant innovations and inventions in the field of information and communication technologies. These advancements have led to rapid and transformative changes in the fields of science, particularly in educational sciences. A key focus of the current study is e-learning, a method of direct learning where educational content is delivered through electronic media, such as the internet or satellites (Al-Kilani, 2004).

Additionally, the emergence of a global health pandemic has profoundly affected all facets of life, especially education. This pandemic, experienced by countries across various ethnic, racial, religious, cultural, and scientific backgrounds, has forced many to swiftly transition to e-learning systems. The success of this transition in different countries has largely depended on the presence of electronic infrastructure and pre-established digital transformation plans. These plans, in some instances, were accelerated by the pandemic, leading to mixed results in achieving certain goals (Othman, 2020). Numerous studies have advocated for the use of e-learning, including those by Othman (2020), Wasila et al. (2019), Al-Rashidi (2019), Al-Shehri (2017), and Jones & Jones (2017).

Therefore, this study aims to explore the realities of implementing e-learning at Al Nahda University College, as perceived by faculty members and students.

1.1 The Search Problem

The COVID-19 crisis has significantly affected the education sector, leading universities worldwide to shut their doors to mitigate the virus's spread. This closure has caused widespread concern among those involved in education. In response to these global challenges, educational institutions have been compelled to adopt e-learning to ensure the continuity of teaching and learning processes. This shift involves utilizing the internet, smartphones, and computers for remote communication with students (Yulia, 2020).

Furthermore, the current educational system in Sudan, especially at the general education stages, seems inadequate in preparing students to meet the demands and challenges of the modern era. The future requires individuals with advanced abilities and skills, such as information analysis, effective communication, and adaptability to technological changes. These essential skills are not adequately addressed in the traditional education system, prompting a shift towards individualized and self-directed learning methods.

Al-Nahda College, a private institution in Sudan, was suddenly thrust into the realm of e-learning, adopting communication methods previously unutilized. This transition highlighted various challenges, as the college had not previously engaged in e-learning or distance education. Consequently, there is an urgent need to assess and evaluate the e-learning experience at Al-Nahda College, particularly in terms of educational goal achievement, addressing student needs, and creating an interactive environment as an alternative to traditional face-to-face learning.

The central research question of this study focuses on exploring the realities of implementing e-learning at Al Nahda University College, as experienced by faculty members and students. From this central question, several related inquiries may arise.

1.2 Research Questions

- What is the faculty's perspective on the reality of e-learning at Al Nahda University College?
- How do students perceive the reality of e-learning at Al Nahda University College?
- What obstacles do faculty members identify in the e-learning process at Al Nahda University College?
- From the students' viewpoint, what are the challenges encountered in e-learning at Al Nahda University College?

1.3 Research Objectives

This study aims to explore and understand the implementation of e-learning at Al Nahda University College, specifically from the perspectives of faculty members and students. Additionally, it seeks to uncover the challenges and obstacles associated with the use of e-learning at the college, as perceived by both faculty and students.

1.4 The Importance of Research

Theoretical Significance:

- This research offers a valuable theoretical foundation for scholars and practitioners, enhancing their understanding of e-learning implementation. It provides comprehensive insights that can guide future research and practice in the domain of e-learning.
- Addressing a contemporary and relevant issue in education, this study has the potential for broad applicability and utility. Its findings and implications can be leveraged at both macro and micro educational levels, contributing significantly to the evolving landscape of digital learning.

Applied significance:

- The findings of this research could be instrumental for Al Nahda University College and other higher education institutions in enhancing their e-learning systems. They offer valuable insights for developing and training human resources to effectively manage and utilize e-learning platforms.
- This research provides useful guidance on how e-learning can be adapted and implemented during wars and crises. Its results can inform strategies for maintaining educational continuity in challenging and unpredictable circumstances.
- The insights gained from this study are crucial for understanding the practical aspects of e-learning implementation in higher education. They offer a roadmap for institutions seeking to integrate or improve e-learning in their curriculum.
- The outcomes of this research have the potential for broader applicability and can be generalized to various higher education contexts. They provide a benchmark for institutions aiming to adopt or enhance e-learning methodologies.

1.5 Limits of Research

Objective Boundaries: This study is focused on exploring the reality of e-learning implementation at Al-Nahda University College, specifically through the perspectives of both faculty members and students.

Spatial Boundaries: The research is confined to Al-Nahda University College, providing an in-depth analysis within this specific educational setting.

Temporal Boundaries: The study is being conducted over a defined period, spanning from 2022 to 2023. This timeframe allows for a comprehensive understanding of the e-learning experience during this period.

Human Boundaries: The primary subjects of this research are the faculty members and students of Al-Nahda University College. Their experiences and viewpoints will form the core of the study's data and analysis.

1.6 Search Terms

E-Learning: Defined as an interactive system integral to the educational process, e-learning depends on a digital environment to present courses and activities. This system utilizes electronic networks and smart devices to facilitate learning (Berg, Simonson, 2018). In the specific context of Al Nahda College, researchers describe e-learning as a deliberate and goal-oriented process. Here, students engage interactively with faculty members to achieve defined educational objectives. This interaction is mediated through interactive educational software, electronic networks, and smart devices, with an emphasis on maintaining physical distancing for safety.

Faculty members: Al Nahda University College, also known as Renaissance University College, is a prestigious private institution established in 2014. The College initially launched with programs in Medicine and Dentistry, subsequently expanding to include Medical Laboratories, Pharmacy, and Information Technology. In 2015, it welcomed its inaugural cohort of Nursing Sciences students. That same year marked the introduction of the Administrative Sciences program, encompassing various branches such as Accounting, Business Administration, and Banking. In 2016, the College broadened its academic horizon by admitting the first batch of students into its language program, offering courses in English and French. By 2018, Al Nahda further diversified its curriculum by adding the Arts program, with a focus on Arabic studies.

The faculty at Al Nahda University College comprises esteemed professors holding master's and doctoral degrees across various academic ranks, including Lecturer, Assistant Professor, Associate Professor, and Professor. This diverse and highly qualified team of educators plays a pivotal role in delivering the College's wide range of academic programs.

2 Theoretical Framework and Preliminary Studies

2.1 The Concept of E-learning

E-learning is defined as an interactive distance learning system, designed to be learner-centric and based on a fully integrated digital environment. It focuses on building and delivering courses through electronic networks, providing guidance and organizing assessments (Abdulhamid, 2005). In this context, an e-learning teacher is tasked with multiple responsibilities during the presentation of courses or educational sessions (Ernest et al., 2001).

Despite the plethora of definitions available in the academic domain, e-learning commonly refers to education or training that employs various media and technologies, such as computers, the internet, and intranets. The content in e-learning encompasses educational objectives, teaching methods, educational media, and cognitive-skill aspects.

The European Commission defines e-learning as the use of modern multimedia technologies and the internet to improve learning quality. This is achieved by facilitating access to knowledge sources and network services, and supporting cooperation, information exchange, and remote participation (Heseyin, 2006).

Furthermore, Zhu & McKnight (2003) describe e-learning as any organized educational process where the teacher and learner are not physically co-located, and internet technologies are employed to facilitate communication between them.

