An Analysis of E-learning Strategies and Their Impact on Faculty Performance in Arabic Higher Education (Using King Khalid University in Saudi Arabia as a Case Study)

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Abstract

With the increasing integration of technology in education, e-learning has become a prominent alternative method of instruction. This investigation strives to examine the effect of e-learning on the performance of faculty staff and identify the factors that influence their effectiveness in an Arab context. The research utilized a quantitative analysis of survey data, employing a non-probability sampling technique. The sample consisted of faculty staff members from various disciplines at King Khalid University. The survey assessed the extent of e-learning implementation, faculty members' perceptions of its effectiveness, and overall performance using frequency, percentage, and correlational and regression analyses. The findings revealed strong positive correlations between all variables and faculty staff performance in the Arab higher education context. However, among the variables examined, only online support, e-learning quality standards, collaboration methods, and asynchronous (recorded) virtual lectures demonstrated significant relationships with faculty performance. These variables exhibited the highest F-values of 41.809, 39.377, and 27.670, respectively, with p-values less than .001. This examination donates to the expanding publications on e-learning in the Arab region, providing valuable insights into the relationship between e-learning approaches and faculty staff performance. The findings can inform policy decisions and guide the development of effective strategies for implementing e-learning in higher education institutions in Arab countries. Further research is needed to explore additional factors and contexts influencing faculty staff performance in e-learning environments.

Keywords: E-learning, Faculty Staff Performance, King Khalid University.

1. Introduction

The advancements in digital technology have made significant changes in various fields, including education (Bilyalova et al., 2020). The traditional classroom setup has transitioned into more interactive and dynamic learning environments due to the emergence of e-learning platforms. Arab countries, in particular, have embraced this digital transformation and have witnessed a significant shift towards e-learning in their higher education institutions. E-learning, or electronic or online learning, utilizes digital technologies and electronic resources to provide educational content and support learning experiences (Coman et al., 2020). This approach enables students to access educational materials remotely, engage with instructors and classmates, and complete assignments and assessments via the Internet. E-learning platforms offer multimedia resources, such as videos, e-books, interactive modules, and discussion forums, which enhance learning and promote student engagement (Khaldi et al., 2023).

Arab countries, known for their rich cultural heritage and academic traditions, have recognized the potential of e-learning to overcome geographical barriers and reach a larger audience. These countries have significantly invested in developing and implementing e-learning systems in higher education institutions (Sulaiman, 2023; Al-Mamary, 2022). The e-learning approach allows Arab universities to expand access to quality education, cater to a diverse student population, and address the growing demand for higher education. One of the essential aspects of donating to the achievement of e-learning in Arab countries is the quality of faculty staff involved in its implementation. Studies conducted in Saudi Arabia have shown that faculty members have positive attitudes toward e-learning and are prepared to use it (Alanazi & Alshaalan, 2020). Faculty members play a crucial role in designing and delivering online courses, ensuring their alignment with curriculum objectives and pedagogical practices. Effective faculty staff performance in e-learning involves various skills, including instructional design, content creation, technological proficiency, and student support. This notion is related to the study by Chaudhry et al. (2021) that developed a framework to extent the triumph of e-learning, which included system use, quality standards, perceptual assistances, and imminent outcomes from scholars' perspectives.

To excel in e-learning, faculty staff in Arab higher education institutions must understand digital tools and technologies and be adept at integrating them into the education and learning development. It is prerequisite to undergo professional development programs to enhance their e-learning competencies and keep up with the latest trends and advancements in the field. A study by Lakshmi (2021) found that faculty members needed more training and support to enhance their e-learning competencies. Moreover, faculty members should possess effective communication and interpersonal skills to engage with students online, provide timely feedback, and create a collaborative virtual learning environment. The performance of faculty staff in virtual learning is closely tied to the efficiency of student learning outcomes. Research indicates that when faculty members demonstrate high-quality e-learning practices, students are more likely to experience positive educational outcomes, including improved academic performance, increased motivation, and enhanced critical thinking skills (Encarnacion et al., 2021; Yahiaoui et al., 2022). Therefore, investing in faculty development programs and providing ongoing

support is crucial to ensure the success of e-learning initiatives in Arab higher educational institutions.

However, challenges and barriers to effective e-learning implementation in Arab countries also exist. Limited access to reliable internet connectivity, technological infrastructure, lack of technical support, inadequate training, and resistance to change can hinder the widespread adoption of e-learning platforms (Qashou, 2021). An investigative research to comprehend faculty staff observations and tasks in accessible teaching found that faculty members faced several challenges and difficulties in engaging students (Mulla et al., 2023). Additionally, cultural factors, such as the preference for traditional face-to-face learning and lack of ICT knowledge, may need to change the acceptance of e-learning approaches among some students, faculty members, and educational stakeholders (Almaiah et al., 2020). E-learning has emerged as a transformative approach in Arab higher education institutions, providing students with increased access to quality education and expanding their learning opportunities. The success of e-learning initiatives in these institutions is contingent upon the adequate performance of faculty staff who possess the necessary skills, competencies, and support to design, deliver, and assess online courses. While challenges exist, Arab countries continue to invest in infrastructure and faculty development to overcome these obstacles and grip the prospective of e-learning to shape the impending of higher education in the region. This article overviews the e-learning approach and its impact on faculty staff performance in Arab higher education institutions.

