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El concepto de impacto de la Inteligencia Artificial en la Educación Artística: nuevos horizontes para la creatividad, el cambio social, la innovación y el enriquecimiento cultural

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Resumen. La inteligencia artificial (IA) está transformando la cultura y el arte contemporáneos, abriendo nuevas oportunidades para la creatividad, la innovación, la transformación social y el enriquecimiento cultural. Sin embargo, su aplicación en el arte también plantea serias cuestiones éticas y filosóficas relacionadas con la naturaleza de la creatividad y la originalidad. El propósito de este estudio es explorar el impacto de la inteligencia artificial en la educación artística utilizando un enfoque mixto que incorpora metodologías de ciencia de datos, big data y ágil. La IA se considera cada vez más una herramienta que amplía los límites de la creatividad humana, permitiendo a los artistas explorar nuevas formas y técnicas y crear obras interactivas y adaptativas que antes eran inalcanzables. La Sociedad Internacional para la Educación a través de las Artes (InSEA) desempeña un papel clave en el desarrollo de la educación artística en todo el mundo. Este estudio analiza un nuevo paradigma educativo basado en un enfoque humanista del desarrollo humano y que aboga por la integración de la IA en el proceso educativo para mejorar las capacidades culturales y creativas de las personas.

Palabras clave: inteligencia artificial, desarrollo social, educación artística, creatividad, innovación.

The concept of Artificial Intelligence's impact on Art Education: new horizons for creativity, social change innovation and cultural enrichment

Abstract. Artificial intelligence (AI) is reshaping contemporary culture and art by unlocking new avenues for creativity, innovation, social transformation, and cultural enrichment. However, its application in the arts also introduces significant ethical and philosophical challenges related to the nature of creativity and originality. This study seeks to examine the influence of AI on art education through a mixed-method approach, incorporating Data Science, Big Data, and Agile methodologies. AI is increasingly viewed as a tool that extends the boundaries of human creativity, enabling artists to explore novel forms and techniques, and to create interactive and adaptive works that were previously unattainable. The International Society for Education through Art (InSEA) plays a pivotal role in advancing art education worldwide. This study discusses a new educational paradigm rooted in a humanistic approach to human development, advocating for the integration of AI into the educational process to enhance the cultural and creative capacities of individuals.

Keywords: artificial intelligence, social development, art education, creativity, innovation.

INTRODUCTION

Modern advances in artificial intelligence, innovation and technological progress offer new tools for artists and designers. Algorithms can generate complex visual and musical works, which expands the boundaries of creative possibilities. The use of AI makes it possible to create art that was previously impossible or very difficult to realise. Thanks to the availability of AI technologies, art creation is becoming more accessible to the general public, resulting in the demythologisation of art. This opens up new opportunities for amateurs and young artists who can use artificial intelligence to implement their ideas without the need for deep technical knowledge. AI allows for interactive art projects and new forms of interaction where viewers can interact with works in real time. This is changing the way people perceive and interact with art, making it more immersive and personalised. The debate around whether artificial intelligence can be a real artist or whether AI-generated works can be considered art stimulates deep philosophical reflections on the nature of creativity. The art industry using AI is opening up new markets and business models as AI has a significant economic impact (Andriukaitiene et al., 2017). From the sale of digital works and NFTs to new forms of art installations and exhibitions, AI technology offers new sources of income for artists and galleries. AI can also be used to preserve and restore cultural heritage and support traditional art. Algorithms can restore damaged artworks, analyse ancient techniques and styles, contributing to the preservation of cultural history, and changing the artistic landscape through AI.

InSEA (International Society for Art Education) is a global organisation dedicated to the support and development of art education worldwide. Established in 1954, InSEA is one of

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the oldest and most influential international organisations that brings together artists, teachers, researchers and students interested in the development of arts education (Bostrom, 2020). The main goals and activities of InSEA are: 1) Supporting arts education, InSEA promotes the development of arts education at all levels - from primary school to higher education. The organisation provides resources, support and professional development opportunities for art teachers. 3) International cooperation, InSEA brings together members from different countries, creating a platform for the exchange of experiences, ideas and best practices in the field of arts education. The organisation organises international conferences, symposia and workshops where professionals can communicate and learn from each other. 3) Research and publications, InSEA actively supports research in the field of arts education. The organisation publishes scholarly journals, books and other publications that contribute to the dissemination of knowledge and innovative approaches to arts education. 4) Integration of new technologies, InSEA encourages the use of the latest technologies in arts education, including digital media, virtual and augmented reality, and artificial intelligence. This helps to adapt curricula to modern challenges and opportunities. 5) Social and Cultural Initiatives, the organisation supports projects that use the arts as a means of social change and cultural enrichment. This includes programmes for marginalised groups, refugee integration projects and other initiatives that promote social cohesion (Dean, 2021). They include programmes for marginalised groups, refugee integration projects and other initiatives that promote social cohesion.