2.1.1 Types of E-learning

E-learning encompasses a variety of styles, shaped by the utilization of various tools and technologies in the teaching and learning process. These technologies include computers, the internet, intranets, and satellite communication. E-learning can occur either at a distance or within traditional classroom settings, and it may be synchronous (occurring in real-time) or asynchronous (not occurring in real-time). Furthermore, the mode of education in e-learning can range from purely digital (using only e-learning tools) to a hybrid approach, combining traditional and digital methods, often referred to as blended learning.

Upon reviewing extensive literature on the classification of e-learning, it becomes evident that e-learning can be categorized in several ways (Al-Gharab, 2003; Al-Mousa and Al-Mubarak, 2005; Istitiya and Sarhan, 2007; Azmi, 2008). One primary classification differentiates between online e-learning (which is internet-based) and non-internet-based e-learning. Within the realm of internet-based e-learning, further classification is made into synchronous e-learning, where learning happens in real-time, and asynchronous e-learning, where interactions do not occur simultaneously.

• Synchronous E-learning

According to Azmi (2008), synchronous e-learning, often referred to as 'real-time' or 'direct' e-learning, involves the immediate transfer of communications to multiple locations simultaneously. This form of e-learning enables instant interaction and communication, characteristic of a live, direct learning environment. The tools employed in synchronous e-learning are diverse and facilitate this immediate, real-time interaction:

Conversation or chat: According to Azmi (2008) and Shehata (2009), synchronous e-learning tools can be utilized in education through various methods. These tools are particularly valuable for offering immediate feedback to both teachers and learners. Furthermore, they can be used independently or integrated with other technologies, such as virtual classrooms. This flexibility in application highlights the versatility and effectiveness of synchronous e-learning in enhancing the educational experience.

Audio conferences: According to Estate and Sarhan (2007) and Azmi (2008), TV messages serve as a medium in synchronous e-learning, enabling the connection of participants simultaneously. This connection can be established through regular telephone lines or via the internet. Additionally, loudspeakers may be employed in scenarios where multiple individuals are gathered in the same location, facilitating a group meeting with others in different places. This method of communication effectively bridges the gap between various locations, making it a useful tool in synchronous learning environments.

Video conferencing: Estaita and Sarhan (2007), Azmi (2008), and Shehata (2009) discuss the utilization of interactive communication technology tools in e-learning. These tools enable real-time, two-way video communication and simultaneous audio broadcasting between two or more locations, even if they are geographically distant. They are employed in educational contexts to facilitate the discussion of ideas, experiences, and information in a collaborative and interactive environment. This technology fosters a shared understanding and enriches the learning experience by allowing participants to engage in a dynamic exchange of knowledge and perspectives.

Virtual classes: According to the insights from Al-Musa and Al-Mubarak (2005), Istitia and Sarhan (2007), and Shehata (2009), online technology in e-learning facilitates sessions between teachers and learners who are separated by geographical barriers, enabling real-time interaction through online dialogue. Virtual classes in this context offer a range of communication avenues. These include written communication, where participants engage in text-based interactions and the use of a smart blackboard for interactive sharing and illustration of ideas. There is also direct sharing of systems, programs, and applications, either between the teacher and the learners or among the learners themselves. The technology enables the sending and exchanging of files directly, allowing the teacher to follow up individually with learners or address the entire group simultaneously, often employing electronic presentation programs. Features such as educational film projection enhance the teaching experience, while the capability for directing written questions and follow-up orders adds to the interactive nature of the sessions. Furthermore, the technology supports controlled participation, with functionalities for managing classroom entry and exit, speaking permissions, printing options, and the recording of lectures, both audio and written. Additionally, there is the feature of desktop sharing, where the teacher's desktop view can be transferred to all learners' devices. Notably, the technology also allows session management to be handed over to one of the learners, adding an extra layer of engagement and interactivity to the e-learning environment.

- **Asynchronous (indirect) E-learning**

As elucidated by Al-Musa and Al-Mubarak (2005) and Shehata (2009), in asynchronous e-learning, the teacher has the capability to upload educational resources along with a structured learning and calendar plan onto an educational website. Students can then access this site at their convenience, following the teacher's instructions to complete their learning independently, without the need for real-time interaction with the teacher. This approach is one of the most prominent facets of asynchronous e-learning.

A key tool in this method is the use of electronic pages on the World Wide Web (WWW). These pages can be either static or interactive, allowing the lecture material to be placed in a specific online location. Learners have the flexibility to review, listen to, or watch this material from the same location, or they can download it for later study. This method leverages superimposed texts, such as Microsoft Word files, PDFs, or audio files like MP3 or WAV. Additionally, video files can be utilized, often through platforms like YouTube. This variety of formats caters to different learning preferences and needs, making asynchronous e-learning a versatile and accessible option for students.

E-mail: According to Istitia and Sarhan (2007), Azmi (2008), and Shehata (2009), asynchronous e-learning encompasses various tools, including mailing lists and mailing groups. These platforms facilitate the transmission of text, voice, or video messages over communication networks, distributing them electronically to learners or teachers. These tools are characterized by their ease of use, quick transmission capabilities, and low operational costs. They are widely used due to their accessibility through numerous technologies over the network and their ability to send attachments, such as lectures, course materials, assignments, or inquiries.

Another significant component of asynchronous e-learning is discussion groups or discussion boards (announcements), as detailed by Azmi (2008) and Shehata (2009). These are electronic boards where teachers and learners can post notes, comments, questions, and answers related to a specific topic or a learning group within a particular course. They provide a platform for leaving messages that can be accessed and responded to by participants at their convenience. This format encourages an ongoing, flexible dialogue and enhances the collaborative learning experience.

Electronic blogs: According to the research by Istitia and Sarhan (2007), Azmi (2008), and Shehata (2009), one modern method of publishing and communication on the internet, particularly relevant to e-learning, involves the use of online platforms akin to daily diaries or sites for scientific or educational articles. These platforms, often found on the websites of electronic communities, are characterized by their interactive nature and direct access between the content creators and their audience.

Notably, these platforms include an archive that arranges the topics and ideas in ascending chronological order, facilitating easy access to historical content. The managers of these platforms have control over the presentation of content and the audience, while also providing opportunities for others to engage, participate, and comment on the published ideas. Furthermore, these platforms are recognized for their ease of creation, distribution, and the simplicity with which they can be updated. This makes them an invaluable tool in the realm of e-learning, enhancing the dissemination and exchange of knowledge.

CDs: According to Shehata (2009), in the realm of e-learning, specific tools are employed to facilitate interactive lessons either offline or via the internet. These tools involve the use of curriculum software and data, which encompass various forms such as text, graphics, images, and audio. This content can be stored

and then transferred onto the student's device, allowing for easy reference whenever needed. Such tools are widely favored in e-learning due to their accessibility and the convenience they offer in terms of data transfer and storage, all at a relatively low cost.