2. Literature Review

Acceptance of Online Teaching

The rise of online teaching has significantly impacted educators, leading to greater flexibility and innovation in education. Despite technological difficulties and limited face-to-face interaction, faculty members have readily embraced online teaching opportunities (Barrot et al., 2021). One significant advantage of online teaching is its adaptability. Teachers have recognized the potential to tailor learning experiences to meet individual student needs. Online platforms allow instructors to offer supplementary resources, host virtual discussions, and provide personalized feedback, catering to diverse learning styles and accommodating the pace at which students learn. This flexibility allows teachers to tailor their methods and improve the learning experience for their students (Muller et al., 2021).

Additionally, online teaching fosters inclusivity by breaking down geographical barriers and time constraints. Students from different backgrounds and locations can more easily access education through online learning. Teachers can create a welcoming and inclusive virtual environment, ensuring all students feel valued and supported (Withers et al., 2021). This inclusivity benefits both students and teachers as educators navigate diverse student demographics and work to foster a truly inclusive learning community. The acceptance of online teaching has significantly impacted faculty members, driving increased adaptability and innovation within the educational landscape. Despite challenges such as technological issues and limited face-to-face interaction, faculty members have actively embraced online teaching opportunities (Barrot et al., 2021). One key advantage of online teaching is its flexibility.

Faculty members have recognized the potential to customize learning experiences according to students' needs. Online platforms allow instructors to provide supplementary resources, conduct virtual discussions, and offer personalized feedback, catering to diverse learning styles and accommodating the pace at which students absorb information. This flexibility enables faculty members to tailor their teaching methodologies and enhance their learning experience (Muller et al., 2021). Moreover, online teaching promotes inclusivity. By removing geographical barriers and time constraints, students from various backgrounds and locations can access education more easily. Faculty members can create a welcoming and inclusive virtual environment, ensuring all students feel valued and supported (Withers et al., 2021). This inclusivity benefits students and enhances faculty performance as they navigate diverse student demographics and foster an inclusive learning community.

The shift to online teaching has also necessitated the development of digital skills among faculty members. Instructors have honed their abilities by utilizing multimedia tools, learning management systems, and other technological applications (Abdulrahaman et al., 2020). They have embraced instructional design principles, incorporating interactive elements, engaging visuals, and multimedia presentations to enhance the learning experience. Additionally, faculty members have become proficient in data analysis to assess student progress and make data-informed decisions. These skills not only enhance faculty performance in the current online teaching environment but also equip them with valuable competencies for the future of education. By embracing online teaching, faculty members can create engaging learning experiences for their students (Bogiannidis et al., 2023). Virtual discussions, collaborative projects, and interactive activities can be integrated into the curriculum to encourage active student participation. Online tools and platforms also allow instructors to incorporate gamification, simulations, and real-time assessments, promoting higher levels of engagement and more profound understanding among students (Gameil & Al-Abdullatif, 2023). These innovative approaches foster a dynamic and interactive learning environment, enhancing student experiences and outcomes.

Technical Competency

In today's education landscape, having technical competency is essential for faculty members due to the significant role of technology. It equips them with the necessary skills to leverage digital resources, engage students through innovative methods, and adapt to changing educational paradigms. Faculty members with technical competency can deliver more engaging and interactive lessons by incorporating multimedia resources, simulations, and educational apps into their teaching (Abdulrahaman et al., 2020). These digital tools enhance students' comprehension, attention, and interest, resulting in higher levels of engagement and improved knowledge retention. Additionally, technical competency enables faculty members to streamline administrative tasks efficiently. They can use their proficiency in learning management systems (LMS), data analysis tools, and collaborative platforms to manage courses, monitor student progress, and provide timely feedback (Furqon et al., 2023). By automating administrative processes, faculty members can reduce the administrative burden and spend more time on meaningful student interactions, creating a student-centered learning environment.

Faculty members must have technical expertise to facilitate research and professional development (Uzorka et al., 2023). With the help of advanced digital tools and technologies, they can gather, analyze, and share data more efficiently, enabling them to conduct cutting-edge research and contribute to their respective fields. Being skilled in online databases, academic search engines, citation management software, and collaborative research platforms enhances their ability to access scholarly resources, cooperate with colleagues, and publish their findings. Moreover, staying up-to-date with the latest technological advancements allows faculty members to improve their teaching techniques and remain at the forefront of educational innovation (Haverly, 2022). Prioritizing technical competency attracts and retains highly skilled faculty members who can utilize technology to improve student learning outcomes. Integrating technical proficiency into faculty recruitment, evaluation, and professional development promotes institutional advancement and educational excellence. Institutions that value and support technical competency establish a culture of continuous improvement and innovation (Meissner & Shmatko, 2019). Students benefit from a rich, immersive learning environment where faculty members can deliver high-quality education using digital resources and innovative teaching methods. Ultimately, this emphasis on technical competency leads to enhanced student learning outcomes and establishes institutions as leaders in the field of education.