The aim of the study is to conceptualise artificial intelligence in the arts in the context of new horizons of creativity, social change innovation and cultural enrichment. To achieve this goal, it is necessary to: 1) to analyse the place and role of InSEA in the development of art education at the global level (Marcus, 2023); 2) to find out the impact of AI on personal expression through art, new horizons of creativity, digital educational innovations in the context of global challenges; 3) to substantiate the concept of a new educational paradigm as a humanistic perspective of human development; 4) to identify areas of AI development through art for the cultural enrichment of the individual. The topic "AI and Art" is determined by the wide range of its impact on modern society. Artificial intelligence not only changes the way art is created and perceived, but also promotes the development of new forms of creativity, innovation, social change, and cultural enrichment. This makes it an important topic for research and discussion in the contemporary art context. AI and the arts is the process of using modern digital technologies and tools to enhance learning to engage with art, creativity, innovation, access to knowledge, and communication in an educational environment. This may include the use of AI computers, tablets, smartphones, software, online courses, web resources, and other digital resources (Kivlyuk et al., 2023).

MATERIALS AND METHODS

The concept of the impact of artificial intelligence on art education in the context of developing new horizons of creativity, innovations of social change and cultural enrichment and in the environment of threats and new global challenges can be analysed using the following methods:

1) Data Science, which is based on the analysis and processing of artificial intelligence data in art, which opens up new opportunities for creativity, social change innovation and cultural enrichment in digital form.

2) Development of AI, including data mining, intelligent and in-depth data analysis to expand and personalise data on creativity, social change and cultural enrichment for the further development of the educational process.

3) Use of Big Data methods such as graph mining and topological analysis to analyse the place and role of InSEA in the development of arts education globally.

4) Improving the Agile method of creative smart digitalisation technologies to increase the effectiveness of AI's impact on creativity, innovation and educational innovation in the context of global challenges.

5) Using Scrum methodology to analyse the phenomenon of digitalisation and its components in art education projects.

6) Implementation of deep learning models in education to improve the concept of a new educational paradigm through creative digital technologies.

The conceptualisation of artificial intelligence in art in the context of new horizons of creativity, innovations of social change and cultural enrichment is complemented by the following concepts: 1) The concept of the "reverse classroom", which uses online platforms for learning at home and using classroom activities to solve practical problems. 2) The concept of integrating digital technologies into the learning process to engage students and improve their academic performance. 3) The concept of an interactive programming environment for children aimed at teaching computational thinking and developing creative skills through digital tools.

To study the topic "The impact of artificial intelligence on art education: new horizons of creativity, innovation, social change and cultural enrichment", a comprehensive approach can be used, which will include several methods.

1) Developing questionnaires for teachers, students and other participants of art education who use or have experience of using AI in their educational activities. Conducting surveys to collect data on experience, attitudes, challenges and benefits of using AI in art education. Analysing the collected data to determine the main trends and development prospects.

2) The experimental method includes conducting experiments on integrating AI into the curricula of art education institutions. Measuring the impact of such innovations on the creative process, learning outcomes, and overall student satisfaction. Comparison of the results of experimental groups with control groups to determine the effectiveness of AI.

3) Content analysis involves analysing the content created by students using AI to identify new forms of creativity and artistic expression. The study of visual, audio, and textual materials created with the help of AI to identify innovative approaches in art.

4) Observation, which includes conducting observations in classes where AI is used to understand the process of integrating technology into the learning process. Analysis of students' interaction with AI tools and their impact on learning and creativity.

5) Case studies include an in-depth analysis of individual cases of successful use of AI in art education. The study of specific examples of educational institutions or programmes where AI has contributed to the improvement of the learning process and student creativity.

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6) Data analysis methodology, including the use of statistical methods to analyse quantitative data from surveys and experiments. The use of data processing software, such as SPSS or R, to conduct detailed analysis and identify significant patterns. The combination of these methods will allow us to gain a comprehensive understanding of the impact of artificial intelligence on arts education, identify new opportunities for creativity and innovation, and assess the social and cultural changes associated with this integration.

