

Strategic Foresight Through the Temporal Dimensions of Electronic Arts Leadership

Prof. Ghada Mostafa Ahmed Ismail

Ghada_ismail@fae.helwan.edu.eg

<https://orcid.org/0000-0003-1020-0594>

Prof. Fatma Abdel Rahman Mohamed Badawi

FATMA_BADAWI@fae.helwan.edu.eg

Professors of Fundamentals of Art Education - Department of Art Education Sciences - Faculty of Art Education - Helwan University

Abstract:

This study aims to analyze the role of time dimensions (past, present, future) in supporting e-leadership in the field of arts, with a focus on the importance of strategic foresight in developing technical services to keep pace with digital and social transformations. The study used the mixed approach (quantitative and qualitative) through a questionnaire and semi-structured interviews for a sample of (319) individuals from academic leaders, graduate students and undergraduate students at the Faculty of Art Education.

The results showed a disparity in the level of digital and forward-looking awareness between different groups, where high awareness emerged among student groups, with some hesitation among senior leaders. Servant leadership and democracy were also found to be the most preferred, and the results emphasized the need to promote a culture of digital transformation, develop digital infrastructure, and support future e-leadership skills.

The study recommended integrating foresight strategies into academic curricula, providing specialized training programs, and stimulating scientific research in the fields of digital arts.

Keywords: e-leadership, strategic foresight, time dimensions, digital arts, technical education.

الاستشراف الاستراتيجي من خلال الأبعاد الزمنية للقيادة الإلكترونية للفنون

أد/غادة مصطفى أحمد إسماعيل. أ.د فاطمة عبد الرحمن محمد بدوي

أساتذة أصول التربية الفنية- قسم علوم التربية الفنية- كلية التربية الفنية- جامعة حلوان

المخلص:

تهدف هذه الدراسة إلى تحليل دور الأبعاد الزمنية (الماضي، الحاضر، المستقبل) في دعم القيادة الإلكترونية بميدان الفنون، مع التركيز على أهمية الاستشراف الاستراتيجي في تطوير الخدمات الفنية لمواكبة التحولات الرقمية والاجتماعية. استخدمت الدراسة المنهج المختلط (الكمي والكيفي) عبر استبيان ومقابلات شبه منظمة لعينة مكونة من (319) فرداً من القيادات الأكاديمية وطلاب الدراسات العليا والبيكالوريوس بكلية التربية الفنية.

أظهرت النتائج تفاوتاً في مستوى الوعي الرقمي والاستشرافي بين الفئات المختلفة، حيث برز وعي مرتفع لدى الفئات الطلابية، مع بعض التردد لدى القيادات العليا. كما تبين أن القيادة الخادمة والديمقراطية هما الأكثر تفضيلاً، وأكدت النتائج ضرورة تعزيز ثقافة التحول الرقمي، وتطوير البنية التحتية الرقمية، ودعم مهارات القيادة الإلكترونية المستقبلية.

أوصت الدراسة بدمج استراتيجيات الاستشراف في المناهج الأكاديمية، وتوفير برامج تدريبية متخصصة، وتحفيز البحث العلمي في مجالات الفنون الرقمية.

الكلمات المفتاحية: القيادة الإلكترونية، الاستشراف الاستراتيجي، الأبعاد الزمنية، الفنون الرقمية، التعليم الفني.

Introduction:

In light of the rapid transformations that the world is witnessing as a result of technological progress and the information revolution, the concept **of e-leadership has emerged** as one of the most important pillars of administrative and artistic change in contemporary institutions, especially in the fields of creativity, culture and arts. Digital platforms have become an alternative environment, even parallel to physical reality, necessitating a rethinking of how **art production is managed and strategically directed** through flexible leadership models, supported by long-term foresight and planning.

In this context, **strategic foresight emerges** as a vital tool to understand the future and anticipate changes, as it contributes to the development of time awareness among leaders, and guides their decisions within time frames that include the past, present, and future. This type of thinking is necessary to address the challenges associated with uncertainty, rapid technological changes, and shifts in consumer behavior.

The COVID-19 pandemic **has accelerated** digital transformation, prompting art institutions and artists to rely on electronic media for communication, display, and marketing. However, this shift was carried out randomly and unorganized, leading to fragmentation of efforts, a lack of standards, and even ethical and legal issues about artistic ownership and digital leadership. Hence, the need for competent and well-trained digital arts leadership, capable of managing digital artistic production with a deliberate methodology that combines **Innovation, organization, and cultural awareness**.

E-leadership refers to the **practice of leadership through digital communication technologies**, where the leader manages individuals, teams, or organizations through electronic platforms instead of traditional direct interaction, defined by **Avolio, Kahai & Dodge (2001)** as: a process of social impact facilitated through modern information technology to drive change, decision-making, and motivate individuals to achieve common goals."

The characteristics of electronic driving are distinguished:

- **Virtual communication:** Rely on email, virtual meetings, social networks, and digital collaboration platforms.
- **Remote Team Management:** The ability to motivate and direct geographically spread teams.
- **Temporal and spatial flexibility:** Breaking down traditional barriers associated with time and space.
- **Using technology in decision-making:** Relying on digital data and analytics to support strategic decisions.