Reliable Infrastructure

The quality and effectiveness of educational institutions depend on reliable infrastructure and faculty performance (Teixeira et al., 2017). It highlights the significant impact of reliable infrastructure on faculty performance, ultimately improving students' educational experience. Several critical factors connect infrastructure to faculty performance, including establishing a conducive learning environment, utilizing technological advancements, providing adequate resources, reducing administrative burdens, and offering professional development opportunities. Firstly, reliable infrastructure is essential in creating a conducive learning environment. Properly designed classrooms, well-equipped laboratories, libraries, and other necessary facilities provide an environment that fosters creativity, engagement, and motivation among faculty members (Barrett et al., 2019). Educators with access to modern and comfortable learning spaces can deliver their lessons effectively and inspire students (Bowie, 2020). This positive learning environment encourages faculty members to strive for excellence in their teaching, leading to improved performance and student outcomes.

In addition to resource availability, reliable infrastructure in educational institutions includes technological advancements. Investing in modern technologies like computers, multimedia equipment, and high-speed internet connectivity enables faculty members to explore innovative teaching methods (Okoye et al., 2023). Integrating multimedia elements into lectures makes teaching approaches more interactive and engaging. Adequate research facilities and a well-stocked library provide educators with the latest resources and information in their fields (Okere, 2022). This access allows faculty members to enhance their knowledge, stay updated with advancements in their disciplines, and improve their performance in the classroom. Furthermore, reliable infrastructure reduces administrative burdens for faculty members. Streamlined administrative systems and processes within educational institutions can significantly minimize the time and effort spent on tasks like tracking attendance, grading, and record-keeping (Peeters

& Widlak, 2023). By reducing these administrative responsibilities, faculty members can allocate more time and energy to their primary teaching, mentoring, and research responsibilities. This focus on their core duties allows faculty members to develop their expertise, stay abreast of advancements in their fields, and implement innovative teaching strategies, all contributing to improved performance.

In addition, having reliable infrastructure in educational institutions offers opportunities for professional growth. The robust infrastructure allows for the organization of internal and external workshops, conferences, and training programs, which empower faculty members to develop their pedagogical skills, expand their knowledge and make connections with peers in their field (Cornel, 2023). By participating in these activities, faculty members engage in a continuous learning process, enhancing their teaching effectiveness and overall performance. Investing in reliable infrastructure is crucial for educational institutions seeking to foster a culture of excellence and equip students for success in an ever-changing world (Teixeira et al., 2017). Reliable infrastructure provides the needed physical facilities, resources, and support systems that enable faculty members to excel in their teaching endeavors (Abonyi et al., 2020). As a result, it leads to better academic outcomes, higher student achievements, and overall institutional excellence.

Synchronous (Real Time) Virtual Lectures

Virtual synchronous lectures provide an interactive way of learning, allowing for immediate communication between professors and students (Lowenthal et al., 2021). Such lectures promote engagement through live chats, virtual hand-raising, and lively discussions, thus facilitating feedback and interactive Q&A sessions. These lectures also provide accessible learning opportunities for students, regardless of their geographic location (Singh et al., 2021). This inclusivity expands educational opportunities for those facing various on-campus education barriers. Additionally, virtual lectures offer flexibility and convenience for both students and faculty members. Professors can conduct classes from anywhere, without the need for travel, while students can attend classes remotely, managing their schedules more efficiently. Such flexibility qualifies individuals to equilibrium their theoretical quests with professional or personal assurances. Synchronous virtual lectures also encourage technology integration, as faculty members can use multimedia elements, interactive polls, and collaborative platforms to enrich the learning experience and promote technological literacy among students (Santiago Jr et al., 2021).

Faculty members must become proficient in new technologies and develop technological competence when they adopt synchronous virtual lectures. This challenge presents professional growth opportunities and helps educators stay current with innovative teaching methodologies. By embracing these changes, faculty can use technology to deliver engaging and interactive lectures (Anthony et al., 2020). Synchronous virtual lectures also increase student engagement by prompting faculty members to develop strategies that capture and sustain students' attention. Interactive tools are available to create stimulating learning environments that promote active participation and engagement. Faculty can use virtual breakout rooms, group discussions, and online collaboration to facilitate more profound learning experiences and foster community within the virtual classroom (Berry, 2019). The flexibility of content delivery in synchronous

virtual lectures allows faculty to tailor their teaching techniques to confer the requirements and preferences of their learners (Moorhouse & Wong, 2022). They can incorporate different methods, such as visual aids, multimedia presentations, and real-time demonstrations, to enhance understanding and retention of complex concepts.

