Educational Administration: Theory and Practice
2025, 31(2), 461-479
ISSN: 2148-2403
https://kuey.net/

Research Article

Perceptions of Educational Staff about the Role of Artificial Intelligence in Supporting Art Therapy in the School Environment

Sana Waleed Rashed[1], Dr. Yousef Jaber Alawneh[2*]

[1]Master's Student, An-Najah National University, Nablus, Palestine
[2*]Faculty of Humanities and Educational Sciences, An-Najah National University, Nablus

***Corresponding Mentor: Dr. Yousef Jaber Alawneh**,
E-mail: yousef.alawneh@najah.edu

Citation Dr. Yousef Jaber Alawneh, et al .(2025). Perceptions of Educational Staff about the Role of Artificial Intelligence in Supporting Art Therapy in the School Environment, *Educational Administration: Theory and Practice*, 31(2) 461-479
Doi: 10.53555/kuey.v31i2.11215

ARTICLE INFO

ABSTRACT

This study aimed to explore the perceptions of educational staff regarding the role of artificial intelligence in supporting art therapy as part of a comprehensive educational and therapeutic support system within the school environment. It focused on the challenges and future perspectives related to integrating smart technologies into psycho-educational programs. The study adopted a mixed-method approach (quantitative and qualitative descriptive design). Data were collected through a questionnaire consisting of 25 items, distributed to a sample of 101 members of educational staff, in addition to semi-structured interviews conducted with 12 participants, including teachers, counselors, and art therapists.

The results showed that participants' perceptions toward artificial intelligence were at a high level (overall mean = 3.81), reflecting a positive attitude toward its integration in educational therapy programs, while emphasizing the importance of human supervision and maintaining a balance between technology and human interaction. The findings also indicated no statistically significant differences attributed to gender, school type, years of experience, or professional role.

The qualitative interviews revealed that the main challenges lie in the lack of training and technical readiness, weak infrastructure, and concerns about privacy and digital ethics. On the other hand, participants expressed cautious optimism about the future of integration, provided that artificial intelligence remains a supportive tool rather than a replacement for teachers and therapists.

The study recommends strengthening professional training for educational staff, developing clear policies for the ethical use of smart technologies in therapeutic and educational contexts, and conducting more applied studies in this field.

Keywords: Artificial intelligence, art therapy, multi-tiered system of support, educational staff, smart education, digital ethics.

Introduction

Modern education is undergoing a deep transformation in its structure and teaching approaches due to the rapid development of artificial intelligence technologies. Today, AI has become a key element in redefining the relationship between teachers and learners and in building learning environments based on predictive analysis and personalized learning. AI systems are capable of analyzing students' behavioral and emotional data, suggesting precise educational or therapeutic interventions that consider individual differences and support mental well-being at the same time (Prilop et al., 2025; He & Zhang, 2025).

This transformation is not limited to developing content or teaching techniques but extends to reshaping the very philosophy of education itself—toward an integrated model that combines the human and technological dimensions and enhances interaction and creativity in the educational process (Al-Zouman Al-Azmi & Al-Sharah, 2023; Khalaf, 2023).

In this context, **art therapy** emerges as one of the educational and therapeutic approaches that aligns closely with the goals of artificial intelligence in supporting students' emotional and psychological development. Art therapy is an effective method of expressing emotions and stress in non-verbal ways, helping to build communication skills, self-esteem, and emotional flexibility (Moula et al., 2023; Malchiodi, 2012). With digital advancement, AI-based applications have started to make a significant leap in this field by analyzing drawings, colors, and visual symbols, linking them to psychological and behavioral indicators. This allows for a deeper understanding of emotional states and helps therapists design more precise interventions (Kim et al., 2024; Luo et al., 2024).

Modern educational environments have become more open to integrating these creative tools within the **multi-tiered system of support (MTSS)**, which is based on prevention, continuous assessment, and early multi-level intervention (Sugai & Simonsen, 2012). Within this framework, AI contributes to improving decision-making in schools by monitoring emotional and behavioral changes in students and supporting the implementation of art therapy programs as part of psychological and social support at the second and third levels of the model (Yeasmin et al., 2025; Yilma et al., 2025).

Interactive applications such as the **DeepThInk system** have proven their ability to enhance collaborative artistic expression between humans and machines, increasing students' emotional engagement and providing broader opportunities for creative thinking and self-reflection (Du et al., 2024). Educational experiments in visual arts have also shown that using **generative AI tools**—such as text-to-image transformation and style transfer—helps learners develop aesthetic sensitivity and understand the cultural values of art within a stimulating digital learning environment (Bougzoula, 2024; Al-Hindum, 2024).

Despite the vast potential of these technologies, their actual acceptance in schools remains tied to the awareness and confidence of educational staff in their value. Evidence shows that the attitudes of teachers and therapists are crucial for the success of any educational innovation. The higher the level of digital competence and ethical awareness among staff, the more effective the integration of AI in education and therapy (Al-Ibrahim, 2024; Petrucco et al., 2025; Yim & Wegerif, 2024). However, challenges such as limited training, weak infrastructure, and fears of losing the human dimension still hinder the shift toward smart therapeutic and learning environments (Al-Shanawi, 2024; Ja'wani & Al-Kaabi, 2024).

Accordingly, this research gains its significance from analyzing the **perceptions of educational staff** toward the use of AI in supporting art therapy in schools, as a modern approach that integrates technology with the psychological and educational dimensions within a comprehensive therapeutic framework. The study also seeks to understand the factors that facilitate or hinder this integration, aiming to help build an intelligent therapeutic school that meets students' emotional and social needs—combining art and technology to create a creative, human-centered, and knowledge-based learning environment that promotes well-being.

Research Problem

In recent decades, there has been a noticeable expansion in the use of artificial intelligence within educational and therapeutic institutions. These technologies have become a central element in supporting the educational and instructional process through data analysis, personalized learning, and real-time monitoring of students' academic and psychological status (Prilop et al., 2025; Liu et al., 2025).

At the same time, **art therapy** has emerged as one of the most effective psychological approaches for promoting emotional and mental well-being among learners—especially younger students who may struggle to express their feelings verbally or cope with stress and trauma (Moula et al., 2023; Malchiodi, 2012).

With the growing interest in educational innovation, global efforts have begun to combine **art therapy and artificial intelligence** to build interactive and personalized therapeutic learning environments (Shojaei et al., 2024; Du et al., 2024; Yilma et al., 2025). However, this integration is still in its early experimental stages, and its effectiveness and practical frameworks in the school environment remain unclear—particularly within the **multi-tiered system of support (MTSS)**, which requires coordination among academic, psychological, and behavioral dimensions (Yeasmin et al., 2025).

Recent literature points to a clear ambiguity and diversity in the attitudes of educational staff toward the use of AI in therapeutic and educational contexts. International studies have shown that teachers' and counselors' acceptance of technology is influenced by complex cognitive, ethical, and institutional factors—such as their trust in technology, competence in using it, and its alignment with human values in education (Yim & Wegerif, 2024; Petrucco et al., 2025; Verboom et al., 2025). Other studies (Kim et al., 2024; Luo et al., 2024) have noted that AI applications in art-based psychotherapy still lack standardized evaluation models to determine their effect on emotional interaction and psychological improvement.

In the **Arab context**, evidence shows a clear shortage of research exploring the integration of AI with art therapy in schools, despite the growing discussion around digital transformation in education. Most Arab studies have focused on using AI to improve curricula or enhance teachers' skills, without addressing its role in emotional or therapeutic dimensions (Al-Zouman Al-Azmi & Al-Sharah, 2023; Khalaf, 2023; Al-Ibrahim, 2024; Ja'wani & Al-Kaabi, 2024). Bougzoula (2024) and Al-Hindum (2024) also pointed out that AI can

support artistic creativity and aesthetic identity among students, yet its use as a therapeutic tool within psychological and educational support programs remains largely absent from Arab educational practice.
Accordingly, the **research gap** lies in the absence of in-depth Arab educational studies exploring the perceptions and attitudes of educational staff—including teachers, psychologists, and art therapists—toward integrating AI into art therapy as part of the comprehensive educational and therapeutic support framework in schools. To date, there has been no documentation of how these groups perceive smart technologies in therapeutic contexts, nor of the cultural and institutional challenges that may hinder their implementation in local educational settings.

Therefore, the main problem of this study is to understand **the perceptions and attitudes of educational staff toward integrating artificial intelligence into art therapy** as part of the multi-tiered educational and therapeutic support system. It also seeks to identify the challenges and opportunities involved in this integration, paving the way for developing training programs and policies that enable schools to adopt this approach effectively and ethically while maintaining its human-centered spirit.