The importance of e-leadership in the arts:

- Facilitate **the display and marketing of artworks** online.
- Enable artists to **manage their digital projects** and follow their audience electronically.
- Support **e-technical education** and expand access to modern digital skills.
- Promote **creative transformations in the** production and distribution of works of art.

Challenges associated with e-leadership:

- The difficulty of building electronic trust.
- The challenges of emotional communication through digital channels.
- The need to develop new skills for the digital leader, such as Virtual Emotional Intelligence.

Strategic foresight is **a systematic process of exploring the future**, aiming to visualize multiple scenarios and make flexible strategic decisions according to potential opportunities and risks. Rohrbeck & Kum (2018) **defined** it as: an ongoing organizational process that combines gathering future information, analyzing emerging trends, and planning strategies to adapt to future changes."

Strategic foresight in the field of arts:

- **Anticipate future artistic trends** (e.g. the evolution of digital art and creative artificial intelligence).
- **Analyze the impact of technology and society** on artistic production and marketing practices.
- **Designing new digital arts business models** commensurate with global transformations.
- **Stimulate artistic innovation** to keep pace with the evolution of cultural tastes and behaviors.

Components of the Strategic Foresight of the Arts:

1. **Trend Monitoring:** Tracking technological, technical and social developments.
2. **Scenario Analysis:** Setting multiple possibilities for the course of development of digital arts.
3. **Strategic Planning:** Building dynamic plans that are adaptable to changes.
4. **Future-oriented Decision-Making:** Supporting technical leadership decisions based on well-thought-out future visions.

The importance of strategic foresight in the arts:

- Maintain **creative leadership** in a rapidly changing competitive landscape.
- Ensure **the economic sustainability** of digital artworks.
- Support adaptation to **changes in public taste** and emerging digital culture.
- Facilitate the exploration of **new markets** and create interactive art experiences.

"Online leadership and strategic foresight are integral pillars to ensure the success of digital arts in an era of digital and social transformations. A

contemporary art leader needs advanced digital skills and a flexible future vision to adapt to the changing art landscape and make strategic decisions that ensure excellence and sustainability."

Leadership in the arts is no longer limited to the guiding or administrative role, but is based on the leader's ability to **anticipate the future and take into account the time dimension in making decisions**, especially in an environment characterized by constant change. This requires a strategic awareness of geopolitical changes, demographic shifts, and technological developments such as artificial intelligence, virtual reality, and three-dimensional printing, all of which are factors that are affecting both artistic production and reception.

Hence, this study is launched to bridge the gap in literature and practices, by providing an analytical model that integrates **e-leadership practices, strategic foresight, and time dimensions** in the arts industry. It seeks to identify innovative strategies to activate digital leadership within sustainable ethical and cultural frameworks that contribute to **the development of the art profession, empower artists, document their work, and ensure effective interaction with local and global audiences**.

Study problem:

Electronic arts are witnessing rapid transformations in light of the digital revolution, and the need for electronic artistic leaders capable of dealing with these changes has emerged through forward-looking strategies aware of the temporal dimensions (past, present, future). However, real practice indicates the absence of this style of leadership, and the lack of well-thought-out digital regulatory frameworks for art institutions.

This study starts from a key question:

How can strategic foresight be employed within the temporal dimensions (past – present – future) to enhance the effectiveness of e-leadership for the arts?

A number of sub-questions arise from it:

1. What are the critical time dimensions affecting the electronic leadership of the arts?
2. How is strategic foresight currently applied in the practices of digital arts leaders?
3. What are the ethical and professional challenges facing e-leadership for the arts?
4. What impact does the integration of time foresight into leadership decisions have on the quality of innovation and cultural identity?
5. How can digital leadership strategies be developed that take into account different technological and time contexts?

Study assignments:

1. There is a positive correlation between leaders' awareness of time dimensions and the effectiveness of electronic leadership for the arts.

2. The use of strategic foresight positively affects the quality of decision-making in the digital art field.
3. Ethical challenges are the most prominent barriers to the application of e-leadership for the arts at the local level.
4. The use of time scenarios enhances the ability of technical institutions to innovate and be digitally sustainable.

Objectives of the study

This study aims to:

1. **Analyze the concept of strategic foresight and** determine its temporal dimensions in the context of electronic leadership of the arts.
2. **Monitor and analyze leadership practices** in today's digital art landscape.
3. **Explore the ethical and professional challenges** facing leaders in an electronic arts environment.
4. **Present a proposed model** for e-leadership based on systematic and sustainable time forecasting.
5. **Enhancing the awareness of art education graduates and students** of the concepts of digital leadership and future foresight.

Study Methodology

The study relies on **the mixed methods approach**, as it allows a combination of quantitative and qualitative analysis. Data collection tools include:

- **E-Questionnaire:** To measure the awareness and attitudes of a sample of leaders or practitioners in the field of the arts towards digital leadership and time foresight.
- **Semi-structured interviews:** with some educational and technical leaders to clarify their experiences and methods.
- **Content analysis:** to study some technical pages and websites and analyze the leadership styles used.
- **Case Study:** selected digital technical pages to understand actual digital leadership patterns and compare their effectiveness.