Despite the advantages, synchronous virtual lectures come with challenges. Technical issues and connectivity problems, such as internet connectivity, software glitches, or hardware limitations, can disrupt the flow of these lectures. These issues may impact content delivery and hinder the interactive nature of the session (Kumar et al., 2023). Additionally, managing time and workload is challenging for faculty members conducting synchronous virtual lectures. Preparation and delivery of real-time lectures, managing online discussions, and providing individual attention to students require careful planning and organization (Lapitan et al., 2021). Faculty may need to allocate additional time for administrative tasks associated with online teaching, such as monitoring discussion boards and responding to emails. Ensuring consistent student participation and engagement can be a hurdle in virtual settings (Gocotano et al., 2021). Some students may need help with self-discipline and focus, reducing interaction and active learning during synchronous lectures (Fabriz et al., 2021). Faculty members must employ strategies to promote student engagement and motivation, including setting clear expectations, creating engaging activities, and fostering a supportive online learning community.

Asynchronous (Recorded) Virtual Lectures

Over the past few years, technological advancements have changed the education landscape. One such change is the introduction of asynchronous (recorded) virtual lectures, which have proven to be a notable innovation. This approach allows students to conveniently access pre-recorded lectures, avoiding the traditional synchronous classroom setting (Lowenthal et al., 2021). While asynchronous virtual lectures offer numerous benefits to students, their impact on faculty performance has also been recognized. Firstly, asynchronous virtual lectures provide flexibility for faculty members (Abisado et al., 2020). By pre-recording their lectures, educators can effectively manage their time and workload. This format allows them to focus on creating high-quality content and refining their delivery, enhancing students' overall learning experience. Moreover, faculty members can reach a broader audience, which includes students in different time zones or those with conflicting schedules. This increased accessibility can foster diversity and inclusivity in education, promoting a more equitable learning environment.

Asynchronous virtual lectures present new challenges for faculty performance, particularly regarding receiving immediate student feedback. Traditionally, instructors can assess student understanding through real-time interactions and adjust their teaching methods accordingly. However, this interaction is limited with asynchronous lectures, and faculty members need to find alternative ways to measure comprehension. One solution is to implement discussion forums, quizzes, or assignments that encourage student engagement and active learning, which can help instructors gauge the effectiveness of their teaching (Hollister et al., 2022). Moreover, asynchronous virtual lectures require faculty members to adapt their teaching style to the online environment, including learning new technologies and instructional strategies to convey their knowledge through recorded videos effectively. The lack of face-to-face interactions can also impact the personal connection between faculty and students, affecting student engagement and

motivation (Guzzardo et al., 2021). Therefore, faculty members must intentionally create a sense of community and foster student-teacher relationships through virtual means, such as regular communication, virtual office hours, or interactive online platforms.

Collaboration Methods

Collaboration among faculty members is of utmost importance in educational institutions to improve their performance. Effective collaboration improves teaching quality, increases research productivity, and enhances professional development (Mahato, 2021). One of the most effective ways to collaborate is by forming interdisciplinary teams. When faculty members from different fields come together to work on a project or research, they bring diverse perspectives, expertise, and ideas. This interdisciplinary collaboration fosters innovation, creativity, and problem-solving skills, ultimately leading to higher faculty performance (Johnston et al., 2020). By pooling their knowledge and skills, faculty members can tackle complex issues, explore new research avenues, and create more comprehensive and impactful educational experiences for their students.

One practical approach to enhancing faculty performance is creating communities of practice (Akinyemi et al., 2019). These groups consist of faculty members with shared professional interests or expertise who regularly collaborate to share ideas, offer support, and exchange best practices. By participating in these communities, faculty can access valuable knowledge, resources, and experiences that can help improve their teaching and research (Wilson et al., 2020). They can learn from each other's successes and setbacks, discover innovative teaching methods, and receive constructive feedback on their work. The camaraderie and belonging cultivated within these communities also help combat isolation and boost job satisfaction, ultimately leading to enhanced performance and well-being (Murphy, 2020).

Online Support

In our digital era, educational institutions have integrated online support systems that benefit both students and faculty members. These systems have significantly improved faculty performance by equipping them with the necessary tools and resources to engage students and provide quality education effectively (Almahasees et al., 2021). One of the significant advantages of online support is its accessibility. With online access to information, research materials, and teaching resources, faculty members can stay current with the latest field advancements (Seiter & Freeman, 2022). This accessibility enriches their knowledge and enables them to deliver relevant and current information to their students, ultimately enhancing their learning experience.