Research Questions

Based on the problem and objectives of the study, this research seeks to answer the following questions:
1. What are the perceptions of educational staff (teachers, psychologists, art therapists, and school counselors) regarding the role of artificial intelligence in supporting art therapy as part of the comprehensive educational and therapeutic support system in the school environment?
2. Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in participants' responses regarding their perceptions of the role of artificial intelligence in supporting art therapy within the multi-tiered support system attributed to gender?
3. Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in educational staff perceptions of the role of artificial intelligence in supporting art therapy within the multi-tiered support system attributed to the type of school (public/private)?
4. Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in educational staff perceptions of the role of artificial intelligence in supporting art therapy within the multi-tiered support system attributed to years of experience?
5. Are there statistically significant differences at the level of ($\alpha \leq 0.05$) in educational staff perceptions of the role of artificial intelligence in supporting art therapy within the multi-tiered support system attributed to their professional role (occupation)?
6. What are the educational, technical, and organizational challenges that may hinder the implementation of artificial intelligence in the field of art therapy within schools?
7. How do members of educational staff envision the future of integrating artificial intelligence into therapeutic and educational programs in their schools?
8. Are there professional or educational concerns regarding excessive dependence or overreliance on artificial intelligence in art therapy programs? How can such concerns be addressed educationally to ensure the safe and balanced use of smart technologies in school settings?

Research Objectives

This study aims to gain an in-depth understanding of the role of artificial intelligence in supporting art therapy within the multi-tiered system of educational and therapeutic support in schools through the following objectives:
1. To analyze the perceptions of educational staff (teachers, psychologists, art therapists, and counselors) regarding the importance and role of artificial intelligence in supporting art therapy as part of an integrated educational and therapeutic framework.
2. To identify differences in educational staff perceptions of the role of artificial intelligence in art therapy according to gender, school type (public/private), years of experience, and professional role.
3. To explore the educational, technical, and administrative challenges that may hinder the integration of artificial intelligence into art therapy programs within the school environment, whether related to infrastructure, professional training, or ethical frameworks.
4. To anticipate educational staff perceptions of the future integration of artificial intelligence in therapeutic and educational programs in schools and explore ways to enhance this integration in support of students' psychological and social well-being.
5. To identify potential concerns and risks associated with excessive dependence on artificial intelligence tools in art therapy and propose educational and ethical principles to ensure balanced and safe use of these technologies in school contexts.
6. To provide practical recommendations that can help develop training and professional development programs for educational staff, enabling them to benefit effectively from artificial intelligence in art-based educational support, thereby enhancing students' mental health and creative expression.

Significance of the Study

1. Theoretical Significance

The theoretical importance of this study lies in addressing a contemporary and complex topic—integrating artificial intelligence with art therapy within the comprehensive educational and therapeutic support system in schools, an area that remains underexplored in educational and psychological literature. The study seeks to expand scientific understanding of how AI can be used not only as a teaching tool but also as a medium for psychological support and art-based counseling. It contributes to building a theoretical framework that clarifies the relationship between technology, creativity, and emotional processes in the school environment, strengthening the link between academic and psychological support practices in light of digital transformation in education. Furthermore, it offers a new perspective on the role of educational staff in this transformation by analyzing their perceptions and attitudes toward AI as a therapeutic and educational tool—adding valuable insight to ongoing discussions about the future of smart technologies in education and therapy.

2. Practical Significance

The practical importance of this study stems from its direct relevance to the school context. It seeks to provide empirical data that can guide the development of educational and therapeutic support practices in schools. By exploring educational staff perceptions and professional experiences, the study identifies opportunities and challenges in applying AI to art therapy, enabling the design of suitable training programs that prepare educators to engage responsibly and effectively with such technologies.

The expected results may also help shape new educational directions that encourage integrating technology into psychological and social services, improving students' mental health and enriching the overall learning environment. Moreover, this study can suggest mechanisms to ensure the ethical and balanced use of AI in educational settings—so that it serves as a tool for enhancing human creativity rather than replacing it—thereby promoting harmony between the technical and human dimensions of art-based education and therapy.

Operational Definitions

Artificial Intelligence (AI):

Artificial intelligence is defined as "a set of digital systems and technologies capable of analyzing educational and behavioral data and predicting learners' needs to design personalized interventions that improve the quality of learning and psychological support" (He & Zhang, 2025). In this study, AI refers to the smart tools and platforms used in school settings to analyze students' learning patterns, behaviors, and emotions in order to design educational and therapeutic interventions that enhance their mental health and academic and social engagement within the comprehensive support framework.

Art Therapy:

Art therapy is defined as "a therapeutic and educational approach that uses artistic media as a means of self-expression, emotional awareness, and coping with psychological stress through interactive creative practices" (Shojaei et al., 2024). In this study, art therapy refers to the use of creative activities—such as drawing, painting, and digital sculpting—in the school environment as a way to support students' emotional expression and mental health, whether through direct therapy sessions or AI-supported digital tools.

Multi-Tiered System of Support (MTSS):

The MTSS is defined as "an integrated educational framework that provides tiered interventions based on students' individual levels of need, covering academic, emotional, and behavioral dimensions through ongoing assessment and intervention" (Yeasmin et al., 2025). In this study, MTSS refers to the system through which AI and art therapy are integrated to deliver comprehensive educational and psychological services in schools, ensuring interventions are tailored to each student's needs to enhance their well-being and academic performance.

Educational Staff:

Educational staff refers to "all individuals working in schools, including teachers, psychologists, counselors, and art therapists, who contribute simultaneously to educational and therapeutic processes" (Prilop et al., 2025). In this study, the term refers to all school-based personnel involved in implementing or supporting the use of AI and art therapy, whose perceptions and attitudes toward this integration are examined within the framework of comprehensive educational and therapeutic support.

Previous Studies

The study by **Al-Zouman Al-Azmi and Al-Sharah (2023)** aimed to explore the role that artificial intelligence (AI) applications can play in developing the educational process in the field of art education in general, and specifically in teaching metalwork art. The researchers adopted a **descriptive analytical approach** through three main axes: (1) the concept, characteristics, and importance of AI in art education, (2) the areas and applications of AI in education, and (3) the potential of using AI to improve the teaching of metalwork art. The findings revealed that AI applications represent an effective approach to modernizing art

education curricula and increasing the efficiency of e-learning strategies through **visual interaction and digital simulation**. They also contribute to fostering students' artistic creativity and enhancing teachers' ability to plan the educational process using intelligent technologies.

The study by **Khalaf (2023)** aimed to identify the role of AI applications in developing educational and pedagogical skills in the Arab world and to examine their impact on traditional education systems. The researcher used a **descriptive survey method**, collecting data through a questionnaire administered to a sample of **140 university professors** from Arab universities. The results showed that participants' perceptions of AI applications in education were at a **moderate level**, although these applications clearly contributed to improving educational skills more effectively than traditional methods. The findings also indicated that AI enhances learners' engagement and enjoyment, making the learning process more dynamic and effective. However, potential technical and security barriers were highlighted, such as risks of hacking or self-replicating viruses that could affect smart systems. Significant differences were found according to **experience and age**, suggesting that younger and less experienced educators are more willing to adopt AI in education.

The study by **Al-Ansari, Al-Harshani, and Awad (2023)** aimed to examine the role of school administration in promoting AI literacy among general education students and to identify differences according to gender, educational stage, years of service, and educational region. Using a **descriptive survey method**, the researchers applied a questionnaire to **496 teachers** selected randomly from different educational regions in Kuwait. Results showed that the role of school administration in promoting AI culture was **moderate**, with significant differences based on years of service (favoring those with 10–15 years of experience) and educational level (favoring secondary education), while no differences appeared by gender or region.

The study by **Moula et al. (2023)** aimed to evaluate the effectiveness of school-based art therapy from the perspective of children themselves through a **pilot randomized controlled trial (RCT)**. The study tested the feasibility of implementing an integrated art therapy model in real school settings, focusing on both **process evaluation** and **outcome evaluation**. The sample included **62 children**, of whom 16 received art therapy sessions within a broader school art-based therapy program conducted in several British schools. Results showed that the greatest impact of art therapy was creating a **"safe space"** for emotional expression, stress relief, psychological comfort, and self-empowerment. Although quantitative improvements did not reach statistical significance, the benefits persisted a year after the intervention, indicating long-term positive psychological effects. Children rated the sessions highly (9/10), reflecting strong satisfaction and engagement.

The study by **Al-Hindum (2024)** aimed to investigate the **innovative effects of AI use in developing artistic creativity and aesthetic identity** among art students and to explore human–machine interaction in producing contemporary visual artworks. The researcher adopted an **experimental method** with a stratified random sample of **20 fourth-year students** from the Faculty of Specific Education, Alexandria University. The experiment consisted of two phases: traditional hand drawing (pre-test) on humanistic themes such as the Palestinian cause, and re-creating the works using **AI generative techniques**, including **Convolutional Neural Networks (CNNs)**, **Neural Style Transfer (NST)**, and **Text-to-Image generation**. The findings revealed that AI as a creative tool broadened students' artistic horizons, enhanced critical thinking, and encouraged artistic experimentation without diminishing the artist's human role. It also strengthened their intellectual independence and artistic identity, as they reinterpreted social issues like the Palestinian cause in contemporary digital artworks with deep human and cultural dimensions.