- **Adjunct or complementary e-learning Adjunct**

Complementary e-learning is a model that augments traditional or classroom education by leveraging online networks equipped with necessary programs and support services. In this approach, various e-learning tools are partially utilized to support, enhance, and increase the efficiency of classroom-based education. Examples of this complementary model include several practices. For instance, before teaching a specific subject, a teacher may direct students to review a particular lesson available on the internet. Alternatively, students might be instructed to conduct internet research for specific information. Post-lesson activities could involve directing students to a designated website to answer questions related to the topic they have studied. This method of e-learning serves to enrich the traditional classroom experience, offering students a more comprehensive and interactive educational journey.

- **Single E-learning (pure form) Totally online :**

In the field of Information Technology, the pure model of e-learning is utilized as the sole medium for conducting the teaching and learning process. In this approach, either a local network or the internet serves as the primary platform for delivering the entire educational experience, which falls under the category of distance learning based on e-learning technologies.

Examples of applications within this pure e-learning model include scenarios where a student engages in an electronic course independently. This independent study might involve learning through software that is accessed via CDs, the web, or a local network. Alternatively, the learning process can be collaborative, involving a student's participation in a group to learn a lesson or complete a project. This collaborative aspect often utilizes participatory e-learning tools such as electronic chat rooms and video conferences. These tools facilitate interactive learning experiences and foster a sense of community among learners, even in a virtual environment.

- **Blended E-learning**

In Information Technology, e-learning is increasingly being integrated with traditional classroom education in teaching and learning processes. This blended approach employs e-learning tools for a portion of the face-to-face classroom education, while other tools are utilized for the online components. Many specialists in the field, including Khan (2005), advocate for this model, citing its effectiveness in combining the benefits of both e-learning and traditional classroom instruction. They argue that educational institutions and organizations should embrace and promote this method to optimize the e-learning experience.

One application of integrated e-learning involves a mix of classroom and online teaching methods within a single course. For example, certain lessons might be taught in the classroom without e-learning tools, while others are conducted using various online educational resources. Additionally, some lessons could be taught using a combination of both approaches. An example of this might be a lesson on 'trigonometric functions,' where the teacher begins the lesson in the classroom, then directs students to an online platform for illustrative examples, and finally returns to traditional methods to complete the lesson. This interchange between classroom and online learning enriches the educational experience, offering learners diverse ways to engage with the material.

2.1.2 Elements of E-learning Systems

According to Mahmoud (2008 99-100), the elements of e-learning encompass the following key components:

- **Content:** This is the core scientific material prepared electronically and is a crucial element of e-learning. Educational content is developed using specialized technologies and software, consisting of texts, films, videos, images, and various interactive mechanisms.
- **Mediator Media:** This refers to the communication means between the components of the educational process, such as the internet, data networks, or any electronic communication tools. These media facilitate interaction among the teacher, learner, and content, especially enabling dialogue sessions between the teacher and the learner.
- **E-Learner:** An e-learner is a student who engages with electronic media and e-learning systems. This individual attends classes, participates in exams, and interacts with teachers and peers within the educational environment.

- **E-Teacher:** An e-teacher may operate from within an educational institution or remotely from home. This role is often not bound by specific working hours but rather by the number of courses managed, the responsibility for these courses, and the number of students enrolled.
- **E-Learning Environment:** Various software packages have been developed to manage e-learning processes, known as e-learning environments or ELEs. These programs, provided by educational institutions, are designed to organize and manage various learning processes such as the presentation of materials, student follow-up, assignments, etc. The term 'e-learning environment' specifically refers to these programs, distinguishing them from the broader concept of an electronic school environment. They can also be likened to electronic classrooms.
- **System Administrator:** a technical expert responsible for managing the e-learning system fills this role. Duties include controlling system resources, managing sessions, updating content, and ensuring seamless connectivity within the educational process.

2.1.3 Advantages of E-learning

In theoretical terms, e-learning introduces a new paradigm often referred to as 'Digital Culture,' distinct from traditional educational culture. While traditional culture primarily focuses on the production of knowledge, digital culture emphasizes the processing and interaction with knowledge (Al-Saud, 2008).

E-learning democratizes educational opportunities, making them accessible to diverse societal groups including women, workers, and employees, without discrimination based on gender or color. It plays a significant role in developing critical thinking skills and enriching the learning process. One of the key features of e-learning is the ease with which educational sites and programs can be updated, allowing for the swift modification and dissemination of information to students via the internet.

This mode of learning enhances communication, facilitating the exchange of opinions, experiences, and viewpoints between students and teachers, and among students themselves, through various means such as email, discussion rooms, and interactive video. E-learning also empowers students with the freedom and confidence to express themselves more openly compared to traditional education settings.

Furthermore, e-learning effectively addresses the challenges of overcrowding in physical classrooms and limited resources, especially prevalent in colleges and in theoretical disciplines. It enables continuous feedback during the learning process, allowing students to track their progress through both self-evaluation and final assessments (Al-Saud, 2008).

Accessibility is another advantage; students can easily reach their instructors at any time for direct dialogue or via email. E-learning also offers a variety of learning resources, providing students with access to electronic libraries and other beneficial sites, thus broadening their understanding and facilitating information assimilation (Al-Saud, 2008).

Lastly, the design of e-learning materials often incorporates multimedia elements like sound, images, films, and animations. This not only enhances the learning experience but also makes it more engaging, interactive, and motivational for students.

2.1.4 Objectives of E-learning

E-learning, as highlighted by Al-haylah (2007) and Al-Saud (2008), aims to revolutionize education by harnessing technological advancements and preparing students to adeptly navigate the evolving developments of our era. Its primary objective is to facilitate the acquisition, development, and continual updating of knowledge, while also honing skills and refining attitudes for effective modern education. Key goals of e-learning encompass creating interactive learning environments through the use of new electronic technologies and a diverse array of information and experience sources. It also emphasizes supporting the process of interaction between students, teachers, and assistants. This is achieved through the exchange of educational experiences, opinions, dialogues, and discussions using various communication channels such as email and virtual classrooms. Moreover, e-learning aims to equip teachers with the technical skills necessary for utilizing modern educational technologies effectively. Concurrently, it focuses on enabling students to acquire the skills or competencies essential for using communication and information technologies. Additionally, e-learning seeks to develop the role of teachers in the educational process, ensuring it keeps pace with continuous scientific and technological advancements. It also aims to expand the circle of student communication through both global and local networks, transcending the traditional confines of teacher-centric knowledge dissemination, while interlinking educational sites to augment learning resources. Importantly, e-learning strives to provide education that caters to different age groups, taking into account

the individual differences among learners. Lastly, it endeavors to strengthen the relationship between parents and schools, as well as between schools and the external community, fostering a more inclusive and connected educational ecosystem.

