

A Proposed Perspective to Improve Practicing of Heads of Academic Departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions

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Abstract

The research aimed to present a proposed vision to improve the practices of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions. The descriptive approach was used to reveal the reality of the practices of academic department heads at the university regarding the dimensions of digital leadership. A questionnaire was applied to a sample of 107 members, using a comprehensive survey method for the study population, which consists of 142 members. The research results showed that the degree of practice of academic department heads in digital leadership dimensions was “high,” with an arithmetic mean of (3.70). The study revealed that the dimension of “Future Leadership” ranked first with a mean of (3.72), followed by the dimension of “Digital Age Learning Culture” in second place with a mean of (3.75). Meanwhile, “Systematic Development and Improvement” ranked third with a mean of (2.68), followed by “Digital Citizenship” in fourth place with a mean of (2.67). Lastly, “Technology-Driven Professional Development” ranked fifth, showing a “weak” level of practice with an arithmetic mean of (2.5). The research results also revealed the presence of statistically significant differences at the significance level (0.01) based on the administrative position variable in favor of the category of those holding a position. However, no statistically significant differences were found at the significance level (0.01) based on gender and years of experience. One of the main recommendations of the study was the need for growth and systematic improvement in digital leadership methodologies, as well as the importance of digital citizenship and technology-driven professional development for academic department heads. Moreover, future research efforts should focus on expanding knowledge about digital leadership dimensions in various academic environments to improve the transition of education to the digital landscape.

Keywords: *Academic Department Heads, Proposed Vision, Digital Leadership.*

رؤية مقترحة لتحسين ممارسة رؤساء الأقسام الأكاديمية في جامعة الاستقلال فيما يتعلق بأبعاد القيادة الرقمية

ملخص

هدفت الدراسة إلى تقديم رؤية مقترحة لتحسين ممارسة رؤساء الأقسام الأكاديمية في جامعة الاستقلال فيما يتعلق بأبعاد القيادة الرقمية. تم استخدام المنهج الوصفي للكشف عن واقع ممارسة رؤساء الأقسام الأكاديمية في الجامعة لأبعاد القيادة الرقمية. وقد تم تطبيق استبيان على عينة مكونة من (107) أعضاء باستخدام طريقة المسح الشامل لأعضاء مجتمع الدراسة البالغ عددهم (142) عضواً.

أظهرت نتائج البحث أن درجة ممارسة رؤساء الأقسام الأكاديمية لأبعاد القيادة الرقمية هي «عالية»، وبمتوسط حسابي (3.70). وقد أظهرت الدراسة أن بعد (القيادة المستقبلية) جاء في المرتبة الأولى بمتوسط (3.72)؛ ثم جاء بعده (ثقافة التعلم في العصر الرقمي) في المرتبة الثانية بمتوسط (3.75). بينما جاء (التطوير والتحسين المنهجي) في المرتبة الثالثة بمتوسط (2.68)، وجاء بعده (المواطنة الرقمية) في المرتبة الرابعة بمتوسط (2.67). أما في المرتبة الخامسة فقد جاء بعد (التطوير المهني المدفوع بالتكنولوجيا) بدرجة «ضعيفة» من الممارسة بمتوسط حسابي (2.5). كما كشفت نتائج البحث عن وجود فروق ذات دلالة إحصائية عند مستوى الدلالة (0.01) وفقاً لمتغير المنصب الإداري لصالح فئة من يشغلون المناصب أكاديمياً وإدارياً، ولم توجد فروق ذات دلالة إحصائية عند مستوى الدلالة (0.01) وفقاً لمتغير الجنس وسنوات الخبرة. وكان من أهم التوصيات التي خلصت إليها الدراسة: ضرورة النمو والتحسين المنهجي في منهجيات القيادة الرقمية، وأهمية المواطنة الرقمية والتطوير المهني المدفوع بالتكنولوجيا لرؤساء الأقسام الأكاديمية، كما يجب أن تركز الجهود البحثية المستقبلية على توسيع المعرفة بأبعاد القيادة الرقمية في بيئات أكاديمية مختلفة لتحسين انتقال التعليم إلى البيئة الرقمية.

الكلمات المفتاحية: رؤساء الأقسام الأكاديمية، رؤية مقترحة، القيادة الرقمية.

Introduction

Background of the Study

In the era of the digital revolution and rapid technological advancements, digital leadership has emerged as one of the essential pillars driving transformative change in educational and academic institutions. Educational institutions, particularly universities, are now required to adopt digital leadership strategies and frameworks that enable them to address contemporary challenges and achieve their aspirations amid global competition (Wu & Plakhtii, 2021). Embracing digital leadership is essential to ensuring the sustainability of academic excellence and enhancing universities' resilience in adapting to local, regional, and international changes (Bakeer, 2023a).

In this context, Al-Istiqlal University, as one of the leading academic institutions, seeks to develop its digital infrastructure and leverage technology to enhance the quality of education and support the professional development of its faculty members (Shaarawi et al., 2022). This strategic approach aims to achieve integration between academic and administrative goals, foster a culture of digital learning, and systematically develop the educational environment.

Given the growing importance of digital leadership, this study highlights its various dimensions and its role in enhancing the performance of academic departments, focusing on how department heads practice these dimensions (ALAwAmRAh et al., 2023). The study aims to provide a comprehensive insight into the reality of digital leadership at Al-Istiqlal University by achieving a set of key objectives. These include assessing the extent to which academic department heads practice digital leadership dimensions from the perspective of faculty members and analyzing differences in the responses of the study sample based on various variables. Additionally, the study seeks to propose a conceptual framework that contributes to enhancing the digital leadership practices of department heads, thereby improving digital performance and fostering an effective and advanced academic environment that meets contemporary challenges.

Problem Statement

Given the current era's technological advancements and changes, adopting a digital leadership approach has become inevitable. Universities and educational institutions must leverage modern digital technologies and tools to build and design a digital infrastructure that acts as a fortress, enhancing their ability to be flexible and adapt to various developments at local, regional, and international levels (Shaarawi et al., 2022). Al-Istiqlal University is one of the universities striving to enhance its academic standing by highlighting the dimensions of digital leadership and its importance in fostering a culture of learning in the digital age, facilitating systematic development and improvement, promoting digital citizenship, and supporting technology-based professional growth in all aspects of the educational and administrative process.