The study by **Al-Ibrahim (2024)** examined the perceptions of female faculty members at the College of Education toward using **generative AI tools (ChatGPT)** in university education and their readiness to adopt them. Using a **descriptive survey approach**, a questionnaire was applied to **48 participants**. Data were analyzed using SPSS to compute means, standard deviations, and significance of differences across academic specialization, rank, and experience. The results showed that perceptions toward generative AI in education were **moderate to high**. Participants viewed ChatGPT as an innovative educational tool that enhances self-learning and academic interaction, yet emphasized the need for clear ethical guidelines and training in safe and effective use. Significant differences were found in perceptions by experience level, in favor of those with less than ten years of experience, reflecting the younger generation's greater openness to technological adoption.

The study by **Bougzoula (2024)** sought to highlight the role of AI applications in developing **visual arts education** based on the **Discipline-Based Art Education (DBAE)** framework. The researcher used a **descriptive analytical method** to examine digital platforms and AI tools used in art education, such as **Study Monkey** for interactive learning activities, **AR Histoire de l'Art – Artly** for teaching art history through augmented reality, and **Midjourney** for generating digital artworks via generative AI. The findings showed that AI enhances students' creativity and engagement and provides a **rich digital learning environment** that helps them understand the aesthetic and historical values of art through interactive simulation.

The study by **Al-Shenawi (2024)** explored the educational and creative role of AI in **fine arts**, emphasizing the challenges of using it as an educational medium. The researcher noted that although AI can produce high-quality digital artworks, **human creativity remains central** to artistic expression, as machines cannot replicate human emotions. Using a **descriptive analytical approach**, the study discussed the relationship

between the artist's creative intelligence and AI techniques in both two-dimensional and three-dimensional artistic expression. The results showed that AI serves as a **stimulating educational medium** that promotes creativity rather than replacing the artist or teacher. It can be used effectively for visual data analysis and designing precise, high-quality art applications, but it cannot substitute genuine human creativity.

The study by **Shojaei et al. (2024)** explored the perspectives of art therapists on integrating **AI-based generative tools** into art therapy practice, focusing on how these tools influence the therapeutic process and the client–therapist relationship. Using a **mixed-methods co-design approach**, the study engaged **10 art therapists** from the American Art Therapy Association (AATA) through interviews conducted between August and October 2023. A prototype consisting of AI-generated word and image cards was introduced to stimulate creative expression. The findings indicated that AI integration increased interaction and creativity within sessions and improved accessibility to therapy, especially for clients with linguistic or communication barriers.

The study by **Kim et al. (2024)** explored the **AI approach to psychological assessment** in art therapy by analyzing hand-drawn artworks using AI tools to extract quantitative indicators such as line patterns, colors, and spatial distribution for classifying and estimating mental states. Results showed that AI outperformed traditional statistical methods in predicting participants' psychological states and provided deeper interpretive insights into the emotional processes underlying artistic expression.

The systematic review by **Luo et al. (2024)** evaluated the **effectiveness and ethical dimensions** of **AI-based art therapies (AIATs)** in mental health care as a hybrid of digital technology and traditional art therapy. Following PRISMA guidelines, the authors reviewed studies from PubMed, Cochrane Library, Web of Science, and CNKI, identifying **15 high-quality studies** according to Joanna Briggs Institute (JBI) standards. The findings revealed that AIATs—such as **robot-assisted art therapy**, **AI-assisted drawing**, and **therapeutic chatbots**—enhance creativity, emotional expression, and the effectiveness of psychological interventions.

In the study by **Du et al. (2024)**, the researchers developed an innovative system called **DeepThInk**, an AI-powered digital art therapy platform designed to enhance creativity and emotional expression in digital art therapy sessions. Conducted over **10 months** with **five certified art therapists**, the system allowed human–AI collaboration in creating digital artworks and supported therapists through visual and quantitative monitoring of clients' emotional progress. Results showed that **Human–AI Co-Creation** strengthened emotional engagement, creative involvement, and personal empowerment among participants while improving therapists' ability to interpret artistic symbols more accurately.

The study by **Peng et al. (2025)** explored how **generative AI** stimulates **emotional engagement among adolescents** in digital art therapy programs. Using a **cross-sectional design**, data were collected from **444 students** in Hubei Province, China, and analyzed through **Structural Equation Modeling (SEM)** and **Artificial Neural Networks (ANN)**. Results showed that perceived usefulness, ease of use, enjoyment, and trust significantly influenced attitudes toward use ($p < 0.001$). Attitude toward use was the strongest predictor of engagement (100% in ANN analysis), followed by perceived enjoyment (19.3%).

The study by **He and Zhang (2025)** aimed to develop a **Generative Adversarial Networks (GANs)-based educational system** to support artistic creativity and student engagement in digital art learning. Applied to a sample of **60 fine arts students**, the system transformed semantic sketches into full artworks, transferred artistic styles, and provided instant visual feedback. Results showed a **35.4% improvement** in artistic quality and a **42.7% increase** in engagement compared to traditional tools, helping students achieve a balance between creative autonomy and machine support.

Finally, the study by **Yilma et al. (2025)** explored **human–AI collaboration** in **personalized art therapy**, using a **Visual Art Recommendation System (VA RecSys)** designed for patients with **Post-Intensive Care Syndrome (PICS)**. Conducted with **150 participants**, the study found that the **AI–Therapist Duo model** enhanced emotional engagement, therapeutic effectiveness, and personalization of treatment while reducing therapists' workload through automated suggestions of suitable artworks. Participants reported above-average comfort and emotional engagement, confirming that such collaboration represents the future of **creative psychological therapy** through dynamic interaction between human empathy and intelligent visual processing.

Commentary on Previous Studies

The reviewed Arabic and international studies reveal diverse approaches to the intersection of **artificial intelligence, education, and art therapy**. Most focused on enhancing creativity and modernizing education, while others explored AI's potential in psychological and creative therapy. Studies such as **Al-Zouman Al-Azmi and Al-Sharah (2023)**, **Khalaf (2023)**, and **Al-Ansari et al. (2023)** emphasized AI's role in developing art education and promoting its culture in schools, noting challenges related to infrastructure and training. Meanwhile, **Al-Hindum (2024)**, **Bougzoula (2024)**, and **Al-Shenawi (2024)** examined AI's impact on artistic creativity and aesthetic identity, agreeing that AI serves as a supportive tool rather than a substitute for the artist.

In contrast, international studies such as **Moula et al. (2023)**, **Shojaei et al. (2024)**, and **Du et al. (2024)** demonstrated the use of AI and art in psychotherapy, proving its ability to enhance psychological well-being

and emotional engagement. Similarly, **Peng et al. (2025)** and **He & Zhang (2025)** highlighted the effect of generative AI technologies in improving artistic creativity, while **Prilop et al. (2025)** and **Petrucco et al. (2025)** explored teachers' perceptions of AI, underscoring the need for professional and ethical training.
What distinguishes the current study is its integration of these directions by analyzing **educational staff perceptions of AI as a pedagogical and therapeutic tool** in supporting art therapy within the school environment.

Method and Procedures

This chapter is considered one of the most important parts of the research, as it explains the methodological and procedural steps followed in studying the **perceptions of educational staff regarding the role of artificial intelligence in supporting art therapy** within the comprehensive educational and therapeutic support system. It also highlights the scientific foundations on which the researcher relied in designing, administering, and analyzing the study tools, ensuring credibility and objectivity in reaching the results.

Research Methodology

This study employed a **mixed methods approach**, combining both **quantitative and qualitative methods**. This design was chosen due to the nature of the topic, which requires not only objective analysis of numerical data and statistics but also a deeper understanding of human experiences and insights. The mixed-methods approach provided a comprehensive and balanced view of the educational staff's perceptions of the role of artificial intelligence in supporting art therapy as part of the multi-tiered system of educational and therapeutic support.
The **quantitative component** consisted of a structured questionnaire used to collect numerical data about participants' attitudes and awareness levels. The data were analyzed statistically to identify differences across key demographic variables such as gender, school type, years of experience, and professional role.
The **qualitative component** involved open-ended questions and semi-structured interviews designed to explore the psychological and educational depth of participants' experiences and to capture their practical insights and real challenges regarding the use of AI in art therapy within school environments.

Population and Sample

The population of this study included **all educational staff members** working in schools that implement educational and therapeutic support programs. This population comprised **teachers, school counselors, psychologists, art therapists, and professionals** engaged in emotional and social support programs. This population was chosen because of its direct connection to the study's topic, as these individuals interact daily with students' psychological, educational, and social experiences, allowing for an accurate understanding of their perceptions regarding the integration of artificial intelligence into art therapy within the multi-tiered system of support (MTSS).
The **qualitative population** consisted of participants with direct practical experience in implementing educational and therapeutic support programs in schools. These individuals were selected because their field experience and applied knowledge enable them to provide rich and accurate insights into the practical realities, potentials, and challenges of merging AI with art therapy.
For the **quantitative study**, a **purposive sampling method** was used, as the selected participants are directly involved in educational and therapeutic support programs and are interested in using modern technologies, including AI. A total of **105 questionnaires** were distributed, and **101 valid responses** were collected, representing a **96.2% response rate**. The sample was distributed according to demographic variables such as gender, years of experience, type of school, and professional role, as shown in **Table (1)**.
For the **qualitative sample**, a **purposeful sampling** technique was also used. It included **12 participants** representing teachers, counselors, psychologists, and art therapists. The sample size was determined based on the **principle of data saturation**, which occurs when additional interviews no longer yield new or meaningful information.