2.2 Previous Studies

Identifying the trajectory of scientific research through prior studies is crucial for situating current research within its methodological context. These studies offer valuable insights into the field of e-learning, particularly in light of the challenges posed by the COVID-19 pandemic. For instance:

- **A study by Abdul Bari (2022)** aimed to assess the state of e-learning in higher education through Sudanese universities during the pandemic. It concluded that e-learning in these institutions is still nascent, with significant challenges including poor infrastructure and technology, internet connectivity issues, and a lack of teacher expertise in e-learning. The study recommended a broader adoption of e-learning systems in higher education for quality assurance.
- **Al-Jamal (2020)** focused on the difficulties faced by Palestinian university students in Hebron governorate with e-learning during the pandemic. The study, which surveyed 102 students using an electronic questionnaire, found significant challenges in e-learning, ranked in order of importance as: issues related to the lecturer, psychological pressures, curriculum-related difficulties, infrastructural problems, and knowledge gaps in e-learning.
- **Conversely, Basilaia and Kvavadze (2020)** studied the transition from traditional to online learning in Georgian schools during the pandemic. Their findings suggested that the transition was successful, with newly acquired systems and skills by teachers, students, and school management proving useful in various contexts post-pandemic.
- **Qunaibi's (2020)** study on the reality of e-learning in Palestine from the perspective of teachers indicated the need for significant development in the Palestinian curriculum to adapt to e-learning. The study also found that teachers' engagement with e-learning was moderate.
- **Bashir's (2019)** study in Ugandan higher education institutions explored the relationship between e-learning interaction, learner satisfaction, and continuous learning intentions. The study, which surveyed 232 learners, revealed a three-factor structure of e-learning interaction: learner interface, feedback interaction, and learning content.
- **Al-tayti and Hamayel (2016)** aimed to examine e-learning in Palestinian universities from the faculty members' perspective. Their study found that the availability of an e-learning environment was rated highest, followed by understanding the concept of e-learning, with e-learning outputs rated lowest. Notably, no significant differences were observed based on gender, years of experience, university level, and scientific qualification, except in the case of An-Najah University, where PhD holders rated significantly higher than Masters holders.
- **Finally, Al-Hassan and Abdul Aziz (2015)** study investigated the impact of e-learning on developing problem-solving skills in mathematics teaching at the University of Khartoum. The semi-experimental study, involving 60 calculus students, concluded that the experimental group showed significantly better problem-solving skills compared to the control group.

Each of these studies contributes to understanding the various dimensions and challenges of e-learning, providing a rich context for further research in this evolving field.

Feedback on previous studies

The current study aligns with the research methodologies used in several previous studies, including those by Abdul Bari (2022), Al-Jamal (2020), Basilaia and Kvavadze (2020), Qunaibi (2020), Bashir (2019), and Hamayel (2016). Like these studies, the current research employs a descriptive approach, which is instrumental in understanding the nuances of e-learning in various settings.

However, the current study diverges from the methodology used by Hassan and Abdulaziz (2015), who adopted a semi-experimental approach, in contrast to the descriptive method employed in the current research.

In terms of application context, the current study shares similarities with the works of Abdulbari (2022), Al-Jamal (2020), Qunaibi (2020), Bashir (2019), Hamayel (2016), and Hassan and Abdul aziz (2015), all of which were conducted in university settings. This similarity underscores the relevance of university environments in exploring the dynamics of e-learning. On the other hand, the current study differs from

Basilaia and Kvavadze's (2020) research, which was conducted in a school setting, highlighting the diverse educational landscapes in which e-learning can be investigated.

3 Field Study Procedures

3.1 Methodology of Study

The study employs a descriptive-analytical approach, effectively combining quantitative and qualitative methods. This approach involves a comprehensive description of the phenomenon under investigation, through systematic data collection and classification. The gathered data are then subjected to detailed analysis to uncover the relationships among various dimensions of the phenomenon. This method enables the study to interpret the data adequately, facilitating the formulation of general conclusions. These conclusions are instrumental in understanding the current context, diagnosing the reality of the situation, and identifying its underlying causes. The descriptive-analytical approach, therefore, serves as a robust framework for exploring and understanding the complex dynamics of the study's subject matter.

3.2 The Study Community

The study community in this research refers to the entire set of elements to which the researcher intends to generalize the findings related to the problem being studied. The primary study community for this research comprises two key groups:

- Faculty members of Al Nahda College.
- Students of Renaissance College.

3.3 Study Samples

Regarding the study sample, it was selected through a random sampling method. The researchers distributed a total of 50 questionnaires to the faculty members at Al-Nahda College, out of which 42 individuals responded, resulting in an 84% response rate. Additionally, 200 questionnaires were distributed to the students at Al-Nahda College, with 187 individuals responding, leading to a 94% response rate.

This approach to sampling ensures that the study results are based on a representative and diverse set of responses, providing robust insights into the perspectives of both faculty members and students at Al-Nahda College.

3.4 Description of the Study Sample

3.4.1 The Sample of the Teaching Staff Members

Table 1 shows the frequency distribution of the study sample according to the functional degree variable.

Table 1: The frequency distribution of the study sample according to the functional degree.

Title	Number	Percentage
Lecturer	16	38.1 %
Assistant professor	21	50%
Associate professor	1	2.4 %
Professor	4	9.5 %
Total	42	100 %

Table 2: The frequency distribution of the study sample according to the variable number of training courses.

Number of training courses	Number	Percentage
course	13	31 %
Two sessions	11	26.2 %
Three or more courses	8	19%
I have not received training	10	23.8
Total	42	100 %

3.4.2 Description of the Sample for Students

Table 3 shows the frequency distribution of the study sample according to the type variable.

Table 3: The frequency distribution of the study sample by type.

Gender	Number	Percentage rate
Male	81	43.3 %
Female	106	56.7 %
Total	187	100 %

Table 4: The frequency distribution of the study sample according to the scientific specialization.

Scientific specialization	Number	Percentage ratio
Scientific	82	43.9 %
Literary	80	42.8 %
Other	25	13.4 %
Total	187	100 %

Table 5: The frequency distribution of the study sample according to the academic level.

Academic level	Number	Percentage ratio
The third	79	42.2 %
The fourth	108	57.8 %
Total	187	100 %

3.5 The Study Tool

In the domain of scientific research, varieties of tools are utilized to gather the necessary information and data pertinent to a study. For this particular research, the questionnaire has been chosen as the primary instrument for data collection. The researchers have relied on this method to efficiently and effectively collect information from the study sample. The questionnaire, with its structured format and specific questions, allows for a comprehensive and systematic gathering of responses, providing valuable insights into the research topic.

3.5.1 Resolution Description

A research letter accompanied the questionnaire distributed to faculty members at Al Nahda College. This letter explained the subject of the study, its purpose, and the objectives of the questionnaire, providing respondents with a clear understanding of the context and significance of their participation.

The questionnaire itself was divided into two main sections:

- **First Section - Personal Data:** This section gathered personal data from the study sample members. It included information regarding their functional degree and the number of courses they have conducted or participated in within the field of e-learning.
- **Second Section - Likert Scale Statements:** This section comprised 43 statements. Respondents were asked to indicate their level of agreement with each statement using a five-tiered Likert scale. The scale ranged from 'strongly agree' to 'strongly disagree,' including 'agree,' 'neutral,' and 'disagree' as intermediate options. These statements were designed to gauge the respondents' perspectives and experiences in relation to various aspects of e-learning.

The structure of the questionnaire was designed to ensure a comprehensive understanding of the faculty members' viewpoints, spanning from personal engagement with e-learning to broader opinions and attitudes towards it.