The history of artificial intelligence dates back to ancient civilisations, where myths and legends mentioned machines and creatures with human intelligence. However, modern research in this area began only in the 1950s with the advent of the first electronic computers. An important moment was the seminar on "artificial intelligence" held in 1956 by a group of researchers from Dartmouth College, which is considered to be the birth of AI as a science. In the following decades, researchers made significant advances, including the development of expert systems, neural networks, and machine learning algorithms. However, progress has been uneven, and AI research has experienced both ups and downs. In recent years, thanks to the growth of computing power and the availability of huge amounts of data, interest in AI has revived, and the field is once again actively developing. The goal of researchers is to create intelligent machines that can compete with and even surpass human intelligence.

RESULTS AND DISCUSSION

The place and role of InSEA in the development of arts education at the global level.

The International Society for Education through the Arts (InSEA) was founded in France in 1954 to promote the model of education first formulated by Herbert Reed in his seminal work Education through the Arts (1943). InSEA (International Society for Education through Art) is one of the oldest and largest international organisations dedicated to education through the arts. The purpose of this association is to support and develop art education around the world, in accordance with the ideas of Herbert Reed, who believed that art is an important component in the comprehensive development of the individual. InSEA's goal is to promote the exchange of knowledge, ideas and practices in the field of arts education, as well as to raise the level of arts education both internationally and nationally. "Education through the arts" is a natural means of learning at all stages of personal development, cultivating values vital for the full intellectual, emotional and social development of people in a community. Recently, the art educator community has revisited Red's vision, advocating the philosophical position that the visual arts are a fundamental human right and have inherent educational value, that a balanced education is a right for everyone and should provide opportunities for students of all ages to communicate and collaborate with others in society through creativity and curiosity. AI can allow a person who is completely unable to draw to create a "world-famous painting" in a few minutes. All you need to do is enter a few words or sentences to describe it, and you'll get a work like the one below.

(AI painting, creativity, NFT: technology or art?)

The overall goal of education should be to develop responsible and creative individuals who can contribute to the common good. The visual arts are a natural way to achieve these goals. InSEA is an important organisation that promotes art education on a global scale. Its activities cover a wide range of areas, including support for educators, research, international collaboration and the integration of new technologies. Through InSEA, arts education is becoming more accessible, more innovative and more influential in promoting social change and cultural enrichment. InSEA (International Society for Arts Education) can develop through a number of initiatives that will contribute to the development of arts education worldwide. Global Arts Education Programmes InSEA can facilitate the development and implementation of global arts education programmes that will promote the integration of the arts into educational processes in all countries (Nikitenko et al., 2024). InSEA can organise regular international conferences where representatives from different countries can share experiences and best practices in arts education. InSEA can develop and maintain online platforms and resources to facilitate the exchange of knowledge and ideas in the field of arts education. The organisation supports the introduction of the latest technologies, including AI, into curricula. This contributes to the training of future artists who are able to use modern technologies to create new art forms and solve social problems.

Thanks to InSEA, AI is actively used in art education, as interactive AI-based platforms can teach students various artistic techniques, analyse their work, and provide individualised recommendations. This contributes to more efficient and personalised learning, which can help develop new talent. Art created in collaboration between humans and artificial intelligence opens up new perspectives for creativity. Artists can use AI as a tool to inspire, generate ideas, or complement their work. This interaction creates unique works that combine human intuition and machine power. Artists use AI to draw attention to social issues and activism. For example, interactive installations can highlight environ-