Table (1): Distribution of Sample Members According to Demographic Variables

Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	21	20.8
	Female	80	79.2
	Total	**101**	**100.0**
Years of Experience	Less than 5 years	24	23.8
	5–10 years	9	8.9
	10–15 years	19	18.8
	More than 15 years	49	48.5
	Total	**101**	**100.0**
Type of School	Public	91	90.1
	Private	10	9.9

	Total	**101**	**100.0**
Professional Role	Teacher	55	54.5
	Emotional Support Specialist	8	7.9
	Teacher/Counselor	4	4.0
	Psychologist	3	3.0
	School Principal	4	4.0
	Other	27	26.7
	Total	**101**	**100.0**

Study Instruments

This study was based on the **mixed methods approach**, which integrates quantitative and qualitative tools for collecting and analyzing data to achieve a comprehensive understanding of the integration of artificial intelligence into art therapy within the school-based support system.

To achieve the research objectives and answer its questions, **two main tools** were used for data collection:

1. **A structured questionnaire** (quantitative component)
2. **Semi-structured interviews** (qualitative component)

For the **quantitative tool**, the researcher developed a **closed-ended questionnaire** consisting of **25 items** distributed across **five main dimensions**. It was designed based on recent educational literature and previous studies related to AI, art therapy, and multi-tiered educational support systems. The questionnaire aimed to measure participants' perceptions and their level of agreement with statements related to the study's topic, using a **five-point Likert scale** ranging from (1 = Strongly Disagree) to (5 = Strongly Agree).

The instrument covered the following dimensions:

- Knowledge and attitudes toward AI in supporting art therapy
- Perceptions of the role of AI in art therapy
- School readiness for AI integration
- Challenges and needs
- Future visions for integrating AI in educational and therapeutic art practices

For the **qualitative tool**, the researcher used **semi-structured interviews** as a complementary method to deepen understanding and interpret quantitative results. These interviews explored real-life experiences and personal reflections of participants on AI integration in educational and therapeutic settings.

An **interview guide** was prepared to cover the same dimensions addressed in the questionnaire, ensuring consistency and complementarity between both instruments and enhancing the credibility of findings. The interviews were conducted with a **purposeful sample of 12 participants**, representing teachers, counselors, psychologists, and art therapists with direct practical experience in implementing support programs and using modern technologies in schools.

Data collection continued until **data saturation** was achieved—when no new ideas or information emerged from additional interviews.

All interviews were **audio-recorded** after obtaining written consent from participants, then **transcribed verbatim** and analyzed using **Thematic Analysis** following the framework of **Braun & Clarke (2006)**. Recurrent patterns and conceptual meanings were identified to capture participants' perceptions and lived experiences related to artificial intelligence and art therapy.

Psychometric Properties of the Instruments

The psychometric properties of the two instruments were verified to ensure their validity and reliability in accurately measuring the perceptions of educational staff regarding the role of artificial intelligence (AI) in supporting art therapy as part of the comprehensive educational and therapeutic support system in schools. These properties included examining both **validity** (face and content validity) and **reliability** for the questionnaire and the semi-structured interview.

1. Face Validity

Face validity was established by presenting the initial version of the questionnaire to a panel of experts specializing in **education, educational technology, educational psychology, and art therapy**. The reviewers were asked to assess the clarity, linguistic accuracy, and relevance of each statement to the objectives of the study. Based on their feedback, minor linguistic modifications and partial rewording were made to some items to enhance clarity and ensure that the questionnaire would be easily understood by the target respondents.

The experts confirmed that the questionnaire items accurately represented the intended constructs and reflected the dimensions of the studied phenomenon, thereby supporting the instrument's **face validity**.

2. Content Validity

Content validity was verified by aligning the questionnaire items with their theoretical dimensions, based on a comprehensive review of the recent literature on artificial intelligence in education (e.g., Bougzoula, 2024; Al-Zouman, Al-Azmi & Al-Sharah, 2023) and art therapy in school contexts (Moula et al., 2023; Luo et al., 2024).

The instrument was then presented to a panel of domain experts who evaluated its comprehensiveness, relevance to the study topic, and coverage of the theoretical domains (knowledge, role, environment, challenges, and future perspectives).
The **inter-rater agreement exceeded 85%**, which is considered a high level of consensus, confirming that the instrument accurately represents the conceptual content of the study and comprehensively covers all theoretical and behavioral dimensions—thus supporting its **content validity**.

3. Reliability of the Quantitative Instrument (Questionnaire)

To ensure the internal consistency of the questionnaire, **Cronbach's Alpha coefficients** were calculated for each of the five dimensions, as well as for the overall scale. Cronbach's Alpha indicates the degree of inter-item correlation within each dimension, with a value of **0.70 or higher** generally considered acceptable.
The results showed **high reliability across all dimensions**, with coefficients ranging between **0.863 and 0.911**, while the overall reliability coefficient reached **0.970**, demonstrating a very high level of internal consistency and stability.

Table (2): Cronbach's Alpha Coefficients for the Study Instrument

Dimension	Number of Items	Cronbach's Alpha
Knowledge and attitudes toward AI in supporting art therapy	5	0.911
Perceptions of the role of AI in art therapy	5	0.911
School readiness for AI integration	5	0.900
Challenges and needs in integrating AI into art therapy	5	0.863
Future perspectives on integrating AI into art therapy	5	0.905
Overall Scale: Educational Staff Perceptions of AI in Supporting Art Therapy	**25**	**0.970**

4. Validity and Reliability of the Qualitative Instrument (Semi-Structured Interviews)

To ensure the **credibility** and **dependability** of the qualitative data obtained from the interviews, systematic procedures were followed in accordance with the recommendations of **Creswell & Plano Clark (2018)** and **Holsti (1969)**:

- **Interpretive Validity:**

The interview guide was reviewed by experts in education, art therapy, and artificial intelligence to ensure that the questions covered the five main dimensions (knowledge, role, environment, challenges, and future perspectives) and were clearly framed within the school context. Pilot interviews were conducted to assess participants' understanding of the questions and to refine them before formal data collection.

- **Construct Validity:**

Each interview question was linked to a specific theoretical dimension of the study, ensuring conceptual alignment between the theoretical framework and the applied investigation.

- **Inter-Coder Reliability:**

To confirm the stability of qualitative data coding, a subset of interview transcripts was independently analyzed by two coders. The level of agreement between them was calculated using **Holsti's Formula**:
Reliability=2MN1+N2\text{Reliability} = \frac{2M}{N_1 + N_2}Reliability=N1+N22M
where M is the number of matching codes between the two coders, and N_1 and N_2 are the total number of codes identified by each coder.
The inter-coder reliability in this study exceeded **0.80**, which is considered scientifically acceptable and indicates a high level of agreement between coders in the thematic categorization of qualitative data.

- **Procedures to Enhance Trustworthiness:**

Triangulation was employed by comparing interview results with the quantitative findings and previous studies, thereby reinforcing interpretive validity and consistency.
Member checking was conducted by sharing preliminary summaries of the analysis with participants to confirm the accuracy of the interpretations of their views.
Additionally, **peer debriefing** was used to ensure analytical neutrality and coherence of findings across the qualitative analysis process.

Statistical and Data Analysis Methods

Given the study's mixed-methods design, both **quantitative and qualitative analytical techniques** were used in an integrated manner.

Quantitative Analysis

The quantitative data obtained from the questionnaires were analyzed using **SPSS (Version 25)** through the following procedures: (Alawneh,et al,2021) Frequencies and percentages were calculated for demographic variables, while means and standard deviations were computed for the five questionnaire dimensions.

- **Reliability Analysis:**

Cronbach's Alpha was calculated to assess the internal consistency of the instrument.

- **Independent Samples T-Test:**

Used to determine differences between means according to binary variables such as gender and type of school.

- **One-Way ANOVA:**

Applied to test for statistically significant differences across multiple categories, such as years of experience and professional role.

Qualitative Analysis

The qualitative data from semi-structured interviews were analyzed using **Thematic Analysis** following the six-phase framework proposed by **Braun & Clarke (2006)**.
This process involved coding the transcribed texts, identifying recurrent patterns, and extracting core themes that corresponded to the five conceptual dimensions of the study.
To enhance reliability and credibility, **triangulation** and **member checking** were again applied, ensuring the accuracy of interpretation and the validity of the final thematic structure.