3.5.2 Description of the distributed questionnaire for students

A research letter complemented the questionnaire, integral to the study. This letter provided essential information about the study's subject, its overarching purpose, and the specific objectives of the questionnaire, ensuring that respondents fully understood the context and importance of their participation.

The questionnaire itself was methodically structured into two main sections:

- **First Section- Personal Data:** This part of the questionnaire focused on gathering personal data from the study sample individuals. It included inquiries about their type, specialty, and academic level, offering insights into the diverse backgrounds and areas of expertise of the respondents.
- **Second Section- Likert Scale Statements:** Comprising 24 statements, this section sought the participants' responses based on a five-tiered Likert scale. The scale options ranged from 'strongly agree' to 'strongly disagree,' with 'agree,' 'neutral,' and 'disagree' as intermediate options. These statements were carefully

crafted to elicit responses that reflect the participants' perspectives and experiences on specific aspects related to the study's focus.

The distribution of these phrases and the design of the Likert scale were intended to provide a nuanced understanding of the respondents' views and experiences, thereby contributing valuable data for the analysis phase of the study.

3.6 Validity and Reliability of the Study Tool

3.6.1 External Validity

To ensure the reliability and clarity of the study's questionnaire, particularly in terms of its phrasing and comprehensibility, the researchers presented the questionnaire to a select group of academic experts for validation. These experts were chosen based on their specialized knowledge and expertise in relevant fields. They included arbitrators and specialists from the Department of Educational Technology, the Department of Curricula and Teaching Methods, the Department of Educational Psychology, and the Department of Educational Administration. This process of validation by experienced academics from various pertinent disciplines helps to confirm the apparent truthfulness and appropriateness of the questionnaire statements, ensuring that they effectively capture the intended aspects of the study.

3.6.2 Reliability and Validity

To calculate the questionnaire's reliability coefficient, the coefficient (α) Cronbach's alpha was used according to the following formula:

$$\frac{n}{n-1} \frac{1 - \sum_{i=1}^n \sigma_i^2}{\sigma_T^2}$$

Where:

- (α) is the reliability coefficient (Cronbach's alpha).
 - (n) is the number of items in the questionnaire.
 - (σ_i^2) is the variance of each item in the questionnaire.
 - (σ_T^2) is the total variance of the items
- consistency = $\sqrt{\text{reliability}}$

Table 6: The consistency and truthfulness of the answers of the survey respondents from the faculty members of Al Nahda College.

Domain	Correlation coefficient	reliability coefficient	The coefficient of subjective validity
The first domain	0.76	0.87	0.92
The second axis	0.64	0.80	0.89
Resolution as a whole	0.67	0.82	0.91

This indicates that the resolution is characterized by very high stability and honesty to achieve the research purposes, and makes the statistical analysis sound and acceptable.

Table 7: The consistency and truthfulness of the answers of the survey sample of students at Al Nahda College.

The axis	Correlation coefficient	Stability coefficient	The coefficient of subjective honesty
The first axis	0.83	0.91	0.95
The second axis	0.69	0.83	0.91
Resolution as a whole	0.74	0.86	0.93

Which indicates that the study's questionnaire is characterized by very great stability and honesty to achieve the research purposes, and make the statistical analysis sound and acceptable.

3.7 Statistical Methods Used

To achieve the research objectives, the following statistical methods were used:

The table of the frequency distribution of answers, percentages, relative importance, the Spearman - Brown equation for calculating the coefficient of constancy, the standard deviation to measure the homogeneity in the answers of the study sample members, the mediator to find out the direction of the study sample's opinions regarding the study phrases.

4 Presentation and Discussion of the Findings

4.1 Presentation and discussion of the first question

To answer the first question, which reads: What is the reality of e-learning at Al Nahda University College from the point of view of faculty members The calculation of repetitions, percentages, the test (KA^2) was used, Tables 8 and 9 show that.

Table 8: The frequency and percentages obtained by researchers from the respondents ' responses about the reality of e-learning at Al-Nahda University College from the point of view of faculty members

T	The phrase	Frequency and ratio %									
		Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
		Repeat	Ratio%	Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %
1	The students were trained by the College on the use of e-learning by giving them some qualifying courses.	19	45.2	15	35.7	7	16.7	0	0.0	1	2.4
2	The techniques used in e-learning are effective and cover all aspects of the course.	7	16.5	15	35.7	3	7.1	15	35.7	2	4.8
3	There is a smooth transition from traditional education to e-learning in light of the corona pandemic.	12	28.6	15	35.7	8	19.0	3	7.1	14	9.5
4	I feel good when using the e-learning system as an alternative to the traditional education system.	8	19.0	21	50.0	0	0.0	8	19.0	5	11.9
5	Sending and receiving educational materials will not be accompanied by any technical obstacles	0	0.0	9	21.4	4	9.5	24	57.1	5	11.9
6	The college provides electronic training guidance courses that explain the mechanism of use.	11	26.2	22	52.4	6	14.3	3	7.1	0	0.0
7	The teaching staff has sufficient skills to design and produce effective electronic content.	12	28.6	18	42.9	4	9.5	4	9.5	4	9.5
8	The e-learning platform helped to present the scientific material in an interesting way.	6	14.3	18	42.9	8	19.0	8	19.0	2	4.8
9	The e-learning system provides direct communication between the members of the educational system (administration, faculty member, and learner).	5	11.9	28	66.7	2	4.8	3	7.1	4	9.5
10	E-learning effectively contributes to the continuity and success of the educational process in light of the corona pandemic.	18	42.9	18	42.9	1	2.4	2	4.8	3	7.1
11	There is a special	25	59.5	11	31.0	3	7.1	1	2.4	0	0.0

	website (platform) for providing educational materials to students.											
12	The college administration is constantly evaluating the mechanism of Distance Teaching.	15	35.7	17	40.5	6	14.3	4	9.5	0	0.0	
13	The e-learning system fits the type of material on its theoretical and practical.	5	11.9	10	23.8	2	4.8	13	31.0	12	28.6	
14	All professors have sufficient experience and skill and are suitable for using computers and the internet.	9	21.4	19	45.2	5	11.9	5	11.9	4	9.5	
15	The internet speed is suitable and I can give any lecture without any interruption.	0	0.0	13	31.0	6	14.3	12	28.6	11	26.2	
16	Training courses were held and professors were prepared for the mechanism of using e-learning.	11	26.2	18	42.9	8	19.0	4	9.5	1	2.4	
17	The educational material for students is attached easily and conveniently.	10	23.8	23	54.8	6	14.3	0	0	3	7.1	
18	The educational content includes exercises and assignments that help to learn.	6	14.3	23	54.8	6	14.3	3	7.1	4	9.5	
19	The teacher easily answers students' inquiries about the attached scientific material.	6	14.3	19	45.2	8	19.0	3	7.1	6	14.3	
20	There is a high credibility in the evaluation of students through the e-learning system.	2	4.8	5	11.9	7	16.7	15	35.7	13	31.0	
21	The faculty member is satisfied with the e-learning system.	4	9.5	17	40.5	6	14.3	9	21.4	6	14.3	
22	The established calendar methods are appropriate and are carried out in a variety of ways.	8	19.0	24	57.1	3	7.1	5	11.9	2	4.8	
23	The student is constantly evaluated during the e-learning process.	3	7.1	8	19.0	5	11.9	17	40.5	9	21.4	
24	Convincing faculty members to employ e-learning.	10	23.8	14	33.3	7	16.7	8	19.0	3	7.1	
25	There is an e-learning platform for live streaming.	13	31.0	18	42.9	9	21.4	1	2.4	1	2.4	
Total		225	21.3	418	39.5	130	12.3	170	16.1	115	10.9	

Researchers have found from Table (8), which shows the frequency distribution of the responses of the study sample members to the statements of the first axis, "The Reality of E-Learning at Al-Nahda University College" from the perspective of the faculty members, that the majority of the responses were at the level of agreement, with the percentage of agreement reading 39.5%. This was followed by the percentage of strong

agreement, which reached 21.3%, while the percentage of sample individuals who were neutral was the lowest at 10.9%.