The study targets a sample of:

- Faculty members in the faculties of art education.
- Practicing artists in digital environments.
- Students and graduates from digital arts majors.

Practical Framework:

Survey entitled "Strategic Foresight through the Time Dimensions of Electronic Leadership for the Arts"

1- Objectives of the survey:

- 1-1- Recognize leadership patterns in the arts.
- 1-2- Study respondents' experience in dealing with technology and social media platforms.

1-3- Analyze the importance of strategic foresight in supporting e-leadership for the arts.

2- Survey Terms:

2-1- **Leadership:** The process of influencing individuals or groups and directing them towards achieving common goals, by setting a clear vision, inspiring and motivating others, and making appropriate decisions.

2-2- **E-leadership:** A contemporary concept that focuses on managing teams and organizations within digital environments, using digital tools and strategies to achieve organizational goals.

2-3- **Arts e-leadership:** Applying the principles of digital leadership to manage artistic and cultural organizations, teams and projects within modern digital and technological contexts.

2-4- **Strategic foresight:** An analytical methodology that aims to support strategic decision-making by estimating the future and deriving proactive visions based on analysis and scientific intuition.

2-5- **Time dimensions:** A concept that refers to the impact of time on leadership practices, and includes planning for the future, balance between short and long-term goals, timing of decision-making, change management, and sustainable impact.

3- **Study sample:** Faculty members of the Faculty of Art Education, including leaders, graduate students and undergraduate students.

4- **Justifications for selecting the study sample:** A random sample of faculty members at the Faculty of Art Education was selected for the following reasons:

4-1- Diversity of scientific backgrounds and academic roles, enriching the results of the study.

4-2- Different age groups and levels of experience, allowing for exploration of the relationship between experience and attitudes towards digital technical leadership.

4-3- The possibility of comparing trends between different professional stages (professor - assistant professor - teacher).

4-4- Not requiring precise specialization, but sufficiency with the general affiliation to the art education major.

4-5- The questionnaire link was distributed to a large number of faculty members, and the sample that responded randomly to the study was relied upon.

5- Sample characteristics:

5-1- **Total:** 319 participants.

5-2- **Categories Details:**

5-2-1- 18 participants held leadership positions.

5.3.2 45 professors.

5.3.3 48 assistant professors.

5.3.4 45 teachers.

5.3.5 63 postgraduate students (Master and PhD).

5-3-6- 100 students from the bachelor's degree (fourth and fifth year).

The ages of the random sample of leaders and professors ranged between 40 to over 60 years, while assistant professors between 30: 50 years, teachers and postgraduate degrees between 30: 45 years, and the bachelor's degree is limited between 21: 25 years.

6:Poll:

6-1- Axes of the opinion poll:

6.1.1 The first axis: artistic production and marketing in the digital age

Artistic production is a key pillar in the formation of the professional and artistic identity of faculty members and students of the Faculty of Art Education. With the rapid digital transformation, the methods of marketing works of art are ranging from traditional channels such as galleries and galleries, to modern online platforms.

This theme aims to explore the extent to which respondents practice artistic production, and the marketing patterns they adopt, while analyzing the differences in marketing preferences between different academic groups.

It also seeks to assess the ability of the academic community to adapt to digital marketing tools and keep pace with the requirements of the modern art market.

6.1.1.2 Analysis of answers: from Table (2: 3)

From Table (2), we find 62% of the sample produce works of art regularly, 21% are hesitant, and 17% do not produce, most of the faculty members of the College of Art Education and their students, despite their academic and artistic backgrounds, do not practice artistic production regularly or continuously, and it seems that artistic production gradually decreases with progress in the academic path and increasing burdens and responsibilities, while it is at its peak in the early educational stages. This calls for a rethinking of how to support sustainable artistic production among academics, and to encourage a balance between academic performance and artistic innovation.

From Table (3), we find 31% marketing through exhibitions and galleries, 27% online, 31% do not prefer marketing, 5% rely on their fame in the field, 6% have other ways of marketing their business, leaders tend to rely on fame and reputation more than relying on active marketing tools, and professors prefer traditional methods (exhibitions) and less use of digital marketing, and while assistant professors and teachers appear to have a combination of traditional dependence and openness to digital channels, While the younger generations (postgraduate and bachelor's) rely more on online digital marketing.

Thus, the results showed that the practice of artistic production is still strongly present among academic groups, despite some hesitation, especially in the categories of graduate students, but in the field of marketing, traditional methods such as exhibitions

still occupy the forefront among leaders and professors, while younger groups (graduate and bachelor's) have clearly begun to tend to digital marketing through electronic platforms. These trends reflect a gradual shift in marketing behavior towards the adoption of digital channels, although there is still a link to traditional methods in some higher academic categories.

6.1.1.3 Interpretation of differences between categories:

- **Leaders and professors** prefer traditional channels due to their professional stability and dependence on their relationships and resumes.
- **Assistant professors and teachers** show a hesitation between traditional and digital methods as a result of their newness of professional experience.
- **Graduate and undergraduate students** are more oriented towards online marketing thanks to their digital skills and ability to invest in modern means of communication.