In addition, online support systems enable educators to continuously develop their professional skills (Derakhshan et al., 2020). They can attend webinars, take online courses, and participate in virtual conferences to learn about emerging teaching techniques and technologies. This ongoing professional growth directly impacts their performance in the virtual classroom, enabling them to implement innovative teaching methods, create student-centered learning environments, and provide timely feedback to their students. Online resources also allow faculty members to collaborate with their peers by sharing best practices, lesson plans, and instructional materials (Yuliansyah & Ayu, 2021). This collaborative approach enhances their teaching

abilities and fosters a sense of community among educators, ultimately leading to improved faculty performance.

E-learning Quality Standards

E-learning has become a game-changing force in education, giving students unprecedented access to knowledge and enabling them to learn quickly in the ever-changing digital landscape (Gurbuz, 2021). However, it is crucial to establish and adhere to quality standards to ensure the effectiveness of e-learning. These standards include instructional design, content relevance, technical infrastructure, and learner support (Coman et al., 2020). These benchmarks assist in assessing the success of online courses and programs and provide students with a top-notch learning experience.

The attribute of e-learning relies heavily on the performance of faculty members (Alqahtani & Rajkhan, 2020). Skilled and competent faculty are crucial for creating interactive and engaging learning environments, delivering content effectively, and providing students with constructive feedback. In e-learning, faculty performance involves subject expertise, technological proficiency, and pedagogical skills (McGarr & McDonagh, 2019). Faculty must be able to use different e-learning platforms, multimedia tools, and interactive teaching strategies that encourage student participation and promote active learning. Additionally, they should be available and responsive to students, answering queries and addressing concerns promptly. Faculty members' dedication and expertise significantly contribute to the inclusive quality of e-learning programs, ensuring that students receive a valuable educational experience (Karadag et al., 2021).

Conceptual Framework

The conceptual framework designs to illustrate the key dynamics that repercussion faculty performance in the context of e-learning, as shown in Figure 1. Based on the given table below presenting the regression analysis results, the following variables have been identified as significant contributors to faculty performance: Acceptance for Online Teaching, Technical Competency, Reliable Infrastructure, Synchronous (Real-Time) Virtual Lectures, Asynchronous (Recorded) Virtual Lectures, Collaboration Methods, Online Support, and E-learning Quality Standards.

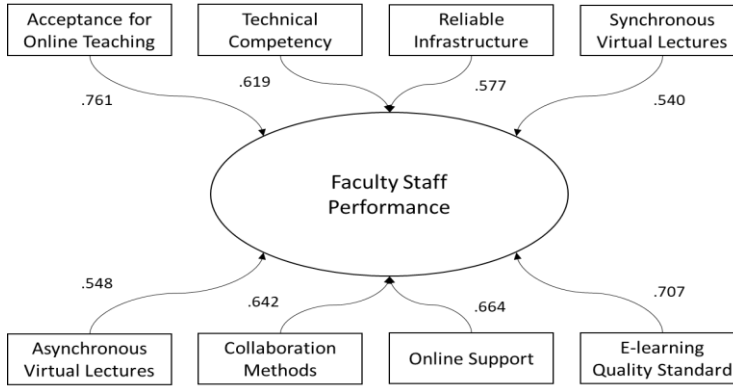

Figure 1. Conceptual Framework

3. Methods

This study was conducted on teaching personnel at King Khalid University in the Southern Region in Abha, Saudi Arabia. The population comprises 4,986 teaching personnel, 2,917 male, and 2,069 female faculty members. The sample used in this research was drawn using a non-probability sampling technique (convenience sampling). This technique was used to identify the respondents for this study and where subjects were selected because of their convenient accessibility and proximity to the researcher. This technique was utilized to select the 163 respondents that served as the unit of the analysis that produced the outputs in the analytic section.

In this research, the survey questionnaire was utilized to gather primary documents from the participants to resolve the research problem. The survey questionnaire is a set of well-structured questions constructed by the researcher to collect primary information from the participants. The Likert scale was employed to lay the foundation for advanced statistical analytic approaches regarding the dependent and independent variables. The Likert scale is a technique of attributing quantitative significance to qualitative information to mark it agreeable to statistical exploration.

Table 1. Demographic profile

Demographic		f	%
Sex	Male	67	41.1
	Female	96	58.9
Age	<30	19	11.7
	31-39	64	39.3
	40-49	61	37.4
	>50	19	11.7
Years of Experience	<5 years	23	14.1
	6-9 years	45	27.6
	10-14 years	50	30.7
	>15 years	45	27.6
Job Position	Professor	7	4.3

	Associate Professor	25	15.3
	Assistant Professor	93	57.1
	Lecturer	38	23.3
Highest Educational Qualification	Bachelor Degree	6	3.7
	Master's Degree	35	21.5
	Doctoral Degree	118	72.4
	Other	4	2.5

Table 1 provides a comprehensive overview of the socio-demographic profile of the respondents who participated in this research. The demographic variables examined in the study include sex, age, years of experience, job position, and highest educational qualification. The study's findings reveal that most participants were female, accounting for 58.9% of the total sample. It suggests that women were more represented among the respondents. The study found that the most significant percentage of participants, 39.3%, fell within the age range of 30-39. Regarding years of experience, it was observed that 30.7% of the participants had accumulated 10-14 years of experience. This finding indicates that a substantial proportion of the respondents had a moderate level of professional experience, likely contributing to their knowledge and expertise in the field under investigation.

