METHODOLOGICAL MANUAL

Arts&AI project

***Erasmus*+ 2023-3-HU01-KA210-YOU-000181250**

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Content

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

INTRODUCTION

The course on *Artificial Intelligence in Cinematography* explores the relationship between AI and artistic expression: how AI can support individual creativity and open up new possibilities in the creative process. The educational project, aimed at young people, started with online learning materials and workshops and culminated in a shared, hands-on creative experience.

The aim of the *Arts & AI - Using Artificial Intelligence in Cinematography* methodological manual is to summarise the experience gained during the implementation of the project and to support the further adaptation of the training methodology. The manual provides a detailed guide for all those - trainers, institutions and creators - who wish to apply in their own teaching practice the innovative curriculum and training model created at the intersection of AI and motion graphics. The aim of the document is to present in a structured and transparent way the professional content of the curriculum, the blended learning training process, the teaching experience, and the experience of results and applicability.

The first chapter of the handbook presents the methodological basis of the training. It describes the blended learning structure, the interplay between online and offline elements, the purpose of the training and the diverse composition of the target group.

The second chapter describes the development of digital curricula and its professional relevance. It describes the objectives of the content development, the topics covered, the methodological principles used and the educational structure of the curriculum. This section emphasises the complexity of the curriculum, its didactic underpinnings and how it contributes to the development of an AI-aware creative attitude. The third part presents the curriculum module by module. The objectives, themes, methodology and skills developed in each of the four modules are described. The first module covers the basics of AI and motion graphics, the second focuses on image generation, the third on sound and video generation, and the fourth on advanced techniques and composition.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

The fourth chapter contains a user's guide to the digital learning material available in the Tanlet e-learning system and the individual links. It also covers the structure of the learning pathways, the video blocks and interactive exercises, and the technical use of the platform.

The fifth chapter analyses the results of the training and its impact on participants, presenting the areas of competence development, the practical application of the knowledge acquired and the audiovisual works produced. In particular, it highlights the positive change in participants' attitudes towards AI and the development of their ability to create independently.

The sixth part looks at the potential for adaptability. It describes how the training material can be used in other training contexts for different target groups. It shows in detail how the modular structure of the curriculum allows trainers and institutions to design their own courses, even using only parts of it.

Finally, the last chapter covers the public availability of the project results. The handbook emphasises that the digital learning material, methodological guides and other results generated by the project are freely available on the project website free of charge, so that anyone interested can use them for their own learning or teaching purposes.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Methodology for training in the *use of Artificial Intelligence in the art of the moving image*

Based on the pilot training that was carried out, the following is a summary of the instructions for use of the curriculum and the experiences of the training.

The aim of the training

The *Arts and AI* project aims to introduce participants to the potential of AI in motion graphics. The project delivered an international training course in motion picture and animation making, *Using Artificial Intelligence in Motion Picture Art,* which consisted of four professional modules.

The project was a four-step process, building on each other. The training included the process of creating a complete cinematographic work from scriptwriting to animation: creative brainstorming, image and sound generation, animation, compositing and editing.

Description of the target group

The target group of the project are young people working and/or studying in the visual creative arts and industries, who are able to apply AI in a variety of fields in their work, and who consider the use of AI tools necessary for their professional development. At the same time, the target group also includes non-professionals who are interested in the creative applications of AI and are open to developing their competences with AI tools in these artistic fields.

A total of 44 participants took part in the training, the digital learning material, the 4 online workshops and the creative camp. The participants included students of image-photo-media, students of directing, students of short film, illustrators, animators, animation makers, graphic designers, art students, cinematographers, animation directors, 3D animation, non-degree students, but also students who want to change their career and work in animation. In addition, there were also participants from civil professions who wanted to develop their skills with AI tools, learn to use AI in the arts, either in their current profession or as a first step towards a professional qualification.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Themes of the training

The blended learning course "*Using Artificial Intelligence in Motion Picture Art*" was designed to enhance the professional knowledge and develop the competences of the participants in the field of motion picture and *animation production*. The training included the processing of digital learning material on the subject, the practical application of the knowledge gained with the support of the instructor in interactive sessions, and the development of the ability to apply the knowledge gained independently through practical exercises.

The training consisted of four digital modules, the acquisition of professional content, online animation workshops for a collaborative hands-on creative process, and a one-week in-person workshop.

The training will cover the following topics:

1. CONCEPTION and WRITING: developing creative ideas and planning the story
2. IMAGE GENERATION: Using AI-based techniques to create motion visuals
3. PREPARATION: generating sound, preparing picture elements for animation and animation
4. COMPOSITION AND CUTTING: editing scenes into an audiovisual work

The blendig learning methodology on which the training is based

The digital learning material and methodology were tested during the training and further developed and finalised through feedback. The pilot training took place between February 2025 and April 2025, during which a total of 44 participants developed the digital curriculum, participated in 4 online workshops and a one-week face-to-face creative camp.