Table 9: The value of calculated KA² and readable KA2, along with interpretation and result relative to the opinions of respondents about the reality of e-learning at Al Nahda University College from the point of view of faculty members.

T	The phrase	The mediator	Standard deviation	Qi ²	interpretation
1	The students were trained by the College on the use of e-learning by giving them some qualifying courses.	5	0.898	18.600	Strongly agree
2	The techniques used in e-learning are effective and cover all aspects of the course.	4	1.246	18.900	Agree
3	There is a smooth transition from traditional to e-learning.	4	1.243	12.500	Agree
4	I feel good when using the e-learning system as an alternative to the traditional education system.	4	1.329	14.500	Agree
5	Sending and receiving educational materials will not be accompanied by any technical obstacles.	2	0.964	24.500	Disagree
6	The college provides training guidance electronic courses that explain the mechanism of use.	4	0.841	19.900	Agree
7	The teaching staff has sufficient skills to design and produce effective electronic content.	4	1.107	16.700	Agree
8	The e-learning platform helped to present the scientific material in an interesting way.	4	1.255	19.400	Agree
9	The e-learning system provides direct communication between the members of the educational system (administration, faculty member, learner) .	4	1.100	57.800	Agree
10	E-learning effectively contributes to the continuity and success of the educational process.	4	1.144	36.800	Agree
11	There is a special website (platform) for providing educational materials to students.	5	0.740	34.600	Strongly agree
12	The college administration is constantly evaluating the mechanism of Distance Teaching.	4	0.950	11.900	Agree
13	The e-learning system fits the type of material on its theoretical and practical brothers.	2	1.432	10.600	Disagree
14	All professors have sufficient experience and skill and are suitable for using computers and the internet.	4	1.233	18.500	Agree
15	The internet speed is suitable and I can give any lecture without any interruption.	2	1.194	27.600	Disagree
16	Training courses were held and professors were prepared for the mechanism of using e-learning.	4	1.018	20.600	Agree
17	The scientific material is attached to the students easily and conveniently.	4	1.017	22.200	Agree
18	The educational content includes exercises and assignments that help to learn.	4	1.129	32.500	Agree
19	The teacher easily answers students ' inquiries about the attached scientific material.	4	1.248	18.200	Agree
20	There is a high credibility in the assessment of students through the e-learning system.	2	1.165	14.200	Disagree
21	The faculty member is satisfied with the e-learning system.	4	1.265	12.500	Agree
22	The established calendar methods are appropriate and are carried out in a variety of ways .	4	1.061	38.700	Agree
23	The student is constantly evaluated during the e-learning process.	2	1.235	13.700	Disagree
24	Convincing faculty members to employ e-learning.	4	1.254	7.800	Agree
25	There is an e-learning platform for live streaming.	4	0.924	26.600	Agree
Total		4	1.120	21.900	Agree

According to Table 9, the researchers have found that the overall median of the study sample members' responses to the statements (represented on the first axis) indicates that a majority of them agree with the concept of e-learning at Al-Nahda University College, especially from the perspective of faculty members. However, it's worth noting that the total standard deviation of these statements on the first axis was 1.120,

suggesting that there is significant variation in the responses among the sample members. In other words, they hold differing views on these statements.

Additionally, the total chi-square value for these statements on the first axis was 21.900, which indicates statistically significant differences in the responses of the participants to these statements. Furthermore,

These results align with a previous study by Abdul Bari (2022), which highlighted the key challenges in implementing e-learning, including issues related to university infrastructure and technology, internet connectivity problems, and a lack of efficiency and expertise in e-learning.

4.2 Presentation and Discussion of the Second Question

To address the second question regarding the obstacles to e-learning at Al Nahda University College as perceived by faculty members, the analysis involved calculating repetitions, percentages, and conducting a Chi-Square test (KA2). Tables 10 and 11 present the results of this analysis.

Table 10: The frequency and percentages obtained by researchers from the responses ' responses about the obstacles of e-learning at Al-Nahda University College from the point of view of faculty members.

T	The phrase	Frequency and ratio %									
		Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
		Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %
1	Weak e-learning infrastructure.	11	26.2	17	40.5	3	7.1	5	11.9	6	14.3
2	There are no special e-learning workshops.	3	7.1	7	16.7	4	9.5	23	54.8	5	11.9
3	The weakness of the internet in college.	9	21.4	20	47.6	4	9.5	8	19.0	1	2.4
4	The high cost of processing required in e-learning.	7	16.7	21	50.0	7	16.7	5	11.9	2	4.8
5	The professor does not have the skills to use e-learning.	11	26.2	16	38.1	2	4.8	7	16.7	6	14.3
6	The difficulty of employing e-learning tools.	8	19.0	19	45.2	6	14.3	6	14.3	3	7.1
7	Rising internet costs.	19	45.2	13	31.0	5	11.9	0	0.0	5	11.9
8	Difficulty following students individually.	19	45.2	13	31.0	5	11.9	0	0.0	5	11.9
9	Lack of motivation of teachers towards the use of e-learning.	7	16.7	20	47.6	9	21.4	4	9.5	2	4.8
10	Frequent network failures in college.	18	42.9	11	26.2	2	4.8	9	21.4	2	4.8
11	There is no technician working on the management of the college's e-learning system.	5	11.9	8	19.0	4	9.5	15	35.7	10	23.8
12	Some countries do not recognize the e-learning certificate.	8	19.0	18	42.9	7	16.7	7	16.7	2	4.8
13	A power outage occurs while you are doing the educational process.	17	40.5	15	35.7	1	2.4	7	16.7	2	4.8
14	There is a difficulty in direct communication between teachers and students (where ideas and opinions can be exchanged through personal confrontation).	14	33.3	17	40.5	1	2.4	9	21.4	1	2.4
15	Professors have problems with the preparation of video lectures .	8	19.0	18	42.9	3	7.1	7	16.6	6	14.3
16	It is difficult for professors to follow the large numbers of students through the available e-learning tools.	14	33.3	10	23.8	4	9.5	9	21.4	5	11.9
17	The student faces problems and obstacles when studying the material electronically.	13	31.0	11	26.2	6	14.3	7	16.7	5	11.9
18	Students ' interaction with e-learning and lectures has been affected by economic conditions.	17	40.5	13	31.1	4	9.5	6	14.3	2	4.8
Total		214	28.3	264	34.9	76	10.1	137	18.1	65	8.6

Researchers have determined from Table (10), which displays the frequency distribution of the responses of the study sample members to the statements of the second axis "Barriers to E-Learning at Al-Nahda University College," from the perspective of faculty members, that the majority of the responses were at the agreement level, with the percentage of agreement reached 39.9%. This was followed by the percentage of strong agreement, which reached 28.3%, while the percentage of sample individuals who were neutral was the lowest at 8.6%.