When considering job positions, 57.1% of the participants held the position of Assistant Professor. Regarding educational qualifications, most participants attained a Doctoral Degree, with 72.4% of respondents achieving this educational milestone. This finding highlights the participants' high level of academic qualification, suggesting that they possessed advanced knowledge and expertise in their respective fields. Overall, the socio-demographic profile of the respondents delivers advantageous acumens into the individualities of the respondents. The distribution of participants by sex, age, years of experience, job position, and highest educational qualification offers a comprehensive snapshot of the sample, allowing for a better understanding of the population from which the study findings were derived.

Table 2. Reliability and Validity Analysis

Variables	Cronbach's Alpha	No. of Items
Acceptance of Online Teaching	.939	15
Technical Competency	.834	7
Reliable Infrastructure	.798	6
Synchronous (Real Time) Virtual Lectures	.928	4
Asynchronous (Recorded) Virtual Lectures	.932	3
Collaboration Methods	.907	4
Online Support	.902	4
E-learning Quality Standards	.902	4
All Instrument Items	.972	46

According to the statistical results obtained in Table 2, Cronbach's coefficient alpha values for the different factors varied from 0.798 to 0.939. These values designate high internal uniformity and dependability within the assessment scales. The total ratio, represented by the All-Instrument Items variable, achieved an impressive value of 0.972. This high ratio reassures the researcher about the robustness and dependability of the research instrument for gathering

information. Focusing on the confirmed outline of social science research studies, academic scholars anticipated that a reliability coefficient 0.70 was acceptable (Nunnally & Bernstein, 1978).

The elevated Cronbach's alpha coefficients and the high total ratio signify that the items within each variable are strongly interrelated and collectively measure their respective constructs effectively. It provides confidence in the reliability and validity of the research mechanism. It suggests that the items included in the instrument are consistent and reliable measures of the intended concepts. As a result, the researcher can have trust in the results obtained from applying the instrument, which aids in answering the research questions and drawing meaningful conclusions from the data.

Table 3. Correlational Analysis

Variables	r	p-value
Acceptance of Online Teaching	.761	.000
Technical Competency	.619	.000
Reliable Infrastructure	.577	.000
Synchronous (Real Time) Virtual Lectures	.540	.000
Asynchronous (Recorded) Virtual Lectures	.548	.000
Collaborative Methods	.642	.000
Online Support	.664	.000
E-Learning Quality Standards	.707	.000

The correlational analysis results in Table 3 provide information about the relationships between different variables. In this case, the results indicate the strength and significance of the relationships between the variables under investigation. According to the results, all variables demonstrate a strong positive correlation. It means that as one variable increases, the other variables also tend to increase. Additionally, the p-value associated with this correlation is reported to be 0.000, which suggests that these relationships are statistically significant. The results highlight the influential role of several factors in the context of online teaching. Specifically, the variables measured in the study include acceptance of online teaching, technical competency, reliable infrastructure, synchronous and asynchronous virtual lectures, collaborative methods, online support, and adherence to e-learning quality standards.

The correlation coefficients (R-values) associated with each variable measure the strength of their relationship with the overall positive experiences and attitudes toward online teaching. The values reported in the analysis are as follows: acceptance of online teaching ($r = 0.761$), technical competency ($r = 0.619$), reliable infrastructure ($r = 0.577$), synchronous virtual lectures ($r = 0.540$), asynchronous virtual lectures ($r = 0.548$), collaborative methods ($r = 0.642$), online support ($r = 0.664$), and adherence to e-learning quality standards ($r = 0.707$). These correlation coefficients indicate the extent to which each factor is associated with positive experiences and attitudes toward online teaching. A higher correlation coefficient suggests a stronger relationship. For example, the acceptance of online teaching ($r = 0.761$) demonstrates the strongest correlation among the variables, indicating that individuals' acceptance of it plays a significant role in their overall positive experiences.

The findings emphasize the multifaceted nature of online education and highlight the importance of considering various elements for its successful implementation and effectiveness. The strong

positive relationships among these variables suggest that factors such as acceptance of online teaching, technical competency, reliable infrastructure, synchronous and asynchronous virtual lectures, collaborative methods, online support, and adherence to e-learning quality standards collectively contribute to individuals' positive experiences and attitudes towards online teaching. Several studies have investigated the aspects that mark satisfaction and performance with online teaching. For example, Gopal et al. (2021) identified four independent elements upsetting students' online learning performance: teacher quality, curriculum design, timely feedback, and student expectations (Du et al., 2023). Li et al. (2017) establish that students' satisfaction with online teaching resources was the most noteworthy feature prompting online learning satisfaction (Yu, 2022). Other studies have identified factors such as poor course design, poor pedagogy, and loss of interest negatively affecting online learning satisfaction (Basuony et al., 2020; El Zein et al., 2023). Factors affecting teacher satisfaction with online teaching include student interaction, instructors, course management and structure, technology, and curriculum design (Borup & Stevens, 2016).