The current literature indicates that while digital leadership is increasingly recognized as essential in higher education, there remains a significant gap in the effective application of these principles among academic leaders, especially at the departmental level. Previous research highlights a lack of skills and training among academic leaders to fully integrate digital leadership dimensions (Wu & Plakhtii, 2021). Moreover, the rapid pace of technological changes poses challenges for faculty members in adapting to new digital methods of teaching and administration, thereby hindering the effectiveness of digital leadership strategies (Bakeer, 2023a). This research gap is particularly pertinent in the context of Al-Istiqlal University, where digital leadership practices are still developing, and the impact of these practices on the academic community needs further investigation. Accordingly, the study seeks to bridge this gap by answering the research questions, which are:

What is the level of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions from the point of view of faculty members?

- Are there statistically significant differences between the responses of the study sample members regarding the reality of the practice of the heads of academic departments at Al-Istiqlal University regarding the dimensions of digital leadership due to the variables (gender, job position, years of experience)?
- What is the proposed perspective to improve the practice of heads of academic departments at Al-Istiqlal University concerning the digital leadership dimensions?

Objectives of the study:

The study aims to present a viewpoint on digital leadership at Al-Istiqlal University, by focusing on the following study objectives:

The objectives of the study were as follows:

- Determining the level of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions from the point of view of faculty members.
- Detecting differences between the responses of the study sample members regarding the reality of the practice of the heads of academic departments at Al-Istiqlal University regarding the dimensions of digital leadership due to the variables (gender, job position, years of experience).
- Framing a Proposed Perspective to Improve Practicing of Heads of Academic Departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions.

Importance of the Study

Scientific Importance

The scientific importance of this study is reflected in several key aspects:

- **Advancing Academic Literature:** This study contributes to enriching the academic literature on digital leadership in academic contexts by providing a comprehensive analysis of the current practices of heads of academic departments at Al-Istiqlal University. The study aims to fill the knowledge gap in the field of digital leadership by focusing on how its dimensions are applied in a specific academic environment, thereby offering new insights that can support future research in this field.
- **Providing a Theoretical and Analytical Framework:** The study presents a theoretical and analytical framework concerning the dimensions of digital leadership, such as visionary leadership, the culture of learning in the digital age, and systematic development and improvement. By analyzing and evaluating these dimensions, the study offers an academic framework that can be utilized in future studies exploring ways to enhance digital leadership in various academic institutions.
- **Analyzing and Evaluating Digital Leadership Practices:** The study enhances the understanding of how digital leadership dimensions are applied by providing analytical data on the practices of heads of academic departments. The results derived from the study's questionnaire offer insights into the effectiveness of different dimensions of digital leadership, helping to establish scientific foundations for improving these practices.

Practical Importance

The practical importance of this study is highlighted in the following aspects:

- **Providing Practical Recommendations to Improve Academic Performance:** The study offers a set of practical recommendations based on the research findings, which can be beneficial for policymakers and practitioners at Al-Istiqlal University. These recommendations include improving the practice of digital leadership dimensions such as fostering a culture of digital learning, developing effective strategies for professional development, and enhancing digital citizenship among faculty members.
- **Guiding Efforts to Develop Digital Leadership:** The study aids in directing efforts to develop training programs and workshops targeted at heads of academic departments. Based on the research findings that indicated the need for improvement in certain dimensions, such as technology-based professional development, the study provides practical insights for designing training programs focused on enhancing the digital skills required for effective academic leadership.

- **Encouraging Improvement of the Academic Environment:** The study's findings help identify areas that need improvement in the practice of digital leadership at Al-Istiqlal University. By focusing on dimensions such as visionary leadership and systematic development and improvement, the study offers tools and recommendations for making positive changes in the academic environment, thereby contributing to the improvement of academic and administrative performance at the university.
- **Supporting Research and Development Efforts in Digital Leadership:** The study encourages researchers and academic leaders to explore new dimensions of digital leadership and expand the scope of research in this field. It recommends the necessity of broadening knowledge about digital leadership in different academic environments, opening new avenues for research and development in this area.

Literature Review

Research Terms:

The research is limited to the following terms:

1. **A Proposed Perspective:** Vision is described as an ambitious outline of what an institution aims to achieve in the medium or long term by specifying the current and future actions the institution should follow (Business Dictionary, 2019). It is also defined as a mental image of what the future will be or what it can become through planning using imagination and wisdom (Oxford Dictionary, 2019).
2. **Operationally,** a proposed perspective is defined as a mental image of the desired and expected future, outlining what the situation should be in the future. It includes a set of practical actions and practices to achieve the desired state of practices by the heads of scientific departments at the University of Independence, considering the current and expected future capabilities.
3. **Heads of Scientific Departments:** In the current research, heads of scientific departments are defined as faculty members officially appointed by the university president to head the department. They are responsible for managing the academic and administrative affairs and overseeing the workflow in the department. They act as a liaison between the department's faculty members' ideas and directions and the upper administration's visions and strategic plans (Shaarawi et al., 2022).
4. **Digital Leadership:** Digital leadership is defined as a leadership style that combines dynamic thinking, behavior, and skills necessary to improve the institution's culture through the extensive use of digital technology (Sheninger, 2014: 258). It is also defined as a social influence process through information and communication technology to change individuals', groups', and organizations' attitudes, emotions, thinking, behaviors, and performance (Chua, 2017:

110). Antonopoulou et al. (2020: 113) describe it as the use of various digital technologies and tools by an institution's leader, such as the Internet of Things, online platforms, webinars, social media, and artificial intelligence, during leadership practices to improve and enhance the educational process.

Operationally, in this study, digital leadership is defined as a set of activities, actions, and practices planned, organized, executed, and monitored by the heads of academic departments at the University of Al-Istiqlal. These activities include formulating a vision for the department that aligns with digital developments and transformations, promoting and developing a culture of learning in the digital age, establishing responsible mechanisms for using technological tools according to job nature, professionally developing faculty members in the technological field, and creating and designing a technologically advanced educational environment to achieve the department's desired objectives and goals using the best and latest methods.