Results of the Study

This chapter presents a concise summary of the study's findings, derived from the analysis of data collected through the questionnaire and interviews. Both **descriptive** and **inferential statistical methods** were employed to determine the level of educational staff perceptions regarding the role of artificial intelligence (AI) in supporting art therapy within the **comprehensive educational and therapeutic support system**.

First Research Question

What are the perceptions of educational staff regarding the role of artificial intelligence in supporting art therapy as part of the comprehensive educational and therapeutic support system in schools?

To answer this question, means and standard deviations were calculated to analyze participants' responses across the five main dimensions of perception, in addition to the overall composite score. The perception levels were categorized into three ranges: Alawneh,Y.(2022).

- **Low:** (Less than 2.33)
- **Moderate:** (2.34–3.66)
- **High:** (3.67 and above)

Table 3. Means and Standard Deviations of Educational Staff Perceptions by Study Dimensions (N = 101)

Dimension	Mean	Std. Deviation	Perception Level
Knowledge and attitudes toward AI in supporting art therapy	3.66	0.847	Moderately High
The role of AI in supporting art therapy	3.75	0.818	High
School readiness for integrating AI into art therapy	3.97	0.855	High
Challenges and needs related to integrating AI into art therapy	3.86	0.810	High
Future perceptions of integrating AI into art therapy	3.81	0.830	High
Overall Scale: General Perceptions of AI's Role in Supporting Art Therapy	**3.81**	**0.755**	**High**

The results in Table (3) indicate that the **overall perception level** of educational staff regarding the role of artificial intelligence in supporting art therapy as part of the comprehensive educational and therapeutic support system was **high**, with an overall mean of **3.81** and a standard deviation of **0.755**. This finding reflects an increasing awareness among educational professionals of the **importance of AI as a supportive tool** capable of enhancing both educational and therapeutic practices within the school setting.
All five dimensions recorded **high or moderately high** means, suggesting a broad consensus among participants about the positive value of using AI in art therapy. The **highest mean score (3.97)** was observed for the dimension of *school readiness for integrating AI*, indicating that educational environments are becoming increasingly equipped—both organizationally and technologically—to adopt smart technologies in therapeutic programs. This readiness may be attributed to improved digital infrastructure and the growing competence of school staff in engaging with such tools.
The *challenges and needs* dimension also recorded a high mean (3.86), reflecting participants' recognition of the necessity for **supportive policies and specialized training** before large-scale implementation of AI-based art therapy.

Similarly, the *future perceptions* dimension (mean = 3.81) suggests an **optimistic outlook** among participants regarding the transformative potential of AI in advancing psychological and educational support systems. These results may be interpreted as an indication that AI is increasingly perceived as an **assistive analytical instrument** that helps educators and therapists interpret students' artistic and emotional expressions more deeply, thus enabling more accurate and personalized interventions.

The overall high perception levels can also be linked to the **growing digital literacy** among teachers and counselors, and the widespread use of smart educational platforms in recent years, which have reinforced their confidence in the educational and therapeutic capabilities of AI.

These findings are consistent with international studies. For instance, **Du et al. (2024)** demonstrated that *Human–AI co-creation in artistic contexts* enhances emotional engagement and creative involvement, while **He & Zhang (2025)** found that *Generative Adversarial Networks (GANs)* effectively support students in developing aesthetic and artistic skills and in increasing engagement with creative content. In the Arab context, the results align with **Hindoum (2024)**, who found that AI acts as a powerful catalyst for expanding artistic creativity and fostering aesthetic identity among art students, and with **Bougzoula (2024)**, who emphasized that integrating smart tools into art education enhances learner interaction and active participation.

Second Research Question

Are there statistically significant differences (α ≤ 0.05) in participants' responses regarding their perceptions of AI's role in supporting art therapy as part of the comprehensive educational and therapeutic support system, attributable to gender?

To examine this hypothesis, an **Independent Samples T-Test** was performed to compare the mean scores of male and female participants across the five perception dimensions, as well as the overall scale.

Table 9. T-Test Results for Differences Between Male and Female Participants' Perceptions of AI in Art Therapy

Dimension	Gender	N	Mean	Std. Deviation	T-value	Sig. (2-tailed)	Significance
Knowledge and attitudes toward AI in art therapy	Male	21	3.60	1.022	-0.348	0.729	Not Significant
	Female	80	3.67	0.801			
Role of AI in art therapy	Male	21	3.58	0.867	-1.056	0.294	Not Significant
	Female	80	3.79	0.804			
School readiness for AI integration	Male	21	3.89	0.893	-0.531	0.596	Not Significant
	Female	80	4.00	0.849			
Challenges and needs in AI-based art therapy	Male	21	3.78	0.832	-0.471	0.638	Not Significant
	Female	80	3.88	0.809			
Future perceptions of integrating AI in art therapy	Male	21	3.77	0.849	-0.260	0.796	Not Significant
	Female	80	3.82	0.830			
Overall Scale: Perceptions of AI in Art Therapy	**Male**	**21**	**3.72**	**0.820**	**-0.584**	**0.560**	**Not Significant**
	Female	**80**	**3.83**	**0.741**			

The results in Table (9) indicate that there are **no statistically significant differences** at the level (α = 0.05) between male and female participants across all study dimensions and the overall perception scale. The significance values (Sig.) ranged between **0.294 and 0.796**, all of which are greater than 0.05, confirming that **gender has no significant impact** on participants' perceptions regarding the use of AI in art therapy within the comprehensive support framework.

This outcome can be interpreted by noting that engagement with AI in educational settings is no longer gender-specific; instead, it reflects a broader professional trend influenced more by **experience and institutional environment** than by demographic factors. Both male and female educators now have comparable opportunities to interact with digital tools—through professional training, daily practice, and exposure to AI-related concepts in teaching and counseling contexts.

The absence of gender-based differences may also be linked to the **collaborative nature of school work**, where interdisciplinary teamwork among teachers, counselors, and therapists minimizes role-based distinctions and reduces the likelihood of gender-based variation in professional attitudes toward AI integration.

These findings are consistent with both Arab and international studies. For instance, **Ibrahim (2024)** found no significant gender-based differences among faculty members in their perceptions of using *ChatGPT* in education. Similarly, **Petrucco et al. (2025)** reported that variations in teachers' attitudes toward AI in

Italian schools were more strongly associated with **digital training levels** than with demographic characteristics such as gender.

Third Research Question

Are there statistically significant differences (α ≤ 0.05) in the perceptions of educational staff regarding the role of artificial intelligence in supporting art therapy as part of the comprehensive educational and therapeutic support system attributable to the type of school (public/private)?

To address this question, an **Independent Samples T-Test** was performed to compare the mean scores of participants working in public and private schools across the five study dimensions, in addition to the overall perception scale of AI in art therapy.

Table 10. T-Test Results According to School Type (Public/Private)

Dimension	School Type	N	Mean	Std. Deviation	T	Sig. (2-tailed)	Significance
Knowledge and attitudes toward AI	Public	91	3.63	0.834	-1.033	0.304	Not Significant
	Private	10	3.92	0.967			
Role of AI in supporting art therapy	Public	91	3.72	0.790	-1.190	0.237	Not Significant
	Private	10	4.04	1.041			
School readiness for AI integration	Public	91	3.98	0.831	0.055	0.956	Not Significant
	Private	10	3.96	1.103			
Challenges and needs in AI-based art therapy	Public	91	3.85	0.792	-0.019	0.985	Not Significant
	Private	10	3.86	1.011			
Future perceptions of integrating AI in art therapy	Public	91	3.81	0.814	-0.152	0.879	Not Significant
	Private	10	3.85	1.014			
Overall Perception Scale	**Public**	**91**	**3.80**	**0.734**	**-0.512**	**0.610**	**Not Significant**
	Private	**10**	**3.93**	**0.966**			

The results shown in Table (10) reveal that there are **no statistically significant differences** at the (α = 0.05) level between the mean scores of educational staff working in public and private schools across all study dimensions and the overall perception scale. The significance values (Sig.) ranged from **0.237 to 0.985**, all of which are higher than the threshold of 0.05, indicating that **school type does not exert a significant effect** on participants' perceptions of AI in art therapy within the framework of comprehensive educational and therapeutic support.

This result may be interpreted by noting that both public and private schools increasingly share a common **orientation toward digital transformation and the adoption of smart technologies**, driven by broader educational reforms and the growing awareness of AI's importance in improving educational and therapeutic quality. Moreover, the widespread accessibility of AI tools through free digital platforms and supported educational programs has **narrowed the technological gap** between public and private institutions.

Although minor mean differences were observed in favor of private schools (e.g., knowledge and attitudes: 3.92 vs. 3.63), these differences were **not statistically significant**, suggesting a **shared conceptual and perceptual understanding** among staff in both types of schools regarding AI's role in art therapy. This convergence may also stem from the fact that educators in both sectors often participate in the **same professional development workshops and training programs** organized by Ministries of Education or educational organizations.