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mental issues, human rights, or political conflicts, creating a strong emotional impact on the audience and promoting social change. AI opens up space for experiments in art. Artists can try out new forms, styles, and techniques that were previously unavailable. This contributes to the development of new genres and trends in art that enrich the cultural landscape. The use of AI in art contributes to the development of creative industries such as cinema, music, design, and advertising. Automation of routine processes allows to focus on creative aspects, improving the quality and efficiency of production. AI is contributing to the globalisation of art, allowing artists from different parts of the world to collaborate and exchange ideas. This creates new opportunities for cultural exchange and enrichment, promoting mutual understanding and integration of different cultures. AI can be used to create personalised art experiences that adapt to the preferences and emotional state of the viewer. This can be used in museums, galleries, exhibitions, and virtual spaces, making art more accessible and engaging. The use of digital technologies and AI in art can have a positive impact on the environment by reducing the need for physical materials and transport. This contributes to a more sustainable approach to art creation and consumption (Polishchuk et al., 2024). The "artificial intelligence gold rush" is an expression that describes the general excitement and demand for the development and application of artificial intelligence in the arts. Although some people still argue whether the creations can be called art and whether they have artistic value, these works have already been appreciated. Since AI technology was introduced to the art world, it has already had a significant impact on this world. In the shadow of digital transformation, it will continue to have an even deeper impact. As Ahmad Elgammal, director of the Art and Artificial Intelligence Lab at Rutgers University, said, "For the first time ever, the tool has some creativity that might surprise you.
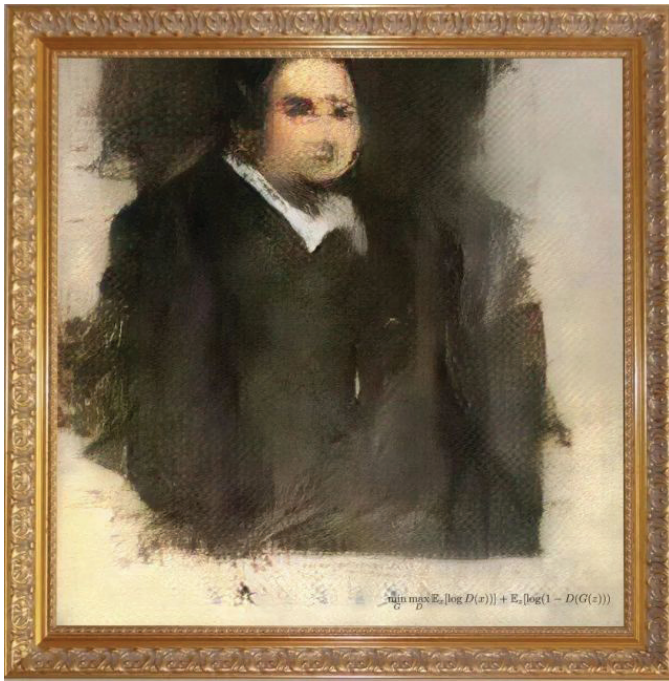

(AI painting, creativity, NFT: technology or art?)

Elgammal's team created AICAN (Artificial Intelligence Creative Competitive Network) and stated that this program has learned existing artistic styles and aesthetics, is capable of creating innovative images and can be said to be an almost autonomous artist. In 2017, AICAN works were presented at the Art Basel exhibition, and 75% of visitors mistook them for works created by humans.
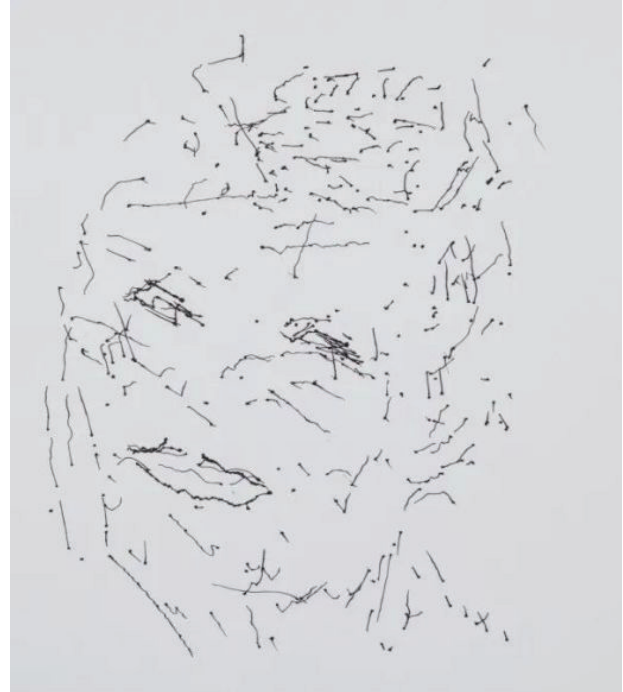

(AI painting, creativity, NFT: technology or art?)

Later that year, one of AICAN's works was sold at auction for almost $16,000. In 2018, the portrait "Portrait of Edmond de Belamy" created by the French art group Obvious using the GAN algorithm was sold at Christie's for an impressive high price of USD 432,500 (approximately RMB 2.98 million), becoming the first official painting in history created by artificial intelligence to be put up for sale at auction. You might be wondering what this expensive piece of art created by artificial intelligence looks like, but you might be disappointed when you see it (Chibalashvili, 2021).

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(AI painting, creativity, NFT: technology or art?)

Compared to many of the outstanding works in the field of artificial intelligence today, this is not so surprising. You could say it's boring and lacking in beauty, and sometimes even looks like a program crash or the product of a debugging process. In 2019, Ai-Da, a humanoid robot that combines skills such as drawing, sculpting, writing poetry, gesturing, blinking, and speaking, was named "the first hyper-realistic humanoid AI artist" (after the first female programmer, Ada Lovelace), and sold over $1 million worth of artwork at one of her art exhibitions (Kapitsa, 2021).