6.1.1.4 Scientific recommendations

- Support the creation of institutional electronic platforms to market artwork to faculty and students.
- Inclusion of specialized courses in digital art marketing strategies within the programs of art education colleges.
- Organize periodic workshops to enhance the online self-marketing skills of academic artists.

6.1.1.5 Analytical conclusion

The findings point to the importance of enhancing artistic production practices while supporting a balanced transition between traditional and digital marketing. It also emphasizes the need to develop the digital and marketing skills of academic artists to keep pace with the requirements of the modern art market and technological developments.

6.1.2 The second axis: digital experiences and the extent of interaction with e-marketing programs:

Digital experiences have become the cornerstone of the practice and management of modern arts, which requires the skills of using virtual communication platforms and digital marketing, this theme discusses the level of familiarity of respondents with digital technologies, and the extent to which they are accustomed to online shopping and the use of sites in artistic interaction, and reviews the extent of their preference between dealing directly or through electronic means, which reveals the readiness of the academic community to transform into future digital artistic environments.

6.1.2.1 Analysis of answers from Table (4:7)

The analysis of Table (4) shows that the ways academic artists market their artwork are diverse: 29% do not market, reflecting a lack of interest, which may be cultural or due to lack of experience/time, and 29% use social media, which indicates a

trend towards modern digital marketing and reaching a wider audience. , 17% rely on personal relationships and acquaintances, which is a traditional method based on trust in direct networks, 13% resort to exhibitions and galleries, which indicates the continued importance of classical methods of displaying art, while the 4% who rely on fame and biography highlight the role of the artist's solid reputation in marketing, and 4% suggest Developing curricula by adding technical marketing courses to address a knowledge gap, and 4% use agents or representatives as a professional approach, but it is little prevalent among the sample.

From it, we find a clear discrepancy in marketing methods among academic artists, ranging from not marketing at all, relying on traditional methods, and adopting modern digital means, with an awareness of the need to develop marketing skills or use specialists.

From Table No. (5), the total percentage of those who actually shop online is 55% of the sample, with 43% likely to use, and only 2% not using the Internet in shopping, and this indicates that online shopping has become a well-established part of the behavior of members of the academic community in the Faculty of Art Education, with slight variation according to the professional stage and age group.

From Table No. (6), we find that the total percentage of those who actually shop online is 55% of the sample, with 43% likely to use, and only 2% do not use the Internet in shopping, and this indicates that online shopping has become a well-established part of the behavior of members of the academic community in the College of Art Education, with a slight variation according to the professional stage and age group.

Therefore, websites are the first choice for most groups (especially professors and undergraduate students), which indicates a great acceptance of digital marketing, while exhibitions and competitions come as a second option, especially among graduate students who seek professional opportunities, and direct interaction is preferred between leaders and teachers, which may indicate a desire for direct personal communication to strengthen relationships.

From Table (7), we find a numeric divide by rank, there is a correlation between higher academic rank (especially professor) and increased engagement in digital art, while teachers, graduate students, and undergraduate students have shown significant weakness in adopting digital art production, which may reflect the curriculum's focus on traditional arts or lack of exposure/interest in digital tools at these stages. This may suggest that digital arts have not yet taken full root at basic educational levels or among early-career academics, while experienced professors have embraced it more.

6.1.2.3 Interpretation of differences between categories:

- **Digital:** Professors are the most engaged in digital production, while there is a clear gap among lower academic groups and students.
- **Professional/marketing communication:** Leaders and teachers tend to communicate directly, while professors and younger students (undergraduates) prefer digital platforms (websites), and graduate students focus on traditional professional platforms (exhibitions).
- **Experience vs. opportunity:** Professors and leaders may rely more on their reputation and experience, while students (especially graduate students) are more actively seeking opportunities through the channels available to them (such as exhibitions).

These differences show that experience, professional stage, focus (academic, administrative, career-building), and perhaps even curricula play a role in shaping the behavior and attitudes of each group within this artistic academic community.

6.1.2.4 Scientific recommendations:

Promote e-marketing training and organize specialized workshops for all segments of the academic community, especially for leaders and teachers, to develop marketing skills through Internet pages and social media platforms.

Inclusion of mandatory digital arts courses in undergraduate and graduate programs aimed at providing students and researchers with the technical skills necessary to produce and market artworks digitally.

Encourage digital art production by launching initiatives to support academic artists to produce digital artworks, including incentives for artistic innovation in the digital environment.

Establishing official electronic platforms to display and market artworks electronically to faculty members and students, which expands marketing opportunities and helps direct contact with the digital audience.

Promote awareness of the importance of digital transformation in the arts through educational activities and events that highlight future developments and their impact on the art market.

6.1.2.5 Analytical conclusion:

The results showed that there is a noticeable disparity in the extent of possessing skills to deal with digital media between different academic groups, as undergraduate and graduate students were distinguished by a higher ability to use the Internet in marketing and communication, compared to the relative hesitation or weakness of some faculty members, especially leaders and teachers.

The results also revealed a decrease in the production of digital works of art compared to traditional production, indicating the need to redouble efforts in the field of digital creativity training.

These indicators emphasize the importance of investing in building digital competencies in the arts to ensure successful strategic foresight and keep pace with rapid global changes.