These findings are consistent with **Jaouani & Al-Kaabi (2024)**, who found that AI implementation in Arab educational institutions faces similar challenges in both public and private settings, with variations mainly due to **institutional support and technical capacity** rather than school type. They also align with **Prilop et al. (2025)**, who concluded that despite differences in resources, higher education institutions share **similar perspectives toward AI** as a result of common academic experiences and professional practices.

Fourth Research Question

Are there statistically significant differences (α ≤ 0.05) in the perceptions of educational staff regarding the role of artificial intelligence in supporting art therapy as part of the comprehensive educational and therapeutic support system attributable to years of experience?

To test this hypothesis, a **One-Way ANOVA** was conducted to examine differences among the four experience-level groups across the five perception dimensions and the overall composite score.

Table 11. One-Way ANOVA Results for Educational Staff Perceptions by Years of Experience

Dimension	Sum of Squares	df	Mean Square	F	Sig.
Knowledge and attitudes toward AI in supporting art therapy	Between Groups: 0.345	3	0.115	0.156	
	Within Groups: 71.362	97	0.736		0.156
Role of AI in supporting art therapy	Between Groups: 0.358	3	0.119	0.174	
	Within Groups: 66.494	97	0.686		0.174
School readiness for AI integration	Between Groups: 1.048	3	0.349	0.471	
	Within Groups: 72.045	97	0.743		0.471
Challenges and needs in integrating AI into art therapy	Between Groups: 0.191	3	0.064	0.094	
	Within Groups: 65.499	97	0.675		0.094
Future perceptions of integrating AI in art therapy	Between Groups: 1.587	3	0.529	0.763	
	Within Groups: 67.283	97	0.694		0.763
Overall Perception Scale	**Between Groups: 0.260**	**3**	**0.087**	**0.148**	**0.148**
	Within Groups: 56.807	**97**	**0.586**		
	Total: 57.067	**100**			

The results in Table (11) indicate that there are **no statistically significant differences** at the ($\alpha = 0.05$) level among the mean scores of participants across all dimensions and the overall perception scale based on **years of experience**. The significance values ranged between **0.094 and 0.763**, all of which exceeded 0.05. This implies that **experience length does not have a significant influence** on educational staff perceptions regarding AI's role in art therapy within school environments.

This result can be explained by the fact that the shift toward adopting smart technologies has become an **institution-wide phenomenon** that transcends individual differences in experience. Continuous training programs, digital workshops, and ongoing technological updates in schools have created a **shared professional culture** in which educators—regardless of their years of service—engage with AI concepts in similar practical contexts.

Additionally, this convergence may stem from the reality that **technical competence** has become a **core professional competency** in modern educational environments, compelling all teachers, counselors, and specialists to remain digitally updated.
Experienced educators now receive regular digital training, while younger staff members exhibit a natural inclination toward smart tools, leading to **comparable perception levels** across different experience groups.

These findings are consistent with **Al-Ansari, Al-Hershani, and Awad (2023)**, who found that differences in AI literacy among Kuwaiti teachers were not statistically significant by experience level. They also align with **Prilop et al. (2025)**, who noted that teachers' understanding of AI's potential depends more on **professional motivation and institutional training** than on length of service. Similarly, **Ibrahim (2024)** observed that less experienced academics showed slightly higher acceptance of AI tools, yet these differences were not large enough to alter the overall **positive orientation toward AI in education**.

Fifth Research Question

Are there statistically significant differences ($\alpha \leq 0.05$) in the perceptions of educational staff regarding the role of artificial intelligence in supporting art therapy, attributable to their professional role (occupation)?

A **One-Way ANOVA** test was conducted to determine whether there were statistically significant differences among the mean scores of educational staff according to their professional role (teacher, psychologist, emotional therapist, counselor, principal, or other) across the five study dimensions, in addition to the overall perception scale.

Table 12. One-Way ANOVA Results for Educational Staff Perceptions by Professional Role

Dimension	Sum of Squares	df	Mean Square	F	Sig.
Knowledge and attitudes toward AI in supporting art therapy	Between Groups: 1.847	5	0.369	0.502	
	Within Groups: 69.860	95	0.735		0.502
Role of AI in supporting art therapy	Between Groups: 0.678	5	0.136	0.195	
	Within Groups: 66.174	95	0.697		0.195
School readiness for AI integration	Between Groups: 1.037	5	0.207	0.273	
	Within Groups: 72.056	95	0.758		0.273
Challenges and needs in AI-based art therapy	Between Groups: 0.597	5	0.119	0.174	
	Within Groups: 65.092	95	0.685		0.174
Future perceptions of integrating AI in art therapy	Between Groups: 1.000	5	0.200	0.280	
	Within Groups: 67.871	95	0.714		0.280
Overall Perception Scale	**Between Groups: 0.660**	**5**	**0.132**	**0.222**	**0.222**
	Within Groups: 56.407	**95**	**0.594**		
	Total: 57.067	**100**			

The results in Table (12) show **no statistically significant differences** at the ($\alpha = 0.05$) level among the mean scores of educational staff regarding the role of AI in supporting art therapy attributable to **professional role**, either across the five sub-dimensions or the overall perception scale. The significance values (Sig.) ranged from **0.174 to 0.502**, all above 0.05, indicating that one's professional role does not have a meaningful effect on the overall perception level of AI's role in art therapy.

This finding can be interpreted as evidence that all professional categories—teachers, counselors, psychologists, emotional therapists, and principals—share a **convergent understanding of AI's educational and therapeutic value**, particularly in light of institutional trends toward the integration of digital technologies within school support systems. AI is increasingly perceived as a **collaborative tool** that supports all roles in the school setting, whether in psychological diagnosis, behavioral monitoring, or designing art-based therapeutic activities.

This convergence can also be explained by the **interdisciplinary and collaborative nature of school work**, where different professional groups interact closely in managing therapeutic and educational programs, leading to a **shared vision** of AI's potential applications. As such, professional role has become less influential than factors such as the **institutional environment** and **prevailing digital culture** within schools.

These findings are consistent with **Al-Ansari, Al-Hershani & Awad (2023)**, who found that AI awareness levels in Kuwaiti schools did not significantly differ by professional role. Similarly, **Jaouani & Al-Kaabi (2024)** reported that all educational groups share generally positive attitudes toward the use of smart technologies in both teaching and therapy, without significant occupational differences.

Sixth Research Question

What challenges may hinder the application of artificial intelligence in the field of art therapy within the school environment?

Participants' responses revealed several challenges that could impede the effective integration of AI into school-based art therapy programs. These challenges were grouped into four main categories:

Qualitative Observations	Frequency*	Main Challenges	Category
The need for continuous practical training programs	High	Lack of specialized professional training on the optimal use of smart tools	Training and Capacity Building
More evident in public schools	Moderately High	Weak technical infrastructure (devices, internet access) in some schools	Infrastructure
Emphasis on the importance of data protection	Very High	Absence of clear regulations for safeguarding student privacy and ensuring psychological safety	Ethical Standards
Particularly in time-constrained school settings	Moderate	Difficulty in allocating time within school schedules for AI-supported art therapy sessions	Administrative Aspects

The qualitative interview data indicate that the challenges facing the integration of AI into art therapy within school environments are **multifaceted and interrelated**—they extend beyond technical issues to include **ethical, organizational, and human dimensions**.

Most participants agreed that **insufficient professional preparation and lack of specialized training** are among the main barriers to effectively using AI in therapeutic contexts. Many teachers, counselors, and

therapists expressed a need for **structured, ongoing training programs** that would enable them to understand AI mechanisms and apply them responsibly in analyzing students' artwork and interpreting emotional expressions.

As one participant stated:

"We need hands-on training that helps us turn technology into a tool for psychological support, not just a digital medium."

Another participant added:

"Our limited technical experience makes us afraid to use these tools—we worry about mistakes or breaching students' privacy."

These reflections highlight a clear gap between the **theoretical potential of AI** and the **practical readiness of the educational field** to adopt it.

In addition, weak **infrastructure** was frequently cited as a major obstacle, especially in public schools with limited technological resources and minimal IT support. Participants noted that inadequate internet connectivity, lack of digital devices, and absence of dedicated spaces for art therapy make AI-supported activities difficult to implement, often relying on **individual initiatives** rather than institutional frameworks. This pattern of challenges reflects what **Sáez-Velasco et al. (2024)** described as the **digital divide** between higher education and traditional school environments, which directly limits opportunities for integrating creative technologies into art-based educational or therapeutic programs.

From an **ethical standpoint**, issues of **privacy and data protection** emerged as a major concern. Many participants feared that analyzing students' artwork through AI algorithms might inadvertently compromise their **emotional safety and personal identity**.

As one teacher remarked:

"It's essential to have strict guidelines defining the limits of data use—these drawings express students' deep emotions, not just digital images."

A psychologist added:

"Technology without ethical boundaries can strip therapy of its human essence, which is built on trust."

These concerns align with **Shojaei et al. (2024)**, who warned that the absence of ethical awareness among therapists using AI-generated art could lead to **misinterpretation or misuse of emotional content**.