Digital Leadership in Academic Institutions

Digital leadership plays a crucial role in shaping the future of education in academic institutions during the digital era. Studies have shown that transformational and open leadership styles can positively impact innovation, while autocratic styles may hinder progress (Avolio & Bass, 2004; Westerman, Bonnet, & Ferraris, 2014). Empowering leadership is vital for fostering management innovation and promoting innovative behavior (Hoch, 2013). Educational institutions must undergo digital transformation to improve learning processes. Incorporating digital technologies is essential for creating effective educational models with lasting effects. Educational leaders need to drive positive changes aligned with technological advancements to maintain competitiveness globally (Garhi, Hassan, & Khadr, 2019).

The transition from e-leadership to digital leadership involves leading effectively in a digital landscape. Digital leadership includes business-focused strategy delivery and personal attributes for interpersonal interactions. Developing digital leadership skills is necessary for academic institutions to thrive amidst rapid technological advancements.

Understanding the significance of digital leadership in academia is essential for driving innovation, enhancing learning experiences, and preparing students for digital work environments. By embracing digital transformation and equipping leaders with the necessary skills, universities can advance and improve educational practices continuously (Oke, et al., 2009; ALAwAmRAh, et al., 2023: 1-5).

1. Visionary Leadership

In the realm of academic institutions like Al-Istiqlal University, forward-thinking leadership plays a pivotal role in shaping the future. It is essential to have a visionary approach that inspires and motivates all stakeholders towards a shared vision of innovation and progress. As evidenced in academic literature, recent studies indicate that transformational leadership plays a pivotal role in enhancing innovation within educational institutions. For instance, a study published in 2023 highlights that transformational leaders in schools significantly contribute to fostering educational innovation and restructuring institutions by creating a visionary outlook, building a collaborative culture, and empowering others to become leaders (Frontiers in Education, 2023).

Additionally, an article published in 2024 emphasizes that integrating modern educational technologies into higher education requires a transformational leadership approach that encourages innovation and embraces technology (Journal of Innovation and Professional Development, 2024).

Studies have shown that transformational leaders can cultivate a culture of innovation by promoting risk-taking, supporting employee growth, and prioritizing goal attainment (Bass & Avolio, 1994). By embracing these leadership principles, heads of academic departments at Al-Istiqlal University can spearhead technological advancements and organizational innovations, thereby enhancing the institution's competitive advantage and preparing students for the digital workforce.

The leadership style adopted within an organization significantly impacts its culture, workforce performance, and the success of digital initiatives (Kane, Palmer, Phillips, & Kiron, 2015). Thus, academic leaders must embrace visionary leadership approaches that emphasize adaptability, continuous learning, and strategic planning. Through such practices, they can guide their departments towards a future where digital technologies seamlessly integrate into teaching and learning processes.

2. Learning Culture in the Digital Age

In the digital era, Al-Istiqlal University is experiencing a profound transformation in its learning environment. The infusion of technology has completely revolutionized educational methods, resulting in the rise of distance learning, e-learning, and mobile learning. These innovative approaches are reshaping how the curriculum is delivered and are enriching the educational journey for both students and faculty members.

A significant trend in universities is the implementation of Learning Management Systems (LMS), which provide a platform for seamless interaction between educators and learners in a digital setting. LMS not only offers effective learning resources but also facilitates the organization and dissemination of academic knowledge. The widespread use of technology, coupled with the desire for personalized education and constant access to information, has opened up new possibilities for teaching and learning experiences.

Furthermore, advancements in wireless technologies and mobile devices have played a pivotal role in promoting e-learning concepts. The availability of diverse tools, such as emulators of musical instruments and multimedia content, has made learning more interactive and engaging. Additionally, collaborative platforms like social media have revolutionized how musical knowledge is shared, making music education more accessible beyond traditional music institutions.

Overall, the transition towards a digital learning culture at Al-Istiqlal University signifies a shift towards more personalized and interactive educational journeys. By effectively harnessing technology, academic departments can boost student engagement, nurture critical thinking abilities, and adapt to the evolving requirements of the digital age. (Wu & Plakhtii, 2021).

3. Systematic Development and Improvement

Implementing strategic digital leadership practices in academic institutions like Al-Istiqlal University is essential for enhancing educational practices. Blended learning, combining traditional and online methods, offers students flexibility and exposure to digital tools crucial for the modern workplace. By incorporating technology into teaching, institutions can optimize resources and equip students with the necessary skills.

Developing professional competencies among students through vocational training and skill development programs is vital for their preparedness for the workforce. Utilizing active learning techniques enhances comprehension and problem-solving capabilities. Transformational practices among academic leaders play a key role in driving positive changes within educational institutions by establishing digital infrastructure and promoting a culture of embracing change.

To support the advancement of digital leadership at Al-Istiqlal University, focusing on enhancing digital infrastructure and providing continuous training for academic department heads is crucial. Aligning with best practices related to blended learning approaches and structured competency development processes for students can create an environment conducive to effective digital leadership practices. Strategic planning and competency development among leaders are essential components for implementing transformational practices that lead to better educational outcomes. (Wu & Plakhtii, 2021; Bakeer, 2023b: 6-10; ALAwAmRAh et al., 2023: 1-5).

4. Digital Citizenship

Digital citizenship is crucial in academic institutions, shaping behavior and responsibilities in the digital realm. Social media platforms like Twitter and Facebook are used for digital diplomacy, promoting engagement, and sharing of policies. Cloud computing raises security and privacy concerns in education, but its global evolution continues. Adoption of technology depends on factors like usefulness, ease of use, trust, and security. Digital tools enhance learner participation in online and traditional classrooms, yet challenges remain in utilizing ICT effectively. Promoting digital citizenship involves harnessing technology for communication, collaboration, and learning

while addressing privacy, security, infrastructure readiness, cultural disparities, and the efficient use of digital tools. Al-Istiqlal University can improve digital citizenship practices among students and faculty by considering these aspects within their academic leadership framework. (Ismail, 2022: 1-5; Wu & Plakhtii, 2021).

5. Technology-Based Professional Development

Utilizing technology for professional growth is essential for enhancing digital leadership practices in academic settings. The incorporation of cutting-edge technologies in education empowers educators to cultivate highly skilled professionals. An example of this is the swift integration of cloud computing into teaching methods, allowing educators to explore diverse educational strategies.