There is also a lot of controversy and doubt about Ai Dee's identity as an AI artist and her work. For example, some believe that her so-called creation is actually just following instructions from a given code, and the art she expresses is just a personal idea of the programmer. Her personality as an artist is also seen as a marketing ploy and hype, and can only be perceived as a performance (Voznesenska, 2015).
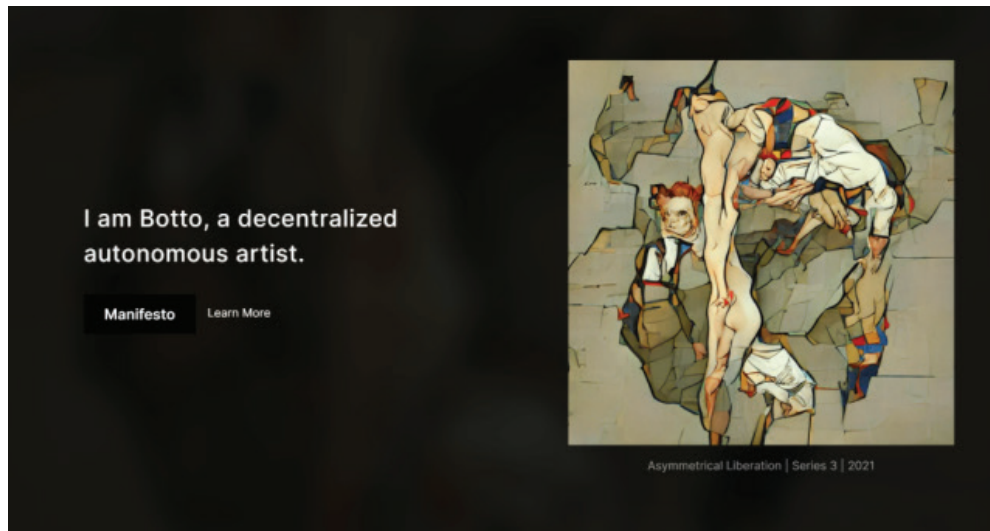

(AI painting, creativity, NFT: technology or art?)

(AI painting, creativity, NFT: technology or art?)

While not everyone is an artist, everyone can create works of art with the help of AI tools.

(AI painting, creativity, NFT: technology or art?)

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(AI painting, creativity, NFT: technology or art?)

A world invented by AI: It is clear that artworks created by artificial intelligence are having an impact on the art market. However, the above-mentioned AI creations seem to be just research and technology from laboratories or technology companies and may not have much meaning for many people. The development of user-friendly tools and applications has allowed more people to experience the novelty of AI creation, making it easier than ever to create artwork (Pchelyansky et al., 2019).

In today's world, the rapid development of technology, in particular artificial intelligence (AI), has a significant impact on various areas of human activity, including art. The use of AI in the arts opens up new horizons of creativity, innovation, and cultural enrichment, as well as contributes to social change. AI offers artists many new tools and opportunities for self-expression. Thanks to machine learning algorithms, artists can create unique visual and audio works that go beyond traditional methods. Generative art, where AI creates paintings, music, and other art forms, demonstrates how technology can stimulate creativity and inspire new approaches to creativity.

Innovative AI technologies are changing the process of art creation. Artists are using neural networks, deep learning algorithms, and other AI tools to create complex and detailed works. For example, projects such as DeepArt and AI Portraits show how AI can analyse and interpret the styles of famous artists to create new works in the same style.

AI promotes social change through art by drawing attention to important issues and problems. Interactive installations created using AI can raise public awareness of environmental prob-

lems, human rights, and other social issues. Art is becoming a tool for activism, influencing people's consciousness and encouraging action. AI contributes to the globalisation of art, allowing artists from all over the world to collaborate and exchange ideas. This leads to the cross-fertilisation of cultures and the creation of new genres and trends in art. In addition, AI can help preserve and restore cultural heritage by analysing ancient techniques and styles and restoring damaged works (Sovgira, 2021).

However, the use of AI in art raises important ethical issues. In particular, the issue of authorship is being discussed: who is the real author of a work created by AI - the machine or the person who programmed it? In addition, there are concerns about the originality and authenticity of AI-generated works.