Hence, there is a need to adopt specialized training and development programs to enhance digital artistic production, e-marketing, and expand the presence of academic artists in contemporary digital environments.

6.1.3 Third Theme: Understanding Digital Arts and Level of Awareness of Future Trends

With the rise of electronic and digital arts as a key part of the global art scene, it is imperative to assess the extent to which academic and student groups understand the nature of digital artwork.

This theme aims to analyze the extent of the sample's experience in electronic arts, their understanding of digital artistic concepts, their goals in displaying artworks through digital platforms, and their awareness of the importance of anticipating future artistic trends and their impact on their academic and professional practices.

6.1.3.1 Analysis of answers:

Table (8) shows a clear disparity in the level of knowledge between the different academic categories, as the category of professors represents the highest percentage of confirmed awareness of digital artworks (100%). In contrast, some categories such as leaders, assistant professors and graduate studies still need applied training support, and therefore the results indicate that theoretical knowledge exists relatively strongly, but there is a gap in practical application, especially for the lower and higher categories administratively.

The desire to display works to taste them in Table (9) is the main goal of most groups, especially leaders, assistant professors and undergraduate students, while other categories such as professors and graduate students focus a high percentage on collecting feedback to analyze the audience's interaction with artistic production.

The results of Table (10) show that the category of professors is most aware and interested in collecting information systematically and continuously. While the leadership category distributes its interests differently between interest and limited follow-up, undergraduate and graduate students show good enthusiasm to follow trends, although there is a significant percentage that does not actively seek future information.

The overall situation reflects the need to foster a culture of proactive research and technical foresight, especially among younger or new to the field.

6.1.3.2 Interpretation of differences between categories

- The high level of awareness among professors is due to **the long experience and intensive academic and professional exposure** to modern digital arts.

- Administrative categories (leaders), despite their organizational status, need **continuous updating** of their applied knowledge to keep pace with digital development.
- Undergraduate and graduate students show **a promising trend** towards an interest in digital arts, but they need systematic training programs to increase applied skill and deepen analytical and critical thinking about future trends.

6.1.3.3 Scientific recommendations

1. **Enhancing hands-on** training on the production of digital artworks through specialized workshops for all groups, with a focus on skills dealing with digital tools and virtual platforms.
2. **Developing future foresight skills** through academic courses that combine technical analysis, the study of global trends, and the use of artificial intelligence techniques in the arts.
3. **Establishing research centers** within technical colleges concerned with monitoring digital transformations in the arts and training students on field research and data analysis.
4. **Integrate future foresight strategies** into the curricula of arts programs, especially in art criticism and cultural management courses.
5. **Create an advanced digital environment** within educational institutions by improving the digital infrastructure and facilitating access to e-learning resources.

6.1.3.4 Analytical conclusion

The results of the third pillar reveal that different academic groups show varying levels of awareness and knowledge of digital arts and their future trends, which confirms the need for integrated development plans to bridge the gap between theoretical knowledge and practical application. Developing a culture of proactive research, fostering analytical thinking related to the digital era, and supporting artistic innovation through advanced electronic platforms is the cornerstone of achieving leadership in the field of digital arts in the next decade.

Thus, the next phase requires strengthening the partnership between academic, artistic and technical frameworks to establish a generation of artists who are able to lead the electronic art scene with awareness, innovation and thoughtful foresight for the future.

6.1.4 Fourth Theme: Leadership and Forward-looking Vision for the Arts

E-leadership has become a vital tool in guiding and developing technical and academic institutions.

This theme focuses on studying the methods of formulating leadership goals among the study sample, their attitude towards the importance of digital leadership, and the leadership styles they adopt in their work. It also analyzes their ability to anticipate the

future and adapt to changes in the artistic work environment, reflecting their professional and leadership maturity in the era of digital transformation.

6.1.4.1 Analysis of the answers:

- **The importance of e-leadership:** The results of Table (11) showed that the majority of the sample is aware of the importance of e-leadership in the field of arts. It was noted that the younger groups (master's and bachelor's students) showed high awareness compared to the academic leadership groups (assistant professor and professor), which indicates the need to promote a culture of digital transformation among some older academic groups.
- **Leadership style preferences:** Table (12) highlighted a variation in leadership style preferences between groups, with servant and democratic leadership being the most preferred, followed by transformational leadership among professors. Relative tendencies towards laissez-faire and transactional approaches have also emerged between some students and assistant professors, reflecting the importance of adopting flexible participatory leadership styles in the academic environment.
- **Dealing with different leaders:** The analysis of open answers showed five main axes: positive interaction, communication and dialogue, adaptation and flexibility, acceptance of different opinions, and the adoption of negotiation as a means of resolving leadership differences.
- **Qualities of a leader in the arts:** The concept of "flexibility" topped the list of qualities required, along with effective communication skills, social intelligence, decision-making ability, wisdom, cooperation, respect, and broad culture.
- **Change of leadership between the real and virtual worlds:** According to Table (13), most groups agree that leadership styles differ between the real and virtual worlds, with complete consensus among the assistant professor category.
- **Strategic foresight for technical leadership:** The sample responses were divided into several axes, most notably: the importance of foresight to anticipate challenges, the role of artificial intelligence, the weakness of information systems in the technical field, and the need to build academic and administrative capabilities capable of facing the future.
- **Time dimensions in leadership:** Table (14) showed that most of the participants focus on the near future (within 5 years), with little interest in long-term planning, and Table (15) showed a high awareness of the need to evoke the past, present and future when making a decision, and Table (16) stressed the importance of employing historical experience in electronic leadership for the arts.
- **Definition of Strategic Foresight in Arts Leadership:** The responses agreed that strategic foresight represents a smart proactive process based on future

analysis, integration of modern technology, continuous development of technical and administrative skills, while striving for the sustainable development of the arts.