A survey conducted among faculty members from various universities has highlighted the benefits of computer-based e-learning tools. These tools enable efficient content management, streamlined educational processes, monitoring of knowledge acquisition, and secure learning environments. The research also underscores how cloud-based e-learning can enhance students' academic performance by leveraging up-to-date educational technologies (AJSRP Blog, 2023; Teach Me Anything, 2023).

Furthermore, the application of technology in education goes beyond mere adoption—it involves maximizing their potential impact. Student-centered technologies such as virtual musical instrument simulators and multimedia resources can enrich training sessions. Collaborative educational activities through online platforms have shown promise in co-creating music and performing together.

By incorporating technology-driven professional development initiatives, academic institutions can foster innovative teaching approaches and boost student engagement. Embracing these advancements enables universities to stay current in the digital era and empowers academic leaders to instigate positive transformations within their departments. (Wu & Plakhtii, 2021).

Conceptualizing Digital Leadership Dimensions

Digital leadership plays a crucial role in guiding the digital transformation process at academic institutions like Al-Istiqlal University. It involves having a vision focused on utilizing technology to improve learning outcomes and streamline administrative processes. Creating a culture of continuous learning and adaptation, along with systematic development and enhancement, are essential components of digital leadership. Fostering digital citizenship among faculty and students is necessary for building a responsible online community within the university. Providing technology-based professional development opportunities can help educators enhance their skills in using digital tools effectively. Embracing these dimensions of digital leadership can lead to transformative changes in how academic departments integrate technology into their educational approaches, ultimately guiding them toward the successful implementation of digital strategies aligned with global standards. (Abuowda et al., 2024; ALAwAmRAh et al., 2023: 1-5).

Importance of Digital Leadership in Academic Departments

Digital leadership is essential in academic institutions like Al-Istiqlal University to incorporate digital technologies and innovative approaches for improved learning quality and competitiveness. Studies show that digital transformation involves shifting from traditional teaching methods to student-centered strategies. Academic leaders need skills for implementing digital transformation to foster creativity, innovation, and progress, providing support and tools for faculty engagement in digital learning. Modern technologies can enhance educational processes, increase student engagement, and improve outcomes.

Leadership focusing on digital transformation can promote a culture of collaboration, accountability, and trust within academic departments by utilizing e-communication and virtual team competencies. E-leadership strategies enable clear communication, coordination, and decision-making in virtual team settings. Overall, digital leadership is crucial at Al-Istiqlal University to emphasize digital citizenship, technology-based professional development, and systematic enhancement. Visionary leadership practices that prioritize learning in the digital era can lead to transformative changes benefiting both faculty and students in teaching and learning experiences. (Abuowda et al., 2024; ALAwAmRAh et al., 2023: 1-5).

Previous Studies

The previous studies directly related to the current research will be discussed under two main headings: the first will cover Arab studies, while the second will cover foreign studies, following a chronological order from the oldest to the most recent studies, as follows:

First: Arab Studies

Mahmoud (2022): Mahmoud's study aimed to develop the practices of school leaders in Egyptian schools through a proposed list of digital leadership practices in light of the International Society for Technology in Education (ISTE) standards for educational leaders. The study explored the conceptual theoretical framework of digital leadership in educational institutions, highlighted the ISTE standards for educational leaders, and examined the current practices of school leaders in Egyptian schools based on official documents and reports. The study utilized the descriptive analytical method and employed a survey form to gather opinions from a group of educational administration professors regarding the proposed list of digital leadership practices in Egyptian schools. The study concluded by proposing several digital leadership practices in Egyptian schools based on the ISTE standards for educational leaders, with input from educational administration experts.

Shaarawi et al., (2022): Shaarawi et al., study aimed to provide a proposed vision to improve the practice of scientific department heads at Al-Azhar University regarding digital leadership dimensions. The study employed the descriptive method and used a questionnaire administered to a

random sample of (396) faculty members at Al-Azhar University to determine the degree to which department heads practiced digital leadership dimensions. The study found that the degree of digital leadership practice among scientific department heads at Al-Azhar University was “medium,” with an average score of (1.70). The study showed that the “visionary leadership” dimension ranked first with a “medium” practice level, followed by “culture of learning in the digital age” with a “medium” practice level, “systematic improvement and development” with a “medium” practice level, “digital citizenship” with a “medium” practice level, and finally, “technology-based professional development” with a “weak” practice level. Significant differences were found at the (0.01) significance level based on the variables of academic rank (favoring professors), gender (favoring males), college nature (favoring theoretical colleges), and administrative position (favoring those with administrative roles). A proposed vision was provided to improve the practice of digital leadership dimensions at Al-Azhar University’s scientific departments.

Al-Dhahli et al., (2021): This study aimed to reveal the degree to which school principals in Oman employ digital leadership from their perspective and to examine the impact of study variables (gender, years of experience, educational qualification). The study used the descriptive method and a questionnaire as the data collection tool, administered to a sample of (207) principals from various educational governorates in Oman. The results showed that the degree of digital leadership employment by school principals in Oman was “high,” with no significant differences found between the responses of the sample due to the variables (gender, years of experience, educational qualification). The study recommended several actions, including equipping classrooms with digital devices, using digital applications in administrative and teaching processes, and training teachers to use electronic tests for easier correction and follow-up.

Al-Tuwaim (2019): Al-Tuwaim’s study aimed to identify the degree of digital leadership application in the Ministry of Education in Saudi Arabia from the perspective of educational leaders. The study used the descriptive method and a questionnaire as the data collection tool, targeting a sample of (102) educational leaders, including directors in the general administration of the ministry, department directors, and heads of departments in the Ministry of Education. The study found that educational leaders perceived the application of digital leadership in the Ministry of Education as “medium,” with the level of administrative work development also rated as “medium.” The study made several recommendations, such as the need for the ministry to establish websites for experience exchange with external institutions, provide incentives for ministry employees to adopt digital leadership, organize specialized training courses in digital leadership, and encourage employees to enroll in them.