Table 4. Regression Analysis

Variable	Model	SS	df	MS	F	Sig.	Model Summary
Acceptance for Online Teaching	Reg Res Total	64.812 47.152 111.963	15 147 162	4.321 .321	13.470	.000	R=.761 RS=.579 ARS=.536 SEE=.566
Technical Competency	Reg Res Total	42.918 69.045 111.963	6 156 162	7.153 .443	16.161	.000	R=.619 RS=.383 ARS=.360 SEE=.665
Reliable Infrastructure	Reg Res Total	37.268 74.695 111.963	6 156 162	6.211 .479	12.972	.000	R=.577 RS=.333 ARS=.307 SEE=.692
Synchronous (Real Time) Virtual Lectures	Reg Res Total	32.646 79.317 111.963	4 158 162	8.161 .502	16.258	.000	R=.540 RS=.292 ARS=.274 SEE=.709
Asynchronous (Recorded) Virtual Lectures	Reg Res Total	33.592 78.371 111.963	3 159 162	11.197 .493	22.717	.000	R=.548 RS=.300 ARS=.287 SEE=.702
Collaboration Methods	Reg Res Total	46.122 65.841 111.963	4 158 162	11.531 .417	27.670	.000	R=.642 RS=.412 ARS=.397 SEE=.646
Online Support	Reg Res Total	49.374 62.590 111.963	3 159 162	16.458 .394	41.809	.000	R=.664 RS=.441 ARS=.430 SEE=.627
E-learning Quality Standards	Reg Res Total	55.894 56.069 111.963	4 158 162	13.974 .355	39.377	.000	R=.707 RS=.499 ARS=.487 SEE=.596

The regression analysis conducted in this study aimed to explore the relationship between different e-learning approaches and faculty performance. Table 4 presents the results of this analysis. Among the variables examined, namely "Online Support," "E-learning Quality Standards," "Collaboration Methods," and "Asynchronous (Recorded) Virtual Lectures," significant relationships were found with faculty performance. The variable "Online Support" exhibited the highest F-value of 41.809, with a p-value of less than .001, indicating a strong and statistically significant relationship with faculty performance. This result suggests that providing sufficient online support to faculty members positively impacts their performance. Adequate online support may include resources, technical assistance, instructional guidance, and other forms of support that help faculty members navigate and effectively engage with the e-learning environment. Institutions that prioritize and invest in providing comprehensive online support are likely to see improved faculty performance.

Previous research examines the impact of online support on faculty members' performance in higher education institutions. It is believed that the quality of the teacher is one of the most precarious methods for learner satisfaction, presiding to the education procedure's outcome. Instructors who retort to inquiries punctually and deliver timely reaction on homework can enable methods that support learners in online courses increase instructor contribution, instructor communication, appreciative, and participation (Gopal et al., 2021). Effective course design is another factor that can expressively influence students' online learning practice. Instructors who develop online learning resources (OLR) for learners can positively affect their online teaching satisfaction (Zhu et al., 2022). Further, the professed quality of the online classroom can stimulus the overall involvement of virtual education applicants and their satisfaction. Students' self-assurance in online learning was described as the robust positive analyst of both students' satisfaction and perceived quality or practicality of wired classes (Li et al., 2023). Therefore, engaging in professional development programs and training designed for online teaching can significantly improve faculty performance (Adelina & Kardoyo, 2021). These programs can provide instructors with the necessary skills and knowledge to effectively teach online and adapt to new teaching environments and demands.

Furthermore, the variable "E-learning Quality Standards" demonstrated an F-value of 39.377, with a p-value of less than .001, indicating a significant relationship with faculty performance. This finding emphasizes the importance of adhering to high-quality e-learning standards. Institutions implementing and maintaining rigorous quality standards in their e-learning programs positively affect faculty performance. These standards may encompass instructional design principles, content relevance and accuracy, assessment strategies, accessibility, and overall effectiveness of the e-learning environment. Also, the variable "Collaboration Methods" showed an F-value of 27.670, with a p-value of less than .001, indicating a significant relationship with faculty performance. It suggests that promoting and facilitating collaboration among faculty members and students within e-learning positively influences faculty performance. Collaboration methods may involve interactive discussions, group projects, virtual team activities, and other collaborative learning approaches. These methods foster engagement, knowledge sharing, and a sense of community, all contributing to enhanced faculty performance.