The training methodology is as follows:

- Digital learning material consisting of 4 modules, each with a learning time of 2 weeks

The training was based on a digital curriculum consisting of four modules, which introduced participants step by step to the creative application of artificial intelligence in the field of motion graphics. The modules of the curriculum are also self-paced and guided the students from concept creation through image generation and video editing to the final creation.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

- pre-delivered, independent processing of digital learning material in the Tanlet system

The digital learning material was available to all participants through the online interface and was made available to them on a continuous basis throughout the training.

- 4 interactive digital workshops

The learning was accompanied by online workshops to provide participants with practical support in applying what they had learnt and to master the skills at a more advanced level. The workshops also provided an opportunity for live consultation with the teachers, clarification of technical issues and joint evaluation of first creative attempts. A total of 4 online sessions were carried out. Each module was worked through in a pilot period of two weeks of learning time, including 1 online workshop and a corresponding practical exercise to be completed by the participants between sessions.

- One-week personal creation camp

The face-to-face international mobility event was an important practical phase of the learning process and the final stage of the training. The participants applied the theoretical and technical knowledge acquired during the online learning materials and workshops to develop their own video art project, realising a complex, independent creative process. Throughout the camp, participants received ongoing mentoring, teacher support and workshops to independently design, create, edit and finalise their audiovisual creations using generative AI tools.

Participants' activities during the training

During the training, participants worked through the 4 modules of the digital curriculum and participated in the subsequent training phases, such as online workshops and the creation camp.

They were involved in the realisation of a complete audiovisual project, from design to implementation:

- developing a project idea: story and scenario building (narrative arc, character development, conflict, resolution)
- AI-based imaging: understanding systems that generate images from text, creating visual elements
- voice generation: narration with AI

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

- the creation of a coherent work: audiovisual elements, editing techniques, visual effects, integration of sound and images

General presentation and professional relevance of digital curricula

This chapter describes the main features of the digital curriculum created in the project, such as the aim of the content development, the methodology used, the topics covered, the skills to be developed, etc.

The aim of curriculum development

The *Arts&AI* curriculum aims to provide a comprehensive, practical and conceptual introduction to the applications of artificial intelligence in the moving arts. The target group will be able to create autonomous AI-supported art projects with appropriate technical and aesthetic awareness.

In many ways, the curriculum is a niche product, covering a new and dynamically developing field of professional knowledge**,** where there is currently little reliable, practical, empirically developed teaching material available in Hungarian. The content is also of exceptional complexity, with a clear structure and didactically sound basis. The knowledge imparted in the course not only provides participants with a technical toolbox, but also helps to develop critical, ethical and theoretical thinking, thus contributing to the development of a new generation of AI-conscious creators.

The Digital Learning Day theme

The course material of the *Artificial Intelligence in Cinematography* course is a four-module, thematically sequenced content that follows a structured learning curve, guiding participants through the full spectrum of the creative process, from scriptwriting to video production: from creative conceptualisation, through the practical use of visual and audio AI tools, to advanced, reflective image editing and video techniques.

The curriculum is up-to-date, based on the latest tools and procedures, but also methodologically well thought-out. The AI tools presented during the training (e.g. Midjourney, ChatGPT, Runway, Eleven Labs, Suno, Gemini AI Studio, Photoshop, After Effects) incorporate the latest technological developments. Not only the technical tools

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

but also examines them from a critical point of view, detailing their strengths, weaknesses, operational logic and limitations**.**

The digital learning material's main value is that it covers the entire audiovisual creative workflow**, with a** step-by-step structure that is transparent and logical. The first module provides a theoretical and historical grounding in the functioning and artistic significance of AI, and covers the topics of prompt writing and scriptwriting, narrative construction; the second module introduces practical techniques for image generation; the third module explores the possibilities of sound and video generation; while the fourth unit introduces tools for compositing, image manipulation and advanced post-production. This deliberate, sequential module structure not only provides an effective learning pathway, but also allows participants to move independently through a complex, interdisciplinary creative process.

The themes of the four modules:

1. **Introduction to the relationship between AI and cinematography, as well as prompt writing and scriptwriting** - basic theoretical and technical concepts, narrative building and creative attitude development;
2. **Image generation with artificial intelligence** - using Midjourney and other AI tools, visual world building;
3. **Audio and video generation** - using Eleven Labs, Suno and RunwayML, multimodal content creation, critical interpretation;
4. **Advanced techniques and compositing** - Photoshop, Gemini AI, After Effects and Runway for visual post-production, style consistency and animation.

Methodological basis of the curriculum

The methodology used combines theoretical grounding, practical guidance and critical thinking. The teaching style is direct and motivating. The use of conversational language, practical examples and clear explanations are designed to make the material widely usable - for beginners and advanced learners alike. The material is structured, transparent, accurate and technically sound, yet user-friendly, allowing each participant to progress at his or her own pace and adapt the learning process to his or her own creative interests.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

The teaching methodology is didactically well thought-out: the curriculum provides a theoretical foundation, a historical framework and practical inspiration. The presentation of knowledge alternates between explanations of concepts, concrete examples, reflective questions and illustrative material. The methodology is well suited to independent processing, but also provides opportunities for mentoring.