Second: Foreign Studies

Lim & Teo (2022): The study conducted by Lim & Teo in 2022 aimed to investigate the impact of digital leadership on the institutional performance of private higher education institutions in the digital age. An online questionnaire was used, targeting a sample of (121) managers working in private higher education institutions in Malaysia. The study found that a culture of learning in the digital age, professional excellence, and digital citizenship positively influence the performance of private higher education institutions in Malaysia. In contrast, visionary leadership and systematic improvement were not found to have a positive impact on performance. The results also indicated that managers are applying the concept of digital leadership in their institutions and have achieved a high level of performance. Additionally, the findings suggested that managers have become pioneers in leading their institutions toward change and adopting digital trends. The study recommended that future researchers and leaders in private educational institutions in Malaysia should be aware of the crucial roles of a culture of learning in the digital age, professional excellence, and digital citizenship.

Misra (2020): Misra conducted a descriptive-analytical study in 2020 aimed at enhancing digital leadership in the higher education sector by examining the current digital programs in India's higher education sector. The study highlighted the necessity of promoting digital leadership in higher education and proposed several strategies for developing digital leadership. Key strategies included selecting digital leaders based on digital merit criteria, empowering digital leaders with the authority to make appropriate decisions, encouraging digital leaders to develop institutional digital policies, and providing more professional training programs linked to emerging digital technologies to improve their skills and competencies in the digital domain and support research related to digital leadership.

Antonopoulou et al. (2020): The 2020 study by Antonopoulou et al. aimed to investigate the leadership skills of department heads at the University of Patras in Greece and analyze their perspectives on digital leadership. It also aimed to analyze the leadership styles they adopt and determine the correlation with other leadership outcomes (transformational and transactional leadership). The study used the descriptive method and a questionnaire as the data collection tool, administered to a sample of (28) department heads at the University of Patras. The results indicated a statistically significant correlation between leadership practices and transformational and transactional leadership. Additionally, the study emphasized that the degree of applying transformational leadership is linked to increased employee efficiency and satisfaction. The findings also showed that the transformational leadership style aligns with a high degree of digital leadership application, contributing to employee satisfaction and increased efficiency.

Lander (2020): Lander's 2020 study aimed to determine the relationship between the values and actions aligned with the pillars of digital leadership among principals and teachers' use of technology in the classroom. The study used the descriptive method and a questionnaire as the data collection tool, targeting all secondary school principals (7) and secondary school teachers (558) in three educational districts in Suffolk County, Long Island, New York. The study found that principals showed a moderate correlation with the pillars of digital leadership. Furthermore, there were no statistically significant differences according to variables such as grade level and years of teacher experience in using technology in their practices. The pillars of digital leadership did not predict teachers' use of technology. Based on these results, the study recommended future studies targeting a larger sample of principals and teachers and encouraging principals to learn from teachers who already use technology in their practices.

Commentary on Previous Studies

From the review of previous studies, the following can be concluded:

1. **Results:** The results of most previous studies are similar in confirming that digital leadership plays a significant and positive role in improving the performance of leaders in educational institutions at both school and university levels, theoretically through various administrative and educational research and studies, or practically. This aligns with the current study's methodology, which aims to enhance the practice of academic department heads at the University of Independence in digital leadership dimensions.
2. **Methodology:** The current study aligns with many previous studies in using the descriptive method, such as the studies by (Shaarawi et al., 2022; Al-Dhahli, et al., 2021; Al-Tuwaim, 2019; Lander, 2020; Antonopoulou et al., 2020; Lim & Teo, 2022). However, some studies used the analytical method, such as (Mahmoud, 2022; Misra, 2020).
3. **Study Tool:** The current study also aligns with previous studies in relying on the questionnaire as the main tool for data collection to achieve its objectives, as seen in the studies by (Shaarawi, et al., 2022; Al-Dhahli, et al., 2021; Al-Tuwaim, 2019; Lander, 2020; Antonopoulou, et al., 2020; Lim & Teo, 2022). However, some studies used personal interviews as the data collection tool, such as (Mahmoud, 2022; Misra, 2020).
4. **Study Objective:** The current study differs from previous studies in its objective, except for the study by Shaarawi et al., (2022), which shares a similar objective of framing a proposed vision to improve the practice of scientific department heads in digital leadership dimensions but differs in its study population, sample, boundaries, and results.
5. **Utilization:** The current study benefits from previous studies in defining and shaping the research problem, formulating its objectives, selecting the appropriate methodology, theoretically framing the study, identifying agreed-upon digital leadership dimensions in most related literature and studies, and designing the field study tool.
6. **Scarcity:** There is a scarcity of studies related to digital leadership in university institutions, especially Arab studies, as most studies are related to pre-university education institutions.

Research Methodology

Study Approach:

In exploring digital leadership at Al-Istiqlal University, a descriptive methodology was used to delve into the current landscape of digital leadership practices among academic department heads. The primary focus of the research was to understand the different dimensions of digital leadership and their importance in academia. A specifically designed questionnaire was prepared to collect data from a variety of academic department heads at Al-Istiqlal University. The process of selecting participants for the study involved identifying individuals based on their roles as academic department chairs, ensuring balanced representation across all departments. The questionnaire included inquiries related to various aspects of digital leadership, including visionary leadership, promoting a culture of learning in the digital age, methodological development and enhancement, digital citizenship, and technology-based professional growth.

The data were analyzed and the average scores derived from the responses to the questionnaire were interpreted. The results of this analysis will guide the proposed vision for enhancing practices among heads of academic departments at Al-Istiqlal University.

Ultimately, this research methodology seeks to provide valuable insights into the current state of digital leadership practices at Al-Istiqlal University and provide recommendations for enhancing these practices in the future.

Field study tool:

The study used a questionnaire as a data collection tool. To reveal the reality of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions from the point of view of faculty members, it was prepared in light of the results of the theoretical aspect of presentation and analysis of previous studies and scientific literature specialized in the field of study. The following are the procedures followed in preparing the questionnaire, its validity, and statistical processing, as follows:

1. Validity of the study tool:

The questionnaire's apparent validity and content validity were confirmed by presenting it to a group of arbitrators with expertise and experience in the field of study. This is to evaluate it after reviewing the title of the study, its questions, and its objectives. Based on the opinions and observations of the arbitrators, some phrases were modified and deleted so that the questionnaire became valid for application. In its final form, the questionnaire consisted of five dimensions to determine the degree to which heads of academic departments at Al-Istiqlal University practice the following dimensions of digital leadership: (visionary leadership, learning culture in the digital age, digital citizenship, technology-based professional development, systematic development, and improvement), and it included (47) statements.