- **Electronic leadership in the field of arts:** From Table (17), strong support for digital transformation emerged in the college, with some reservations resulting from the absence of clear implementation plans, and Table (18) indicated the limited practical experience of e-leadership, especially among smaller groups, which requires intensive training programs, and from Table (19), a strong tendency to accept e-leadership, with some challenges related to infrastructure and training.
- **E-Leadership Challenges:** The main challenges were: rapid technical developments, protection of digital intellectual property, weak acceptance of digital arts by older generations, poor administrative and technical training, and marketing and economic difficulties.
- **Future opportunities:** Opportunities are: market expansion, professional development, improved mental health and education through digital arts, opportunities for artistic innovation using virtual reality, as well as the development of digital intellectual property protection mechanisms.

6.1.4.2 Interpretation of differences between categories

- Younger age groups showed greater awareness of the importance of digital leadership, as a result of their direct contact with new technologies, compared to higher academic groups that showed some hesitation.
- Higher academic categories (professor, assistant professor) tend to prefer transformational leadership styles, while student groups tend to prefer democratic and servant styles.
- Belief in long-term foresight was disparated, with students showing less interest in long-term planning than professors who showed greater awareness of time dimensions.
- Higher career groups were more aware of the need to incorporate historical experience into leadership decisions than students who focused on the present moment and the near future.

6.1.4.3 Scientific recommendations

- **Promoting a culture of digital leadership** through continuous training programs for academic and administrative groups.
- **Integrate strategic foresight skills** into academic curricula and staff development plans.
- **Developing an advanced technological infrastructure** to support e-leadership in technical institutions.

- **Design flexible future strategic plans** that take into account technical and social changes.
- **Encouraging scientific research** in the fields of e-leadership and digital arts.
- **Enhancing students' awareness** of the importance of time dimensions through workshops and applied projects.
- **Supporting the intellectual property protection** of digital works of art with clear legislation and modern technologies.
- **Developing social intelligence and participatory leadership skills** as an essential part of leadership qualification programs.

6.1.4.4 Analytical conclusion

The results of the study reveal a growing awareness among the study sample of the importance of e-leadership and strategic foresight in the field of arts, despite the existence of some differences between age and career groups. The results also indicate that there are significant opportunities to develop leadership performance by investing in modern technology, promoting a culture of foresight, and building flexible educational and technical environments capable of adapting to future changes.

The integration of temporal dimensions (past, present, future) is a necessary basis for rational and sustainable leadership decisions in the digital art field, which requires strengthening institutional and individual efforts to create an environment capable of embracing digital transformation and achieving creative excellence in the future.

The results of the study:

- 1- Raising awareness of the importance of e-leadership, especially among students.
- 2- Preference for servant and democratic leadership styles.
- 3- Diverge vision between administrative and academic categories on time dimensions and strategic foresight.
- 4- Challenges associated with digital infrastructure and weak intellectual protection of electronic artworks.

Recommendations:

- Enhancing the culture of e-leadership through training programs.
- Development of technological infrastructure of technical institutions.
- Adopting flexible forward-looking methodologies to support strategic decisions in digital arts.

References:

First: References in Arabic

١. الخطيب، نضال. (2020). القيادة الإلكترونية في المؤسسات التعليمية: المفهوم، التحديات، والفرص. المجلة العربية لضمان الجودة في التعليم الجامعي، العدد ١٧.

٢. حسن، آمنة. (2021). *التحول الرقمي واستشراف المستقبل في التعليم الفني*. مجلة دراسات تربوية وفنية، كلية التربية النوعية – جامعة القاهرة.
٣. السعدي، منى. (2019). *أثر الأبعاد الزمنية في اتخاذ القرار الإداري*. المجلة العربية للإدارة، المنظمة العربية للتنمية الإدارية.
٤. الزيد، أحمد. (2022). *الاستشراف الاستراتيجي ودوره في تحسين الأداء المؤسسي*. المجلة العربية للدراسات المستقبلية، جامعة نايف العربية.

Second: References in English

5. Avolio, B. J., & Kahai, S. S. (2003). Adding the “E” to E-Leadership: How it may impact your leadership. *Organizational Dynamics*, 31(4), 325–338.
[https://doi.org/10.1016/S0090-2616\(02\)00133-X](https://doi.org/10.1016/S0090-2616(02)00133-X)
6. Fullan, M. (2001). *Leading in a culture of change*. Jossey-Bass.
7. Glenn, J. C., & Gordon, T. J. (2009). *Futures research methodology* (Version 3.0). The Millennium Project.
8. OECD. (2020). *Trends shaping education 2020*. OECD Publishing.
https://doi.org/10.1787/trends_edu-2020-en
9. Schwartz, P. (1991). *The art of the long view: Planning for the future in an uncertain world*. Doubleday.