Quality standards in e-learning programs can positively affect faculty performance. A study on the outcomes of e-learning quality criterions application on teachers' performance during COVID-19 showed a positive effect of e-learning quality standards implementation on teachers' performance (Ghalia et al., 2023). Teaching staff show an essential part in determining the quality of e-learning and are the strength after delivering quality teaching. Equipping instructors with the necessary understanding, abilities, and aptitudes contributes to delivering quality education (Saleem et al., 2022). The overall quality of e-learning also definitely uplifts performance through the intervening part of worker satisfaction and actual treatment of the system (Butt et al., 2021). Improving the quality of e-learning can increase the quality of teaching and learning and state the requirement for higher institutions to maintain competitive asset and ingress to education (Al Rawashdeh et al., 2021). Virtual learning is influenced by instructor performances and characteristics and the methods and media employed to deliver online instruction (Saleem et al., 2022). The instructor's quality positively correlates with students' satisfaction with online classes (Gopal et al., 2021).

On the other hand, promoting collaboration among faculty members and students in the e-learning context can positively impact faculty performance. Collaborative learning has been shown to enhance student achievement and improve learning experiences. A study found a positive correlation between collaborative learning and student achievement. It suggests that when students engage in collaborative activities, it can lead to better learning outcomes (Lash et al., 2022). E-learning platforms can enhance collaboration between faculty and students, resulting in increased flexibility and improved learning experience. While the impact of learning alliance quality, information quality, and course content backing on performance may vary, the study suggests that these factors do not directly impact performance (Sewandono et al., 2023). However, Liu et al. (2022) affirmed that social media-based collaborative learning had been found to affect student and teacher performance positively. Faculty members play a role in facilitating collaborative learning skills among students. Moreover, a case study on collaborative learning in small groups in an online course found that students collaborate in similar patterns and structures regardless of the context. It suggests that collaboration can be effective both online and in-person (Haugland et al., 2022).

Further, the researcher conducted a study investigating the impact of incorporating recorded virtual lectures, specifically asynchronous (recorded) virtual lectures, into e-learning strategies on faculty performance. The statistical analysis yielded an F-value of 22.717, which measures the overall significance of the relationship between the variable (asynchronous virtual lectures) and faculty performance. The associated p-value of less than .001 indicates that this relationship is statistically significant. Based on these findings, it can be inferred that incorporating recorded virtual lectures into e-learning strategies positively affects faculty performance. Asynchronous virtual lectures offer flexibility to faculty members and students alike (Almahasees et al., 2021). They allow faculty members to deliver content that students can access at any time, allowing for convenient and self-paced learning (Rehak, 2022).

The flexibility offered by asynchronous virtual lectures can improve faculty performance in several ways. Firstly, it enables effective time management for faculty members, as they can record lectures conveniently and allocate their time efficiently (Green Ivy, 2020). This flexibility

can reduce time constraints and allow faculty members to focus on other essential tasks. Secondly, asynchronous virtual lectures accommodate diverse learning styles (Main, 2023). Students have different preferences and learning needs, and asynchronous delivery allows them to access the lecture material in a format that suits them best. Some students may benefit from repeated viewings, while others may prefer to review specific sections. By catering to different learning styles, faculty members can enhance student engagement and comprehension, leading to improved performance. Lastly, asynchronous virtual lectures support personalized learning experiences (Fabriz et al., 2021). Students can access the lectures at their own pace, pausing or rewinding as needed, which promotes individualized learning. Faculty members can also supplement the lectures with additional resources, such as readings or supplementary materials, to cater to student's needs and interests. By tailoring the learning experience to each student, faculty members can foster a more engaging and effective educational environment.

4. Conclusion

Incorporating e-learning as a teaching method at King Khalid University has had a significant and noteworthy impact on the performance of the faculty staff who have adopted this approach in their teaching practices. The university's objective of developing the skills and abilities of its faculty staff has been accomplished through the performing of e-learning as a teaching method. The research directed to evaluate the efficacy of e-learning at King Khalid University provides evidence that the faculty staff has not only embraced this method but also agrees that it has improved their technical skills and various other competencies. It indicates that the faculty members have recognized the benefits of e-learning and its positive influence on their teaching abilities.

By utilizing e-learning, the faculty staff at King Khalid University have enhanced their technical skills, such as proficiency in using educational technologies, online platforms, and multimedia tools. This improvement in technical skills has equipped them with the necessary tools to engage students in the virtual learning environment effectively. Moreover, adopting e-learning has also contributed to developing additional competencies among the faculty staff. These competencies include effective communication and collaboration in online settings, adaptability to different learning styles, creativity in designing engaging online learning materials, and the ability to provide timely feedback and support to students. The positive outcomes observed in the study suggest that the faculty staff at King Khalid University have experienced tangible benefits from incorporating e-learning into their teaching practices. These benefits not only enhance their professional development but also positively impact students' overall learning experience at the university.

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