2. Internal consistency of the study instrument:

After ensuring the apparent validity of the study tool, it was applied in the field to a survey sample that included (110) members of the target study population, including faculty members at Al-Istiqlal University, to ensure the suitability of the tool and its suitability for collecting data from the point of view of some members of society, where the consistency of the tool was identified. The study is done by calculating the correlation coefficients between the score of each statement and the score of the dimension to which it belongs, as well as calculating the correlation coefficients between the score of each dimension and the total score of the questionnaire using the Pearson Correlation Coefficient. Table (1) shows the results of calculating the internal consistency indicators for the study tool, as follows:

Table 1: Internal consistency indicators of the study tool (n = 107)

Visionary Leadership		Learning Culture in The Digital Age		Methodological Improvement		Digital Citizenship		The Technology-Based Professional Development	
#	Factor Correlation	#	Factor Correlation	#	Factor Correlation	#	Factor Correlation	#	Factor Correlation
1	**0.67	1	**0.68	1	**0.60	1	**0.57	1	**0.64
2	**0.68	2	**0.60	2	**0.59	2	**0.51	2	**0.64
3	**0.68	3	**0.70	3	**0.77	3	**0.53	3	**0.71
4	**0.67	4	**0.63	4	**0.69	4	**0.57	4	**0.78
5	**0.70	5	**0.65	5	**0.64	5	**0.64	5	**0.62
6	**0.70	6	**0.65	6	**0.72	6	**0.79	6	**0.76
7	**0.70	7	**0.64	7	**0.53	7	**0.62	7	**0.64
8	**0.64	8	**0.57	8	**0.63	8	**0.73	8	**0.68
9	**0.71	9	**0.65	9	**0.74	9	**0.74		
10	**0.67					10	**0.65		
11	**0.55								
CorrelationBy degree the college	**0.78	Correlation By degree the college	**0.90	Correlation By degree the college	**0.87	Correlation By degree the college	**0.88	CorrelationBy degree the college	**0.88

**** Statistically significant value at significance level (0.01).**

It is clear from Table (1) that all statements of the study tool are related to the dimension to which they belong with a statistically significant correlation coefficient at the significance level (0.01). The correlation coefficients ranged from (0.51) to (0.79), meaning that the correlation ranges between moderate and strong. Also, all sub-axes are related to the total score of the questionnaire with a statistically significant correlation coefficient at a significance level of (0.01), where the correlation coefficients ranged from (0.78) to (0.90), which confirms the internal consistency of the study tool.

3. Consistency of the study tool:

The reliability of the questionnaire was calculated using Cronbach's alpha, and Cronbach's alpha coefficient is considered the most appropriate method for calculating the reliability of questionnaires and trend scales. There is a specific range of possible scores for each word or phrase, and Table (2) shows the reliability coefficients for the questionnaire.

Table 2: Reliability coefficients for the study tool (n = 107)

The Axes	Number of phrases	Cronbach's alpha coefficient	Stability level
Visionary Leadership	11	0.88	High
Learning Culture in The Digital Age	9	0.82	High
Methodological Improvement	9	0.85	High
Digital Citizenship	10	0.83	High
The Technology-Based Professional Development	8	0.86	High
Total questionnaire	47	0.98	High

It is clear from Table (2) that the value of Cronbach's alpha coefficient for the reliability of the questionnaire reached (0.98), and the reliability coefficients for the dimensions of the sub-study tool were all high. It ranged from (0.82) to (0.88), and all of them are values higher than the minimum acceptable reliability coefficient, which is (0.70). The reliability analysis indicates a high level of reliability for the total tool and all its sub-dimensions, and thus confidence in the results of applying the questionnaire and the soundness of its construction.

4. The population and sample of the field study:

In light of the main objective of the field study, which is to identify the reality of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions from the point of view of the university's faculty members; The study population represents all 142 university faculty members, according to data for the second semester of 2024 AD. (Al-Istiqlal University, 2024). The following table shows a description of the study population, males and females.

Table 3: Characteristics of the study population

Gender	Number	Percentage (%)
Males	112	79%
Females	30	21%
Total	142	100%

The representative sample of the study population was distributed using the comprehensive survey sample method, which is considered an appropriate sampling method for the current research. It is based on selecting the sample members completely for all members of the study population.

The questionnaire was also published and distributed to the target study population at the end of the second semester of the 2024 academic year, after sorting and reviewing the responses and excluding incomplete ones. The researchers obtained (107) complete responses suitable for analysis, representing a sampling rate of (75.35%) of the total original population of the study. The study sample can be described according to classification variables (job position, gender, years of experience) as shown in the following table:

Table 4: Characteristics of the study sample.

variable	Number	Percentage (%)
Gender		
Male	92	86%
Female	15	14%
Total	107	100%
Job Position		
Academic	100	93.5%
Academic and Administrative	07	6.5%
Total	107	100%
Years of Experience		
Less than 5 years	17	16%
5-10 years	40	37.4%
More than 10 years	50	46.6%
Total	107	100%

It is clear from Table (4) that:

- The study sample, according to the administrative position variable, included (100) from the academic category, with a percentage of (93%), and (07) from the academic and administrative category, with a percentage of (6.5%).
- The study sample, according to the gender variable, included (92) males, with a percentage of (86%), and (15) females, with a percentage of (14%).
- The study sample according to the years of experience variable included (17) from the category of less than 5 years of experience with a percentage of (16%), (40) from the category of 5-10 years of experience with a percentage of (37.4%), and (50) from Category of more than 10 years of experience with a percentage of (46.6%).

5. Statistical methods and treatments:

The study used a set of descriptive and inferential statistical methods. To carry out the process of descriptive and inferential analysis of the questionnaire's statements and topics; Such as frequencies, percentages, standard deviation, coefficient of variation, Pearson correlation coefficient, independent sample t-test, One Way ANOVA. To facilitate the interpretation of the results and determine the level of influence of each variable, the researchers prepared a guide for the degrees of Accurate measurement, and the following table shows this:

Table 5: Degrees and Levels of Arithmetic Mean.