Table 11: The value of the calculated KA^2 and the readable KA^2 , the interpretation and the result for the opinions of the respondents about the obstacles of e-learning at Al-Nahda University College from the point of view of faculty members.

T	The phrase	medium	Standard deviation	Qi ²	Explanation
1	Weak e-learning infrastructure	4	1.383	15.1	Agree
2	There are no special e-learning workshops.	2	1.131	32.800	disagree
3	The weakness of the internet in college.	4	1.097	24.900	Agree
4	The high cost of processing required in e-learning.	4	1.058	25.600	Agree
5	The professor does not have the skills to use e-learning.	4	1.418	13.500	Agree
6	The difficulty of employing e-learning tools.	4	1.173	18.200	Agree
7	Rising internet costs.	4	1.297	13.200	Agree
8	Difficulty following students individually.	5	0.932	29.400	Strongly agree
9	Lack of motivation of teachers towards the use of e-learning.	4	1.035	23.500	Agree
10	Frequent network failures in college.	4	1.330	21.600	Agree
11	There is no technician working on the management of the college's e-learning system.	2	1.363	9.200	disagree
12	Some countries do not recognize the e-learning certificate.	4	1.131	16.300	Agree
13	A power outage occurs while you are doing the educational process.	4	1.246	25.600	Agree
14	There is a difficulty in direct communication between professors and students (where ideas and opinions can be exchanged through personal confrontation).	4	1.194	25.600	Agree
15	Professors have problems with the preparation of video lectures.	4	1.358	15.400	Agree
16	There is a difficulty for professors in following the large numbers of students via the available e-learning tools.	4	1.452	7.800	Agree
17	The student faces problems and obstacles when studying the material electronically.	4	1.401	5.600	Agree
18	The interaction of students with e-learning and lectures was affected by economic conditions.	4	1.234	19.200	Agree
Total		4	1.235	19.100	Agree

The information from Table 11 reveals several important findings for the researchers. First, the overall median of the responses from the study sample members regarding the statements on the second axis suggests that

the majority of them agree with the obstacles related to e-learning at Al-Nahda University College from the perspective of faculty members.

Additionally, the total standard deviation of the statements on the second axis was calculated to be 1.235. This value indicates that there is significant variability in the responses among the sample members, implying that they hold differing opinions on these statements.

Furthermore, the total chi-square value for the statements on the second axis was determined to be 19.100. These results indicate that there are statistically significant differences in the responses of the participants to these statements, highlighting the diversity of viewpoints among the respondents.

4.3 Presentation and Discussion of the Third Question

To address the third question regarding the reality of e-learning at Al Nahda University College from the perspective of students, the analysis involved calculating frequencies, percentages, and conducting a Chi-Square test (χ^2). Tables 12 and 13 present the results of this analysis.

Table 12: The frequency and percentages obtained by the researchers from the respondents' responses about the reality of e-learning at Al-Nahda University College from the students' point of view.

T	The phrase	Frequency and ratio %									
		Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
		Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %	Repeat	Ratio %
1	I am satisfied with the extent to which e-learning is beneficial.	15	8.0	26	13.9	5	2.7	72	38.5	69	36.9
2	Students interact with the e-learning system on an ongoing basis.	10	5.3	6	3.2	32	17.1	71	38.0	68	36.4
3	The e-learning method helps to clearly and smoothly understand the scientific material.	15	8.0	17	9.1	17	9.1	44	23.5	94	50.3
4	Viewing the material electronically provides the student with additional skills.	13	7.0	32	17.1	25	13.4	60	32.1	57	30.5
5	The student can ask any questions and consultations through e-learning.	22	11.8	31	16.6	21	11.2	72	38.5	41	21.9
6	The e-learning system allows the student to access the scientific material at any time.	64	34.2	81	43.3	4	2.1	23	12.3	15	8.0
7	Increases students' motivation to learn and get more information.	32	17.1	20	10.7	21	11.2	54	28.9	60	32.1
8	Increases students' self-confidence and reliability.	16	8.6	10	5.3	25	13.4	84	44.9	52	27.8
9	Saving time and effort to complete the work.	50	26.7	75	40.1	15	8.0	27	14.4	20	10.7
10	Students are given enough opportunity to show their own abilities and potential.	10	5.3	39	20.9	20	10.7	61	32.6	57	30.5

11	E-learning provides sufficient opportunities for students to participate in dialogues and discussions.	10	5.3	27	14.4	28	15.0	49	26.2	73	39.0
12	E-learning gives students instant feedback.	57	30.5	67	35.8	10	5.3	31	16.6	22	11.8
Total		314	14.0	431	19.2	223	9.9	648	28.9	628	28.0

Researchers have observed from Table (12), which presents the frequency distribution of the responses of the study sample members to the statements of the third axis "The Reality of E-Learning at Al-Nahda University College," from the students' perspective, that the majority of the responses were at the level of disagreement, with the percentage of sample members who disagreed reached 28.9%. This was followed by the percentage of sample members who strongly disagreed, which was 28.0%, while the percentage of sample individuals who were neutral was the lowest at 9.9%.

Table 13: The value of the calculated KA^2 and the readable KA^2 , the interpretation and the result for the opinions of the respondents about the reality of e-learning at Al Nahda University College from the students' point of view.

No	The phrase	The mediator	Standard deviation	Q_i^2	Explanation
1	I am satisfied with the extent to which e-learning is beneficial.	2	1.285	103.700	Disagree
2	Students interact with the e-learning system on an ongoing basis.	2	1.072	102.400	Disagree
3	The e-learning method helps to clearly and smoothly understand the scientific material	1	1.299	122.500	Strongly disagree
4	Viewing the material electronically provides the student with additional skills.	2	1.270	44.700	Disagree
5	The student can ask any questions and consultations through e-learning	2	1.315	46.900	Disagree
6	The e-learning system allows the student to access the educational material at any time.	4	1.248	118.500	Agree
7	It increases the motivation of students to learn and get more information.	2	1.464	37.100	Disagree
8	Increases students' self-confidence and dependence on them.	2	1.164	100.200	Disagree
9	Saving time and effort to complete the work.	4	1.311	66.500	Agree
10	Students are given enough opportunity to show their own abilities and potential.	2	1.262	53.400	Disagree
11	E-learning provides sufficient opportunities for students to participate in dialogues and discussions	2	1.252	62.800	Disagree
12	E-learning gives students instant feedback.	4	1.379	61.200	Agree
Total		2	1.278	76.700	Disagree

From Table 13, it is evident to the researcher that the majority of the study sample members do not agree with the reality of e-learning at Al-Nahda University College from the point of view of college students.