Supplements:

Questions of the first axis Art Production and Marketing in the Digital Age							
	Table No. (1) Age						
	Above 60	50: 60	40: 50	30: 40	20: 30	Answer number	Category
	7	9	2			18	leadership
	15	15	15			45	professor
		16	16	16		48	Assistant Professor
			30	15		45	teacher
				27	36	63	Graduate
					100	100	Bachelor
	22	40	63	58	136	319	Total
	Table (2) The first question: "Do you produce art?"						
No	May be	Yes	Category				
22%	%11	%67	leadership				
-	%33	%67	professor				
-	%25	%75	Assistant Professor				
-	%33	%67	teacher				
67%	-	%33	Graduate				
-	%30	%70	Bachelor				
17%	%21	%62	Total				
Table No. (3) The second question "How do you market your artwork?"							
- Another way to follow marketing	-My fame in the field of arts provides me with different	- Do not prefer to market your artwork.	- Through Internet marketing pages.	- Through exhibitions and galleries.			

		marketing opportunities.				
6%	%٢٨	%٣٨	%٦	%٢٢	leadership	
-	-	%٢٠	%٢٠	%٦٠	professor	
-	-	%٥٠	%٢٥	%٢٥	Assistant Professor	
33%	-	%٣٣	-	%٣٤	teacher	
-	-	%١٩	%٥٧	%٢٤	Graduate	
-	-	%٢٠	%٤٠	%٣٠	Bachelor	
6%	%٥	%٣١	%٢٧	%٣١	Total	

The second theme questions are digital experiences and the extent of interaction with e-marketing programs

Table No. (4) Do you have experience in dealing with virtual communication pages?					
Acceptable	Medium	Fairly good	Excellent	Category	
11%	%١١	%٤٥	%٣٣	leadership	
-	-	%٦٧	%٣٣	professor	
25%	%٢٥	%٣٨	%١٢	Assistant Professor	
-	-	%٦٧	%٣٣	teacher	
19%	%٣٣	%١٤	%٣٤	Graduate	
-	%٣٠	%٣٠	%٤٠	Bachelor	
10%	%١٨	%٤١	%٣١	Total	

Table (5) Do you shop through the web pages?			
No	May be	Yes	Category
7%	%٣٣	%٦٠	leadership
-	%٦٧	%٣٣	professor
		100%	Assistant Professor
	33%	%٦٧	teacher
	67%	%٣٣	Graduate
	60%	%٤٠	Bachelor
2%	%٤٣	%٥٥	Total

Table No. (6) When marketing your artwork, you prefer to deal with:			
Dealing with individuals directly	Gallery and exhibitions. and competitions	Websites	Answer
60%	%٢٠	%٢٠	leadership
-	%٣٣	%٦٧	professor
24%	%٣٨	%٣٨	Assistant Professor
67%	%٣٣	-	teacher
19%	%٥٧	%٢٤	Graduate
20%	%٤٠	%٤٠	Bachelor

Table No. (7) Do you produce digital artworks?				
sum	No	May be	Yes	Answer
100	%٥٤	%١٣	%٣٣	leadership
100%		%٣٣	%٦٧	professor
100%	%٦٣	%١٢	%٢٥	Assistant Professor
100%	%١٠٠	-	-	teacher
100%	%٩٠	-	%١٠	Graduate
100%	%٩٠	-	%١٠	Bachelor

If yes, how many years of experience have you had in the field of electronic arts?

From 20:30	From 10:20	From 5:10	Answer
25%	%٣٣	%٤٢	leadership
0	%٦٧	%٣٣	professor
0	.	%١٠٠	Assistant Professor
0	.	.	teacher
		100%	Graduate
		100%	Bachelor

Third Theme: Understanding Digital Arts and Level of Awareness of Future

Trends				
Table (8) I'm not sure what digital artwork is.				
Of course I know	I trained, but I didn't practice in practice.	Auditory knowledge	At all	Answer
44%	%١٢	%٢٥	%١٩	leadership
100%	-	-	-	professor
38%		%١٢	%٥٠	Assistant Professor
83%		%١٧		teacher
	5%	%٣٨	%٥٧	Graduate
-	%١٠٠	%٣٠	%٦٠	Bachelor
Table No. (9) What is the purpose of displaying artworks through social networking pages?				
Another reason	Collect feedback from artwork respondents	Display them to the public to taste		Answer
20%	%٢٠	%٦٠		leadership
-	%٧٧	%٢٣		professor
25%		%٧٥		Assistant Professor
33%	%٣٣	%٣٤		teacher
	67%	%٣٣		Graduate
	30%	%٧٠		Bachelor
Table 10 How can you stay informed of emerging trends and future developments in the arts?				
I have a structured process of gathering information about future developments.	I often seek information about future developments.	Sometimes I ask others for information about future developments.	I am not seeking information about future developments	Answer
27%	27 %	%33	%13	leadership
33%	67%			professor
	36%	36%	28%	Assistant Professor
	67%		33%	teacher
28%	38%	10%	24%	Graduate
	%50	%10	%40	Bachelor
Fourth Theme: Leadership and Forward-looking Vision for the Arts				
Table No. (11) Is electronic leadership important in the field of arts?				
I don't know	No	May be	Yes	Answer
6%		%٤٧	%٤٧	leadership
		33%	%٦٧	professor
		50%	%٥٠	Assistant Professor
		33%	%٦٧	teacher
			100%	Master
	11%	%١٧	%٧٢	Bachelor
Table (13) Do driving styles change between the real and virtual worlds?				
No	Not sure	sure		Answer
12%	%٣٨	%٤٤		leadership
33%		%٦٧		professor
		100%		Assistant Professor
	33%	%٦٧		teacher
	25%	%٧٥		Master