#	Mean	Practice Level
1	1.00 to < 1.80	Very Low
2	1.80 to < 2.60	Low
3	2.60 to < 3.40	Moderate
4	3.40 to < 4.20	High
5	4.20 to 5.00	Very High

Source: Adapted from Koh (2014).

Analysis and interpretation of the results of the study:

Q1) What is the reality of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions from the point of view of faculty members?

To answer the study question, which stated: (What is the reality of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions from the point of view of faculty members?)

The following study reviews the results of the field study by presenting and analyzing the overall results of the reality of the practice concerning the Digital Leadership Dimensions by heads of academic departments at Al-Istiqlal University. The following table shows the arithmetic mean, standard deviation, ranking, and degree of practice corresponding to the responses of the study sample on the reality of the practice of the heads of academic departments at Al-Istiqlal University of the dimensions of digital leadership. Table No. (6) shows the overall results of the practice of the dimensions of digital leadership by heads of academic departments at Al-Istiqlal University.

Table 6: Overall results of the reality of the practice of digital leadership by heads of academic departments at Al-Istiqlal University (n = 107)

Field	Mean	Std. Deviation	Practice Level	Arrangement of Field
Visionary Leadership	3.75	0.49	High	1
Learning Culture in The Digital Age	3.72	0.58	High	2
Digital Citizenship	2.67	0.63	Moderate	4
The Technology-Based Professional Development	2.5	0.55	Low	5
Methodological Improvement	2.68	0.68	Moderate	3
Total Digital Leadership Field	3.70	0.45	High	---

It is clear from Table (6) that the level of practice of the heads of academic departments at Al-Istiqlal University for the total dimensions of digital leadership is high, with an arithmetic mean (3.70) and a standard deviation (0.45); It came in first place after (visionary leadership) with a mean (3.72) and standard deviation (0.49); It came in second place after (the culture of learning in the digital age) with a mean (3.75) and standard deviation (0.58); It also ranked third after (methodological development and improvement) with a mean (2.68) and standard deviation (0.68). It ranked fourth after (digital citizenship) with a mean (of 2.67) and a standard deviation (of 0.63). As for the fifth place, it came after (technology-based professional development) with a “weak” practice score, with an arithmetic mean (of 2.5) and a standard deviation (of 0.55).

It is also clear from Table (6) that there is a difference in the degree of practicing the dimensions of digital leadership. The practices related to the dimension of visionary leadership came in first place with a “high” score with an arithmetic mean of (3.72). This may be attributed to the heads of academic departments having a future vision for their departments, which emerges from the university’s vision towards digital transformation. Hence, department heads strive to clarify the vision for department members and encourage them to adopt it. They also believe that delegating and empowering members is the best way to achieve their tasks and move academic departments and the university to the hoped-for and desired future, while practices related to the dimension of technology-based professional development came in last place with the degree of practice.” “Weak” with an arithmetic mean of (2.5), and the study believes that this result is logical in light of the lack of

financial resources allocated for this, and the weakness of the technical infrastructure supporting the use of electronic training platforms in the professional growth of faculty members at the university, in addition to the presence of negative beliefs among some heads of scientific departments towards e-training; Due to their lack of awareness of the training services provided by electronic training platforms, in addition to their low desire to enroll in professional development programs via electronic training platforms, this is consistent with the study of Al-Shaarawy, et al. (2022), which indicated the weak availability of the financial resources necessary to support the university's digital transformation; In addition to the lack of a system for evaluating the performance of university employees based on their technological practices. This may also be attributed to the weakness of the organizational digital culture among some heads of academic departments at the university and their reliance on traditional routine practices for administrative and educational work, and their adherence to everything that is familiar and accustomed. For fear of failure and criticism that may befall any attempt to change or develop in the performance of their duties, which is consistent with the results of some studies, which emphasized the weakness of the use of modern technological methods in administrative and educational programs, and the weakness of some university leaders' conviction in the necessity of change to keep pace with the changes and challenges of digital transformation. And adopting a culture of routine and lack of change, which limits their ability to make decisions and exploit opportunities and weakens their desire for innovation and innovation. This result is consistent with the study of Al Tuwaim (2019), which indicated that the degree of application of digital leadership from the point of view of educational leaders was moderate. While it differs from the study of Al-Dahli, et al., (2021), which indicated that the degree to which school principals in the Sultanate of Oman employed digital leadership (as a whole) and its fields, from the point of view of the principals themselves, was high.

Q2) Are there statistically significant differences between the responses of the study sample members regarding the reality of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions due to the variables (gender, job position, years of experience)?

To answer the second question of the study, which states: Are there statistically significant differences between the responses of the study sample members regarding the reality of the practice of the heads of academic departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions due to the variables (gender, job position, years of experience)?

Differences in the responses of the study sample were studied according to categorical variables or primary characteristics of the study sample (job position, gender, and years of experience), and the results were as follows:

First: According to the gender variable:

The differences in the responses of the study sample according to the gender variable (male/female) were studied, and the Independent Sample t-test was used, and the results were as shown in the following table:

Table 7: T-test for differences in practicing digital leadership dimensions according to the gender variable.

variables	Gender	Number	Mean	Std. Deviation	Degrees of Freedom (df)	t-value	p-value (Significance)
Practicing The Dimensions of Digital Leadership	Males	92	3.75	0.468	105	1.33-	0.075
	Females	15	3.88	0.636			

Tabular “t” = 1.98

Looking at Table (7), it is clear that there are no statistically significant differences at the level of significance ($0.05 \geq \alpha$) in the practice of digital leadership dimensions at Al-Istiqlal University by gender, where the statistical significance is >0.05 , and also the calculated “t” value is $>$ the tabular “t” (1.98). This is due to the fact that practicing the dimensions of digital leadership is an approach approved by the university within its policies, and practiced by male and female university employees.