TABLE 1. The impact of AI on art for inspiration, idea generation and activism

№	Development area	Content and characteristics
1	Education and training	AI is actively used in art education. AI-powered interactive platforms can teach students various artistic techniques, analyse their work, and provide individualised recommendations. This contributes to more efficient and personalised learning, which can help develop new talent.
2	Collaboration between man and machine	Art created in collaboration between humans and artificial intelligence opens up new perspectives for creativity. Artists can use AI as a tool to inspire, generate ideas, or complement their work. This interaction creates unique works that combine human intuition and machine power.
3	Impact on social change and engagement	Artists use AI to draw attention to social issues and activism. For example, interactive installations can highlight environmental issues, human rights, or political conflicts, creating a strong emotional impact on the audience and promoting social change.
4	Experimental approaches	AI opens up space for experimentation in art. Artists can try out new forms, styles, and techniques that were previously unavailable. This contributes to the development of new genres and trends in art that enrich the cultural landscape.
5	Development of creative industries	The use of AI in the arts contributes to the development of creative industries such as film, music, design, and advertising. Automation of routine processes allows to focus on creative aspects, improving the quality and efficiency of production.
6	Globalisation and cultural exchange	AI is contributing to the globalisation of art by enabling artists from different parts of the world to collaborate and exchange ideas. This creates new opportunities for cultural exchange and enrichment, promoting mutual understanding and integration of different cultures.
7	Personalised art experiences	AI can be used to create personalised art experiences that adapt to the viewer's preferences and emotional state. This can be used in museums, galleries, exhibitions, and virtual spaces, making art more accessible and engaging.
8	Environmental aspects	The use of digital technologies and AI in art can have a positive impact on the environment by reducing the need for physical materials and transport. This contributes to a more sustainable approach to the creation and consumption of art.

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Thus, the relevance of AI and Art is due to the wide range of its impact on modern society. Artificial intelligence not only changes the way art is created and perceived, but also promotes the development of new forms of creativity, innovation, social change, and cultural enrichment. This makes it an important topic for research and discussion in the modern context. The topic of AI and art is extremely relevant, as it covers technological, cultural, social, and economic aspects that affect the development of contemporary art and society as a whole, which is based on the Concept of AI Use (On Approval of the Concept of Artificial Intelligence Development in Ukraine, 2021).

AI's impact on personal expression through art: new horizons of creativity and innovation

InSEA intensifies research work in the field of art education, promoting the development of new approaches, methods and technologies in art education. InSEA initiatives can focus on supporting art therapy, the use of art for social change and development, and other social initiatives aimed at improving the quality of life through the arts.

The future of education through the lens of art is based on integrated education, technology and virtual reality, artistic creativity as a means of self-expression and personal development, global cultural education, art therapy and psychological well-being, art as a means of innovative thinking, integration of art and STEM, accessibility of art education, individualised approach to teaching art, interdisciplinarity and cooperation, creation of art and education centres, art education and ethics. Educational programmes integrate the arts into all aspects of learning. For example, mathematics can be learned through music, where students analyse rhythmic structures, or history through painting, where they analyse paintings as a source of historical information. Thanks to the development of technology, students will be able to interact with art in virtual reality, creating their own artistic masterpieces or exploring virtual museums and exhibitions. The curriculum will place an increased emphasis on developing creativity and self-expression through art.

The main objectives of InSEA include: 1) Strengthening cooperation between art education professionals from around the world. 2) Promoting the development of new approaches and methods in art education. 3) Promoting the arts as an important element of education and cultural development. 4) Supporting the international exchange of programmes and projects in the field of art education. 5) Encouraging research and innovation in the field of arts and education. InSEA regularly organises conferences, seminars, working groups and publications, facilitating the exchange of experience and information among its members. The organisation is an important forum for communication between arts education professionals and promoting the further development of the field throughout the world.

The main idea of InSEA is to develop creativity, self-confidence and critical thinking skills. Educational programmes will become more global, taking into account diverse cultures and traditions through the arts. This will help create a more understanding and tolerant society. The arts will be used as a means to relieve stress, improve emotional well-being and psychological health. Educational institutions will have more programmes and services aimed at psychological support through the arts. Students will learn to apply the principles of art in various fields, which will contribute to the development of innovative thinking and solving complex problems (Kryzhnia, 2024).

The integration of the arts with the fields of science, technology, engineering and mathematics (STEM) will become even more active. Students will use artistic methods to creatively solve problems and stimulate innovation in science and technology. The development of digital technologies

will make art education more accessible to all segments of society. Open online courses, virtual workshops, and platforms for collaborative creative processes will help expand access to art education around the world. With the help of artificial intelligence and adaptive technologies, educational programmes will be more individualised. This will allow students to develop their artistic abilities in accordance with their unique needs and interests.