Moreover, several participants highlighted **organizational and time-related challenges**, noting that integrating AI-supported art therapy activities into the school schedule requires significant **administrative flexibility and institutional backing**. In schools with rigid class structures, allocating time for creative or therapeutic activities is difficult.

As one principal explained:

"Our school schedule doesn't allow extra activities unless the educational policies themselves are revised."

This observation echoes the findings of **Petrucco et al. (2025)**, who emphasized that **administrative constraints and insufficient professional development** are among the key barriers limiting AI adoption in schools, even when teachers are motivated to use it.

Similarly, **Prilop et al. (2025)** found that **trust in technology** and **ethical awareness** are major determinants of teachers' acceptance of AI tools, and that deficiencies in training or institutional readiness often result in hesitation or resistance to implementation.

In conclusion, these findings demonstrate that the challenges of integrating AI into art therapy stem not solely from technological limitations but from a **complex interaction** between infrastructure, professional training, ethical governance, and administrative structure.

Therefore, any successful future initiative in this field must be guided by a **comprehensive strategy** that balances **innovation with regulation**—leveraging technology while safeguarding the **human essence of therapy**.

The results underscore the need for a **national framework for professional training and ethical governance**, ensuring the **safe, responsible, and human-centered** use of smart technologies to enhance students' psychological and educational well-being.

Seventh Research Question

How do educational staff members envision the future integration of artificial intelligence into educational and therapeutic programs in their schools?

Participants' responses reflected a clear sense of **optimism** regarding the future integration of artificial intelligence (AI) into educational and therapeutic programs. Three main themes emerged from the qualitative data:

Qualitative Observations	Frequency*	Features of the Future Vision	Theme
Emphasis on the importance of human interaction	Very High	Developing smart tools that support therapists rather than replace them	Human–Digital Integration
Requires collaboration with technical developers	High	Designing individualized therapeutic plans based on students' specific needs	Personalized Therapy
Necessity for adaptable tools across various settings	Moderate	Continuously updating smart programs to align with psychological and educational developments	Continuous Development

The findings, based on qualitative interview analysis, revealed that participants expressed **cautious yet hopeful optimism** about the future of integrating AI into educational and therapeutic programs in schools. They believed that such integration presents **promising opportunities** for advancing psychological and artistic practices—**provided that the human role remains central** to the process.

Participants' visions for the future clustered around three interrelated themes:

1. Integration between AI and human interaction.
2. Personalization of therapeutic interventions based on real data.
3. Ongoing updates to ensure that smart tools evolve alongside educational and psychological developments.

Most participants emphasized that AI should serve as a **supportive, not substitutive, tool**—enhancing therapists' and teachers' abilities to understand students and monitor their development, without diminishing the **human dimension** of therapy.

As one participant stated:

"I'm optimistic about integrating AI as a supportive tool, but it can never replace the therapist's direct human interaction." (R.J)

Another participant added:

"It's helpful for planning and assessment, but it can't replace that human connection that gives a child a sense of safety." (R.S)

These reflections underscore a shared belief that technology—no matter how advanced—remains limited in its ability to fully interpret the **subtle emotional cues** that form the essence of art therapy.

Several participants also highlighted the importance of **collaboration between educational staff and technology developers** to design digital therapeutic tools that are **emotionally and contextually responsive** to students' needs. They envisioned systems capable of tracking emotional changes through students' digital artwork, analyzing these expressions using intelligent algorithms, and assisting therapists in making **data-informed decisions**.

Some suggested that such collaboration could lead to **personalized therapy plans**, tailored to students' individual psychological and artistic responses—a transformative step toward **data-driven educational and therapeutic support**.

Quantitative findings aligned closely with these qualitative insights. The **"Future Perceptions"** dimension scored at a **high level (Mean = 3.81)**, reflecting an overall positive outlook toward AI integration in art therapy—though participants preferred a **gradual and supervised implementation**.

The statement with the highest mean (3.92) was:

"AI supports diversity in methods but cannot read students' emotions."

This indicates participants' advanced awareness of AI's **technical potential** alongside its **emotional limitations**.

This future-oriented perspective aligns with **Prilop et al. (2025)**, who emphasized the importance of preparing educators to understand the **collaborative nature** of AI rather than viewing it as a replacement, underscoring that the human role remains essential in **ethical and pedagogical interpretation** of AI outputs.

It also resonates with **He & Zhang (2025)**, who found that while **deep generative networks (GANs)** can enrich artistic creativity and enhance learning experiences, they require **educational supervision** to preserve the **human meaning of art**.

Similarly, **Petrucco et al. (2025)** argued that integrating AI in schools must follow **gradual, culturally sensitive strategies**, built on **trust, training, and human oversight** rather than automation.

Taken together, these findings suggest that participants envision a **collaborative and integrative future**, where AI functions as a **partner** in advancing therapeutic and educational programs—not as a replacement for **human expertise** or the **emotional depth** that defines school-based art therapy.

This reflects a **mature and balanced awareness** among educational staff, advocating for a **thoughtful, gradual integration** of technology that enhances student well-being while preserving the **human and relational essence** at the heart of therapeutic art practices in schools.

Eighth Research Question

Have any concerns emerged regarding overreliance or excessive dependence on artificial intelligence, and how can such concerns be addressed educationally?

Participants expressed mixed but thoughtful views on this issue. The majority acknowledged **genuine concerns** about overdependence on smart tools. The results can be summarized as follows:

Educational Approaches	Frequency*	Type of Concern	Category
Integrating parallel group and interactive activities	High	Students' preoccupation with digital tools at the expense of human interaction	Loss of Human Interaction
Training students in critical thinking skills	Moderately High	Dependence on AI as the sole source of support	Overreliance
Raising students' awareness of the limits of technology use	Moderate	Concerns about isolation or psychological effects	Psychological Impact

Both the **quantitative** and **qualitative** analyses indicated that **overreliance on AI** is among the **most prominent concerns** expressed by educational staff—both for its potential to weaken **human interaction** and for its **psychological and educational implications** for students.
Participants' opinions varied between viewing AI as a **valuable opportunity** to enhance educational and therapeutic efficiency, and fearing that excessive reliance on it might **reduce human contact** and lead to a **mechanical approach** to teaching and therapy.
Quantitatively, the "Challenges and Needs" dimension reflected a **moderately high reservation level (Mean = 3.53)** for the item stating that
"Using AI to interpret students' artwork may limit understanding of deeper emotional dimensions."
This suggests a **professional awareness** among participants of the **risk that algorithmic analysis could diminish human empathy and emotional appreciation** when interpreting students' creative expressions.
The qualitative interviews reinforced this pattern. Most participants agreed that **excessive reliance on AI** could lead to a **decline in critical thinking and social interaction** among students.
As one teacher observed:
"There's a real fear that students will rely on AI for everything—even self-expression—and lose their sense of creative individuality." (S.A)
A counselor added:
"Overdependence on technology makes students less interactive with peers and teachers, creating a kind of digital isolation that weakens social communication skills." (A.K)
A psychologist emphasized:
"AI should be used as a supportive, not substitutive, tool—under professional supervision that maintains balance between technology and human input." (D.D)
These remarks reveal a **growing awareness** among educators of the need to **maintain an educational balance** between technology and human connection. AI is not viewed as a threat, but as a tool that requires **responsible and ethical management**.
Participants proposed several practical strategies to mitigate overdependence on AI, such as:

- Incorporating **group-based, interactive activities** alongside digital art therapy sessions to foster social communication.
- Training students in **critical and reflective thinking** when using AI-based tools.
- Educating students on **responsible digital behavior** and the **ethical limits of technology** in creative and therapeutic contexts.

These findings align with **Peng et al. (2025)**, who emphasized that in **AI-generated art therapy with adolescents**, technological interaction must be accompanied by **emotionally intelligent design** that keeps the human element central.
Likewise, **Luo et al. (2024)** identified **overreliance on interactive systems without human supervision** as a key challenge in AI-based art therapy, warning that it could weaken **empathic engagement** in therapeutic processes.
Similarly, **Yim & Wegerif (2024)** found that uncontrolled use of AI tools in early education can lead to **reduced critical thinking** unless guided by **clear pedagogical frameworks**.
In sum, the concern about overdependence on AI reflects a **balanced and critical awareness** among educational staff—one that does not reject technology but seeks to **embed it within ethical and pedagogical boundaries**.
From this standpoint, the researcher recommends addressing these concerns educationally through:

- **Flexible integration policies** that emphasize teachers' ethical reasoning in using AI.
- Promoting **interactive and collaborative classroom activities**.
- Cultivating **students' awareness of technology's limits**—understanding AI as a **supportive tool**, not a substitute for human creativity or empathy.

By doing so, AI in art therapy can evolve into an **empowering instrument** that builds **responsible digital awareness** and enhances **psychological and social growth**, while preserving the **humanity and intellectual independence** of each student.