Second: According to the academic position variable:

The differences in the responses of the study sample according to the job position variable (academic, academic, and administrative) were studied, and the Independent Sample t-test was used, and the results were as shown in the following table:

Table 8: T-test for differences in practicing digital leadership dimensions according to the Job Position variable.

variables	Job Position	Number	Mean	Std. Deviation	Degrees of Freedom (df)	t-value	p-value (Significance)
Practicing The Dimensions of Digital Leadership	Academic	100	3.67	0.444	105	2.33	0.00
	Academic and Administrative	7	3.78	0.666			

Tabular “t” = 1.98

Looking at Table (8), it is clear that there are statistically significant differences at the level of significance ($0.05 \geq \alpha$) in the practice of digital leadership dimensions at Al-Istiqlal University according to job position, where the statistical significance is >0.05 , and also the calculated “t” value

< tabular “t” (1.98), and the differences were in favor of those holding academic and administrative positions. This indicates that there are statistically significant differences in the practice of digital leadership dimensions at Al-Istiqlal University based on job position, with differences favoring those in academic and administrative roles. This variation highlights the importance of leadership positions in facilitating the adoption of digital practices. These findings align with previous studies that emphasize the role of academic and administrative positions in implementing digital leadership. For instance, Mahmoud (2022) in his study on the development of digital leadership practices in Egyptian schools, based on international standards, found that school leaders in academic and administrative positions were more capable of adopting digital practices. Similarly, Shaarawi et al., (2022) in their study at Al-Azhar University found higher levels of digital leadership practice among academic and administrative department heads, with significant differences based on job position. Furthermore, Lim and Teo (2022) in their study in Malaysia highlighted those leaders in private higher education institutions, particularly those in leadership positions, achieved better performance in the implementation of digital leadership, which is consistent with the current study’s findings at Al-Istiqlal University. These studies collectively support the notion that leadership positions are pivotal in enhancing the application of digital leadership dimensions, as reflected in the observed differences in the current study.

Third: According to the variable years of experience:

The differences in the responses of the study sample according to the variable of years of experience were studied: To study the differences in the responses of the study sample according to the variable of years of experience (less than 5 years, from 5-10 years, more than 10 years), a one-way analysis of variance test was used. The results are shown in the following table:

Table 9: One-way analysis of variance for practicing digital leadership dimensions according to the years of experience variable.

Source of Variation	Sum of Squares	Degrees of Freedom (df)	Mean Squares	F-value	p-value (Significance)
Between groups	0.707	2	0.183	1.355	0.195
Within groups	7.364	104	0.144		
Total	8.071	106			

Calculated “F” = 3.07.

It is clear from Table (9) that there are no statistically significant differences at the level ($\alpha \geq 0.05$) in practicing the dimensions of digital leadership according to the years of experience variable, where the statistical significance is >0.05 , and the calculated “F” value is less than the tabulated “F” value. This is due to the fact that practicing the dimensions of digital leadership is an approach approved by the university within its policies, and practiced by new and old university employees.

Q3) What is A Proposed Perspective to Improve the Practice of Heads of Academic Departments at Al-Istiqlal University Concerning the Digital Leadership Dimensions?

In order to enhance digital leadership practices among heads of academic departments at Al-Istiqlal University, it is necessary to consider the transformational strategies that have been identified in Jordanian universities. This approach will help address issues related to the lack of digital resources, challenges in adapting to modern technology, and recurring barriers to achieving goals. Moreover, it is necessary to provide modern electronic and technical platforms that are in line with employees' skills. These suggestions are intended to help faculty embrace technological advances and use them effectively in their responsibilities. A culture of digital readiness can be encouraged among academic leaders by enhancing readiness to embrace change in work environments and integrating it into all operations. Increasing financial allocations to transformative practices is also key to supporting the implementation of digital initiatives. This recommendation is in line with the need for universities to invest in tools that facilitate digital transformation and enhance overall efficiency. In addition, implementing strategies to enhance employees' technical competencies is crucial to improving digital leadership practices at Al-Istiqlal University. By following these recommendations based on the transformative practices observed in Jordanian universities, Al-Istiqlal University can foster an environment conducive to effective digital leadership among heads of academic departments. These efforts will not only encourage the integration of technology into the leadership approach but will also contribute to the overall success and advancement of the university. (ALAwAmRAh et al., 2023, pp. 1-5).

Results

The study produced several of results, the most important of which are:

First: The degree of practicing the dimensions of digital leadership: The degree of practicing the dimensions of digital leadership by heads of academic departments was "high" with an arithmetic average of (3.70).

Second: Arranging the dimensions of digital leadership:

- Visionary leadership came in first place with a mean of (3.72).
- The culture of learning in the digital age came in second place with a mean of (3.75).
- Systematic development and improvement came in third place with a mean of (2.68).
- After digital citizenship, it came in fourth place with an average of (2.67).
- Technology-based professional development came in fifth place with a "weak" practice score with an arithmetic average of (2.5).

Third: Statistically significant differences:

- There are statistically significant differences at the significance level (0.01) in favor of the category of those holding academic and administrative positions.
- There are no statistically significant differences at the significance level (0.01) according to the variable of gender and years of experience.

Study Recommendations

Based on the results of the study, the researchers presented the most important recommendations as follows:

- **Enhancing Digital Leadership Training:** Since the degree of practicing digital leadership dimensions was high among academic department heads, it is essential to strengthen training and professional development programs in this area for all leadership levels within the university, ensuring the improvement and effective implementation of digital skills.
- **Focusing on Improving Weak Digital Leadership Dimensions:** Based on the results showing that “technology-based professional development” had the lowest level of practice, the university should develop plans to enhance digital leadership skills in this area through specialized workshops and training courses, with a focus on promoting the use of technology in both educational and administrative processes.
- **Promoting Digital Culture:** Since “the culture of learning in the digital age” had the highest level of practice, this culture should be promoted at all levels of the university by encouraging the use of digital tools in teaching and administration and providing an interactive educational environment that supports continuous learning.
- **Reevaluating Underutilized Digital Leadership Dimensions:** Given the lower ranking of dimensions such as “digital citizenship” and “systematic development and improvement,” strategies should be developed to motivate academic and administrative leaders to further activate these dimensions, and work towards integrating them into the university’s strategic plan.
- **Supporting Academic and Administrative Positions:** Since the results showed statistically significant differences in favor of those holding academic and administrative positions, institutional support should be provided to these categories by allocating additional resources for technology and innovation, as well as granting them more authority in leading digital transformations within the university.
- **Focusing on Job Diversity:** Since the results indicated no significant differences based on gender and experience, efforts can be directed towards enhancing diversity in digital leadership and supporting leaders from all categories and positions to be more inclusive in adopting digital leadership dimensions.

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