Educational institutions will facilitate interdisciplinary cooperation between students of different disciplines to create innovative art projects. This will stimulate the development of communication and collaboration skills. Specialised artistic and educational centres will appear in cities where students will be able to study, create and share art in a favourable atmosphere. These ideas can be the basis for the development of the concept of education through the arts in 2050, helping to create a more flexible, creative and harmonious educational system. Alongside the development of artistic skills, educational programmes will focus on artistic education and ethics. Students will learn not only techniques and technologies, but also the values and moral aspects of art. These ideas are aimed at creating a holistic and innovative art education system that will contribute to personal development, creativity and harmony in society in 2050.

The concept of Art 2050 emphasises collaborative and project-based learning. Compared to 2020, education will emphasise collaborative and co-created integrated learning between students and teachers. research will be embedded in the learning process to address common global complex problems through interdisciplinary and intercultural discovery. As stated in the InSEA Manifesto (2018): "All learners have the right to an arts education that deeply connects them to their world, their cultural history, and creates new ways of seeing, thinking, doing and being, possibilities and perspectives."

Areas of AI development through art

Today, schools are not actively responding to the challenges of the Fourth Industrial Revolution (World Economic Forum, 2020). Therefore, it is necessary to transform knowledge, its cultural interface, the knowledge system and the structure that destroys and changes knowledge, the origin of knowledge and the origin of stories. The concept emphasises that artists, art educators and the arts sector should work together to develop models of democratic education together with local leaders. InSEA supports and disseminates community-based arts education and local models of education and excellent examples that can serve as a starting point for decolonising educational practice. The idea behind the concept is that a new understanding of tribal/community societies should be explored through decolonised knowledge and research to rethink how knowledge and learning will shape the future of humanity.

Future curriculum models need to be diversified and avoid divisions caused by existing colonial values in order to be inclusive. It is crucial to understand the multiple voices of the world and explore the conditions of human life, which should be learned from local traditions for the betterment of humanity and future learning. The vision for the future of education is a multidisciplinary and programmatic vision that provides sufficient physical and time space for the arts in schools. In addition, it is also important to have well-educated professional art teachers who are guided by arts-based educational research methods and practices and who build professionalism and the unique educational role of the arts. Professional art teachers should come from diverse socio-cultural backgrounds, thus reflecting changes in the social fabric. Teaching and learning the visual arts should be

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seen as a shared experience to encourage an understanding of diversity and respect for other cultures around the world (For a 6-year-old to create a masterpiece, 2024).

Educators will innovate together to solve the problems of human life, learn to combine knowledge exploration, foster empathy, imagination and inclusiveness to broaden understanding of what it means to be 'human'. Learning will be a collaborative experience that emphasises visual literacy, which encourages the integration of cognitive and sensory modalities of inquiry and understanding, design thinking, image interpretation, discerning quality and developing narratives, and will enable students to engage in critical communication, developing the communication skills necessary for creative thinking (Eisner, 2002). By 2050, educational programmes and curriculum models will equip citizens with adaptable intelligence and creative verbal and non-verbal communication skills (InSEA Manifesto, 2018).

In 2050, teachers will teach knowledge not as a single a priori and defined object, but as a process of multiple discoveries in intercultural interfaces. There will be less teaching with the traditional omniscient teacher and students as passive participants. We promote the active transformation of students and oppose the model of "accumulation" education. Collaborative learning environments will have inclusive participants, with teachers as learners, students as teachers, and community members. Each student will develop the ability to lead, work effectively with others, and work independently. Teachers will facilitate the "construction" of knowledge by creating space for narratives of aesthetic experience and empathy, understanding the values of people in specific social contexts (Silverman, 2016), keen observation and care for the natural environment, and awareness of nonjudgmental perception and response.

The education space will become an innovative learning space. The InSEA concession is based on the 2050 approach to education, which will include active and collaborative student engagement, a decolonised curriculum, inclusive and diverse processes of discovery, and the development of imagination and aesthetic perception. The design of learning environments will foster an understanding of the 'common good' and global action. Schools as educational centres will provide students with easy access between communities, physical spaces on earth and digital culture.