					6%	%٢٢	%٢٢	Bachelor	
Table No. (12) What is your driving style?									
Bachelor	Graduate	teacher	Assistant Professor	Professor	leadership				
22%	%١٠٠	%٣٣	%٣٨	-	%٢٧	is a management style Servant leadership that helps you build strong teams of members who feel satisfied personally and quality-professionally, and contribute to high work that helps your company succeed, puts the needs of the team first, and thus you get the level of team satisfaction in order to achieve productive efficiency, and creates a work environment in which everyone feels our respected and appreciated, and thus y company has strong work cultures with high .morale			
39%	-	%٣٣	%٣٨	-	%٣٢	Also known as Democratic leadership participatory leadership: It is a style of leadership in which all team members work together to make decisions, where everyone is .encouraged to participate			
				67%	27%	The Transformational leadership transformational leadership style is similar to the trainer's style in that it focuses on clear communication, setting goals, and motivating putting the employee. However, rather than the majority of energy into each trainee's individual goals, the transformational leader is driven by a commitment to organizational .goals			
17%						A transaction leader is someone Transactions who lasers focused on performance, similar to speed regulator. Under this leadership style, a —the manager sets predetermined incentives usually in the form of a financial reward for .success and disciplinary action for failure			
11%			12%			also known as A policy of laissez leadership, where delegated or passive off and allow team -leaders are hands members to make decisions, researchers have found that this leadership style leads to less .productivity among team members			
11%		34%		33%	7%	Training leadership differs from other Training ends on a collaborative methods, it dep partnership centered on achieving goals, it has become the preferred leadership style by many companies, institutions or organizations ... Looking to improve employee satisfaction and workplace culture, training is investment in talent because often seen as an it employs education and boosts overall .morale			
			12%			Bureaucratic leaders are similar to Bureaucrat authoritarian leaders in that they expect their team members to strictly follow rules and .procedures as written			
					7%	is a Autocratic or authoritarian leadership management style in which a leader alone has the power to make decisions without interference from others. Inputs are not always .necessary			

Table No. (14) What are the time dimensions that you should consider when making strategic decisions?				
- I'm not sure what the strategic vision is.	- The distant future is more than 10 years.	- The near future is at most 5 years away.	-Present	Answer
13%	%٢٧	%٦٠		leadership
	33%	%٦٧		professor
	12%	%٦٣	%٢٠	Assistant Professor
		100%		teacher
		75%	%٢٠	Master
22%	%١٧	%٥٠	%١١	Bachelor

Table No. (15) How important is it to consider the temporal dimensions (past, present, future) in your leadership decisions in the field of electronic arts?			
very important	Somewhat important	Not important at all	Answer
73%	%٢٠	%٦	leadership
100%			professor
38%	%١٢	%٥٠	Assistant Professor
67%	%٣٣		teacher
100%			Master
83%	%١٧	-	Bachelor

Table No. (16) Do you incorporate historical knowledge and lessons learned from the past into your leadership approach?				
I rely heavily on historical knowledge.	I often refer to historical knowledge.	Sometimes I refer to historical knowledge.	I don't care about historical knowledge.	Answer
27%	%٥٣	%٢٠		leadership
67%	%٣٣			professor
	25%	%٢٥	%٥٠	Assistant Professor
34%	%٣٣	%٣٣		teacher
			100%	Master
44%	%٤٤	%١٢	-	Bachelor

Table No. (17) Can the College of Art Education, as one of the arts institutions, turn to electronic driving?			
No	May be	Yes	Answer
6%	%١٩	%٧٥	leadership
	33%	%٦٧	professor
12%	%٣٨	%٥٠	Assistant Professor
	33%	%٦٧	teacher
	25%	%٧٥	Master
-	%٢٨	%٧٢	Bachelor

Table No. (18) Did you deal as an electronic leader in the field of arts?			
No	May be	Yes	Answer
60%	%١٣	%٢٧	leadership
	33%	%٦٧	professor
62%	%٢٥	%١٣	Assistant Professor
67%	%٣٣		teacher
75%	%٢٥		Master
94%	%٦		Bachelor

Table No. (29) From your point of view, is it possible to apply electronic leadership in the field of arts in general?			
No	May be	Yes	Answer
6%	%١٩	%٧٥	leadership
		100%	Professor without leadership
24%	%٣٨	%٣٨	Assistant Professor without leadership
	30%	%٧٠	Teacher without leadership
	25%	%٧٥	Master
%٢	%٢٥	%٨٣	Bachelor