Furthermore, the total standard deviation of the statements on the first axis was calculated to be 1.278. This value indicates significant variability in the responses among the sample members, meaning that they hold significantly different opinions on these statements.

Moreover, the total chi-square value for the statements on the first axis was determined to be 76.700. These values indicate statistically significant differences in the responses of the respondents to these statements, highlighting the diversity of viewpoints among the students.

4.4 Presentation and Discussion of the Fourth Question

To address the fourth question regarding the obstacles to e-learning at Al-Nahda University College from the students' point of view, the analysis involved calculating **frequencies**, percentages, and conducting a Chi-Square test (χ^2). Tables 14 and 15 present the results of this analysis:

Table 14: The frequency and percentages obtained by researchers from the respondents' responses about the obstacles of e-learning at Al-Nahda University College from the students' point of view.

T	The phrase	Frequency and ratio %									
		Strongly agree		Agree		Neutral		Disagree		Strongly disagree	
		Repeat	Ratio %	Repeat	Ratio%	Repeat	Ratio%	Repeat	Ratio %	Repeat	Ratio %
1	The student is not convinced of the feasibility of e-learning in university education	39	20.9	98	52.4	19	10.2	26	13.9	5	2.7
2	The student does not have sufficient awareness about the systems and methods in which e-learning is effectively carried out.	28	15.0	75	40.1	32	17.1	26	13.9	26	9
3	The student's unfamiliarity with the skills of using modern technologies.	42	22.5	88	47.1	22	11.8	23	12.3	12	6.4
4	The student's perception of e-learning as less prestigious than formal education.	54	28.9	56	29.9	29	15.5	37	19.8	11	5.9
5	Constant guesswork and fear of the student from using the internet.	37	19.8	84	44.9	17	9.1	22	11.8	27	14.4
6	The Student finds it difficult to use English when using e-learning.	47	25.1	78	41.7	13	7.0	35	18.7	14	7.5
7	Lack of privacy and confidentiality when using e-learning.	38	20.3	11	5.9	39	20.9	69	36.9	30	16.0
8	The large number of study materials per student per class does not contribute to the use of e-learning .	70	37.4	42	22.5	40	21.4	10	5.3	25	13.4

9	Difficulty adapting to concepts and skills related to e-learning.	54	28.9	57	30.5	34	18.2	32	17.1	10	5.3
10	The e-learning process lacks human interaction between the teacher and the learner.	76	40.6	36	19.3	27	14.4	17	9.1	31	16.6
11	The lack of training courses in the e-learning system.	72	38.5	37	19.8	31	16.6	27	14.4	20	10.7
12	The weak internet network in the college hinders the educational process.	86	46.0	36	19.3	21	11.2	16	8.6	28	15.0
Total		643	28.7	698	31.1	324	14.4	340	15.2	239	10.7

The researcher can deduce from Table (14), which illustrates the frequency distribution of the responses of the study sample members to the statements of the second axis "Barriers to E-Learning at Al-Nahda University College," from the students' perspective, that the majority of the responses were at the agreement level. The percentage of agreement reached 31.1%. This was followed by the percentage of strong agreement, which was 28.7%, while the percentage of sample individuals who were neutral was the lowest at 10.7%.

Table 15: The value of the calculated KA^2 and the readable KA^2 , the interpretation and the result for the opinions of the respondents about the obstacles to e-learning at Al-Nahda University College from the point of view of students.

T	The phrase	The mediator	Standard deviation	Qi ²	Explanation
1	The student is not convinced of the feasibility of e-learning in university education.	4	1.024	138.9	I agree
2	The student does not have sufficient awareness about the systems and methods in which e-learning is effectively carried out.	4	1.274	47.90	I agree
3	The student's unfamiliarity with the skills of using modern technologies.	4	1.144	98.20	I agree
4	The student's perception of e-learning as less prestigious than formal education.	4	1.257	37.10	I agree
5	Constant guesswork and fear of the student from using the internet.	4	1.324	78.40	I agree
6	The Student finds it difficult to use English when using e-learning.	4	1.256	77.30	I agree
7	Lack of privacy and confidentiality when using e-learning.	2	1.357	46.90	I disagree
8	The large number of study materials per student per class does not contribute to the use of e-learning.	4	1.376	53.40	I agree
9	Difficulty adapting to concepts and skills related to e-learning.	4	1.220	38.80	I agree
10	The process of e-learning is reduced to the human interaction between the teacher and the learner.	4	1.498	55.10	I agree
11	The lack of training courses in the e-learning system.	4	1.396	44.10	I agree
12	The weakness of the college internet hinders the educational process.	4	1.483	85.10	I agree
Total		4	1.301	66.80	I agree

From Table (15), it is evident to the researcher that the overall median of the answers from the study sample members regarding the fourth axis indicates that the majority of them agree with the obstacles of e-learning at Al-Nahda University College from the perspective of college students. Additionally, the total standard deviation for the statements in the second axis is 1.301, indicating significant variability in the responses

among the sample members. The total chi-square value for the second axis statements is 66.800, indicating a statistically significant relationship in the responses provided by the participants.

5 Conclusion

In conclusion, Al Nahda University College offers comprehensive e-courses for training and guidance on the effective use of e-learning, facilitating a seamless transition from traditional to e-learning methods. Faculty members exhibit proficiency in designing and producing electronic content, and a dedicated platform is available for providing educational materials to students. Faculty members are enthusiastic about utilizing e-learning and employ diverse and appropriate evaluation methods.

However, faculty members identify key obstacles to e-learning, including the college's weak internet network, the high cost associated with e-learning, challenges in individual student monitoring, and frequent network malfunctions.

On the other hand, students who have experienced e-learning express dissatisfaction with its overall effectiveness. They perceive a lack of ongoing interaction with the e-learning system, which they believe hinders their clear and smooth understanding of the course material. Nevertheless, they acknowledge that e-learning offers advantages such as flexibility in accessing educational material, time and effort savings, and immediate feedback.

Students also believe that e-learning falls short in providing opportunities for them to demonstrate their abilities and engage in dialogues and discussions. Furthermore, they identify obstacles, such as students' skepticism about the utility of e-learning in university education, insufficient awareness about effective e-learning methods, and a lack of familiarity with modern technology skills.

5.1 Recommendations

Based on the study's findings, the researchers propose the following recommendations:

- The college should prioritize improvements to the technical infrastructure, including network boosters and servers, to enhance internet speed.
- It is essential to introduce a comprehensive course across all faculties and disciplines that covers key electronic applications utilized in the e-learning process, emphasizing the significance of e-learning.
- Addressing issues encountered during the initial e-learning experiences at Al Nahda College, such as students' inability to ask questions and seek clarification, by implementing training sessions to rectify these shortcomings.
- Efforts should be made to tackle the obstacles hindering e-learning at Al Nahda College. This includes addressing students' skepticism regarding the utility of e-learning in higher education, increasing awareness of effective e-learning systems and methods, and providing training to enhance students' proficiency in using modern technologies.
- Encourage the Ministry of Higher Education to officially adopt and endorse the e-learning system.
- Establish a highly efficient technical support system responsible for the development and management of systems to ensure optimal performance.

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