After 2050, there will be many ways of "schooling". Innovative learning spaces will not only be inclusive, intercultural and creative, but will also reflect the entrepreneurial mindset of students who design, co-design and build learning environments. The concept of the classroom will be more like a studio, and these potentially mobile studio spaces will be filled with opportunities to explore the world and consult on complex issues. Innovative learning spaces will enable artistic exploration through the use of a variety of media, play objects and artefacts. It is important for learners to have a physical structure, space and time for group learning so that the learning space is a permanent, sustainable and open structure (All Alarmed: How AI is affecting art, film, music and literature, 2024). Students need to be provided with knowledge, experience and literacy in a variety of ways. By 2050, it will become increasingly important to develop skills of keen observation, adaptation, experimentation and collaboration through the arts, where education can harness critical thinking and creative responses to local and global socio-cultural contexts (Eisner, 2002).

Throughout history, people have survived and thrived by using their imagination and creativity to face unforeseen challenges. InSEA believes that imagination must be nurtured to create an inclusive, collaborative, resilient and sustainable world by 2050. By 2050, education, regardless of its form, will need to respond critically and intuitively to the social, cultural, economic and envi-

ronmental challenges of our time. As we assume responsibility for living together and protecting the planet, we need to let our imaginations run wild and allow for different perspectives. Learning environments in 2050 will foster what philosopher Martha Nussbaum describes as the "narrative imagination", whereby we expand our understanding of ourselves by deeply understanding the stories of others in the context of their lives (1998). Engaging in the visual arts is a natural way to communicate and focus on narrative imagination, incorporating First Nations and Aboriginal stories while envisioning new spatial models for learning.

The learning environment of 2050 will reflect multigenerational and community-based learning; an integrated curriculum focused on experience, exploration, collaboration and interdisciplinary approaches; reimagining the learning environment and moving beyond school structures as we know them today; and creating a science that is symbiotic with technology, engineering and the arts. Knowledge connects the uncertainty of the past to the future, and imagination guides global citizens to achieve their visions with humility, wonder and perseverance, compassion and responsibility.

As the educator John Dewey said, so-called basic academic skills need to change, and education includes "flexible goals" (1938); instead of emphasising the transfer of knowledge, it is better to encourage the exploratory life of the process of inquiry through investigation and discovery. By 2050, learning spaces will inspire learners to build supportive and trusting relationships within imagined possibilities and to persevere in tackling global challenges such as water insecurity, poverty, environmental destruction, migration and injustice. When learning environments encourage the imagination, we have opportunity, as educational philosopher Maxine Greene reminds us: "Working together to uncover what is hidden, to contextualise what is happening to us, to dialectically structure the structures that marginalise us, can keep us alive." The development of imagination and aesthetic perception is the key to opening up learning spaces. The creative process begins with exploration, experimentation, discovery, questioning and problem-solving as a way to learn. When envisioning education in 2050, we believe that the visual arts optimise the enrichment scenarios that a global society needs; whether it is through active participation in painting, design, digital media or three-dimensional architecture, visual literacy enables learning for all ages and cultures. The visual arts create habits of mind that are both life-affirming and actionable, leading to a better future. Skills such as visual exploration, problem solving, reframing problems and challenges, engaging in research and analysis, curiosity, dealing with complex situations, critical thinking, collaboration, and using media to broaden one's horizons are powerful ways to address the complex socio-cultural issues that will be at the centre of the world in 2050 (The Puchon Fantastic Film Festival presented awards for the best film created with the help of AI).

CONCLUSION

Artificial intelligence is having a significant impact on the arts, opening up new opportunities for creativity, innovation, and cultural enrichment. It also contributes to social change by drawing attention to important issues through art. However, the use of AI in the arts requires careful discussion of ethical issues and challenges associated with new technologies. The topic of AI and art is relevant and important for understanding current trends in culture and technology. In order to find viable alternatives to outdated school structures, subjects, assessments, and ability distributions, and to move beyond automation, dogmatism, etc., we need creative thinking and creative approaches to collaboration. The creative process embraces diversity and provides learners with a new way of meet-

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ing and interacting with the world. Learning spaces allow children to combine emotional, intellectual, physical and spiritual learning in the context of a global society and the natural world in which they live together. Visual literacy liberates the mind and soul, changes how and what is taught, and helps to re-identify the self. Furthermore, we define education as ubiquitous, flexible and innovative systems that are inclusive and flexible enough to integrate people of different abilities without the need for common standards of learning and assessment. With the visual arts at the centre of learning, the global community will have the opportunity to embrace inclusion and diversity, develop innovative pedagogies, foster creativity and imagination, and redesign learning spaces to promote integrity, the common good and the 'real world'. The results allowed us to identify areas for the development of AI through art for the cultural enrichment of the individual. Artificial intelligence opens up new opportunities for creativity and innovation, which contributes to social change and cultural development. Integrating AI into art education is an important step towards creating a new humanistic educational paradigm.

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