Recommendations

In light of the quantitative and qualitative findings regarding the perceptions of educational staff toward the role of artificial intelligence in supporting art therapy as part of the comprehensive educational and therapeutic support system, the following recommendations are proposed:
1. **Develop specialized training programs** for educational staff and art therapists on how to effectively use artificial intelligence in therapeutic and educational contexts, with a strong emphasis on **ethical and professional aspects** related to students' data and artistic outputs.

2. **Enhance the technological infrastructure** in schools to ensure a safe and well-equipped digital environment that supports AI applications in art therapy—by improving network connectivity, providing adequate devices, and ensuring continuous technical support.
3. **Integrate artificial intelligence within the Multi-Tiered System of Support (MTSS)** gradually and strategically, using it as a supportive tool for diagnosis and therapeutic planning **without replacing direct human interaction** between students, therapists, and teachers.
4. **Establish clear policies and procedural guidelines** defining ethical standards for the use of AI in school environments. These should include privacy protection, data security, and students' rights to **artistic freedom and emotional expression**.
5. **Promote collaboration** between educational institutions and digital technology developers to design **culturally and educationally relevant smart therapeutic applications**, capable of balanced emotional and artistic analysis of students' creative outputs.
6. **Strengthen human-centered interactive activities** alongside digital art therapy sessions to maintain a healthy balance between technology and human connection, while fostering **critical thinking and self-expression** among students.
7. **Incorporate concepts of digital awareness and technological ethics** into teacher training and educational counseling programs, promoting a culture of **responsible AI use** in teaching and therapy, and reducing the risk of excessive reliance on smart tools.

References

1. Al-Zouman, A., Al-Azmi, K. H., & Al-Sharah, A. R. F. (2023). *Applications of artificial intelligence as an approach to developing metalwork art education: An analytical study*. **Research in Art Education and Fine Arts**, Faculty of Art Education, Helwan University, 24(2), 1–35.
2. Khalaf, S. S. (2023). *The role of artificial intelligence applications in developing educational skills in the Arab world and their impact on traditional education systems: A field study.* **Journal of Al-Farahidi Arts**, 15(52), 327–351. https://doi.org/10.51990/jaa.15.52.2.17
3. Al-Ansari, A., Al-Hershani, A. F., & Awad, S. A. (2023). *The role of school administration in promoting AI culture among general education students in Kuwait.* **Journal of the College of Education**, Kuwait University.
4. Al-Ibrahim, A. (2024). *Faculty members' perceptions in the College of Education regarding the use of generative artificial intelligence (ChatGPT) in teaching*. **International Journal of Educational and Psychological Studies (EPS)**, Refaad Publishing.
5. Alawneh,Y., Al-Shara'h,N. (2022) Evaluation of the e-learning experience in Palestinian universities during the Corona pandemic "in light of some quality standards of the Jordanian Higher Education, *Journal of the College of Education (Assiut)*,38(2.2) 181-204
6. Alawneh,Y., Abualrub,D., Jbara,L.,(2021)Behavioral Phenomena Common Among Kindergarten Students In Nablus Governorate From The Point Of View Of Principals And Teachers, *Turkish Journal of Physiotherapy and Rehabilitation*, 32, (3)231-247
7. Alawneh,Y.(2022). Role of Kindergarten Curriculum in Instilling Ethical Values among Children in Governorates of Northern West Bank, Palestine, *Dirasat: Educational Sciences*,49(3),360-375.
8. Bougazoula, M. (2024). *Applications of artificial intelligence in visual arts education in light of D.B.A.E. theory*. **ATRAS Journal**, 5(3), 830–844. https://doi.org/10.70091/atras/AI.53
9. Al-Hindoom, A. A. M. (2024). *Innovative impacts of artificial intelligence on artistic creativity and identity in contemporary visual art*. **Research in Applied Arts and Qualitative Sciences Journal**, Faculty of Specific Education, Alexandria University, 21, 1–59.
10. Al-Shanawi, R. A. (2024). *Challenges of artificial intelligence as an educational mediator for creativity in fine arts education*. **Art and Design Journal**, 2(3), 20–40. https://doi.org/10.21608/ifca.2024.342557
11. Jaouani, A., & Al-Kaabi, S. (2024). *The impact of artificial intelligence applications on improving the educational process.* **International Journal of Educational and Psychological Studies (EPS)**, 13(4), 787–796.
12. Moula, Z., Powell, J., Konstant, T. N., & Karkou, V. (2023). *Child-focused outcome and process evaluation of a school-based art therapy intervention: A pilot randomised controlled study*. **Arts in Psychotherapy**, 85, 102085. https://doi.org/10.1016/j.aip.2023.102085
13. Sáez-Velasco, S., Alaguero-Rodríguez, M., Delgado-Benito, V., & Rodríguez-Cano, S. (2024). *Analysing the impact of generative AI in arts education: A cross-disciplinary perspective of educators and students in higher education*. **Informatics**, 11(2), 37. https://doi.org/10.3390/informatics11020037
14. Shojaei, F., Osorio Torres, J., & Shih, P. C. (2024). *Insights from art therapists on using AI-generated art in art therapy: Mixed methods study*. **JMIR Formative Research**, 8, e63038. https://doi.org/10.2196/63038
15. Kim, S., Kim, K.-E., & Song, S. (2024). *Exploring artificial intelligence approach to art therapy assessment: A case study on the classification and estimation of psychological state based on a drawing*. **New Ideas in Psychology**, 74, 101074. https://doi.org/10.1016/j.newideapsych.2024.101074

16. Luo, X., Zhang, A., Li, Y., Zhang, Z., Ying, F., Lin, R., Yang, Q., Wang, J., & Huang, G. (2024). *Emergence of artificial intelligence art therapies (AIATs) in mental health care: A systematic review*. **International Journal of Mental Health Nursing**, 33(6), 1743–1760. https://doi.org/10.1111/inm.13384
17. Du, X., An, P., Leung, J., Li, A., Chapman, L. E., & Zhao, J. (2024). *DeepThInk: Designing and probing human–AI co-creation in digital art therapy*. **International Journal of Human–Computer Studies**, 183, 103139. https://doi.org/10.1016/j.ijhcs.2023.103139
18. He, Y., & Zhang, S. (2025). *Enhancing art creation through AI-based generative adversarial networks in educational auxiliary system*. **Scientific Reports**, 15, Article 29202. https://doi.org/10.1038/s41598-025-29202-5
19. Yeasmin, S., Saha, S., Rahman, M., Rahman, A., Hasan, M., & Hosen, A. (2025). *The role of AI-driven art therapy in supporting autism, mental health, and emotional well-being: An umbrella review*. **Digital Health**, 11, 20552076251386662. https://doi.org/10.1177/20552076251386662
20. Peng, X., Qian, Y., & Bao, Q. (2025). *Fostering adolescent engagement in generative AI art therapy: A dual SEM–ANN analysis of emotional and motivational mechanisms*. **Frontiers in Psychology**, Article 12327520. https://doi.org/10.3389/fpsyg.2025.12327520
21. Yilma, B. A., Kim, C. M., Ludden, G., van Rompay, T., & Leiva, L. A. (2025). *The AI–Therapist Duo: Exploring the potential of human–AI collaboration in personalized art therapy for PICS intervention*. **International Journal of Human–Computer Interaction**. Advance online publication. https://doi.org/10.1080/10447318.2025.2487859
22. Prilop, C. N., Mah, D.-K., Jacobsen, L. J., Hansen, R. R., Weber, K. E., & Hoya, F. (2025). *Generative AI in teacher education: Educators' perceptions of transformative potentials and the triadic nature of AI literacy explored through AI-enhanced methods*. **Computers and Education: Artificial Intelligence**, 6, 100471. https://doi.org/10.1016/j.caeai.2025.100471
23. Liu, Y., Wang, Q., & Lei, J. (2025). *Adopting generative AI in future classrooms: A study of preservice teachers' intentions and influencing factors*. **Behavioral Sciences**, 15(8), 1040. https://doi.org/10.3390/bs15081040
24. Yim, I. H. Y., & Wegerif, R. (2024). *Teachers' perceptions, attitudes, and acceptance of artificial intelligence (AI) educational learning tools: An exploratory study on AI literacy for young students*. **Frontiers in Education: Research in Education**, e65. https://doi.org/10.1002/fer3.65
25. Petrucco, C., Favino, F., & Conte, A. (2025). *Teachers' perceptions on the introduction of generative AI in schools: A mixed-method study on the opinions of 1,223 teachers in the Veneto Region, Italy*. **Education Sciences and Society**, 2/2024. https://doi.org/10.3280/ess2-20240a18406
26. Verboom, A. D. P. R., Pais, L., Zijlstra, F. R. H., Oswald, F. L., & dos Santos, N. R. (2025). *Perceptions of artificial intelligence in academic teaching and research: A qualitative study from AI experts and professors' perspectives*. **International Journal of Educational Technology in Higher Education**, 22, Article 46. https://doi.org/10.1186/s41239-025-00546-2