The experiential and project-based learning methodology also builds on the content. It not only imparts theoretical knowledge, but also allows participants to experiment at their own pace, along individual themes, and to gain experiential knowledge by testing, comparing and recombining tools.

Critical perspectives are also applied, raising and shaping questions for students. It not only describes the technical tools, but also examines them from a critical point of view, detailing their strengths, weaknesses, operational logic and limitations**.**

Presentation of the digital curriculum by module

Module 1 - Introduction to the relationship between AI and motion graphics

The aim of the module

The aim of Module 1 is for participants to acquire basic creative and narrative skills with the support of AI. The curriculum covers the steps of idea generation, concept development, scriptwriting and prompt writing. Emphasis is placed on using ChatGPT as a creative partner. The curriculum will include theoretical, technological, historical, art theoretical and practical elements, which will contribute to the participants' approach on several levels. Participants will be given a sound, understandable, yet inspiring introduction to the workings of artificial intelligence and its creative applications in the visual arts.

Topics of the curriculum

The module provides a foundation in the basic concepts and technical knowledge required for the application of artificial intelligence (AI) in the visual arts. The knowledge imparted includes: general definition and purpose of AI, machine learning and neural networks

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

how AI works, the history of AI development (from Aristotle to Alan Turing), and tools such as GAN and ChatGPT. Participants will also learn about creative applications of AI, including text and image generation, story generation, visual style mimicry, and ethical issues of authorship and artistic value.

The curriculum effectively supports the understanding and application of AI in the arts at multiple levels:

- **Interactive introduction:** a demonstration of the human-artificial intelligence relationship through examples (traffic lights, captcha) will engage participants through personal and everyday experiences.
- **Creating your own story and prompting**: exercises in screenwriting and image generation develop creative thinking, problem solving and visual narrative skills. The prompting exercise in particular improves precise drafting and logical structuring skills.
- **Practical applications:** the use of ChatGPT develops a multimodal and interdisciplinary approach through letters, scripts, debugging, translation tasks.
- **Technical background and theoretical foundations:** an introduction to the development and functioning of AI (Turing, neural networks, GAN) contributes to digital literacy and basic IT skills.
- **Ethical and philosophical issues:** issues related to the definition of art and the interpretation of AI works.

Presentation of the topics and knowledge covered

1. Interactive introduction - developing a personal relationship with AI

The module will start with an interactive introduction to AI not as an abstract technology, but as part of our everyday lives. Using simple examples such as how traffic lights work, or how to recognise CAPTCHA images, students can relate their personal experiences to understand how AI is involved in their lives. This interactive launch developed cognitive context-making skills and laid the groundwork for further conceptual work.

2. Concept and history of artificial intelligence

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

This will be followed by an introduction to the concept and purpose of AI, during which participants will learn about the functions that mimic human thinking - learning, reasoning, problem solving, creativity - and the historical background of their modelling. The historical arc will introduce the significance of the Turing test from Aristotle's logic systems through the work of Alan Turing, and then introduce mid-20th century concepts of AI (e.g. John McCarthy and symbolic systems).

3. Technical background and operating mechanisms

The third module introduces you to the world of technical background and operating mechanisms. The operation of neural networks, the development of machine learning based on data patterns, and the principles of autonomous content generation (text, image, sound) are all presented through clear, practical examples. In addition, the operation of generative models, including GAN (Generative Adversarial Network), and the principles of GPT systems (e.g. ChatGPT) are explained in detail. Participants will learn how linguistic models differ from image-generating algorithms and how they can produce different types of creative content.

4. AI tools in visual creation

The next chapter focuses on the use of creative and visual AI tools. The tutorial will show examples of how image generation (e.g. Midjourney), text generation and storytelling (e.g. ChatGPT), and simulation of visual styles and character design work. Participants will see through real examples how a character or visual world can be built using AI tools. Special emphasis will be given to supporting the creative process with AI, for example in idea generation, associative thinking or even storytelling. The module will show how AI can be used to create letters, dialogues, short narratives, debugging or even translation tasks - thus developing a multimodal and interdisciplinary approach in the target group.

6. Basics of prompt writing

The practical session will also cover the basics of prompt writing. The curriculum emphasises that one of the key competences of using AI is the ability to give precise instructions, so participants will

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

learn the logic of constructing a well-structured prompt, illustrating different linguistic approaches with examples. Prompt writing develops logical structuring skills, text construction awareness and goal-oriented communication strategies.

7. Screenwriting and narrative building

The module also included an introduction to the basic concepts of screenwriting. Participants will review the structure of the narrative arc, the stages of character development, how conflict structures work and how they can be used to contextualise the content generated by the AI. Practical examples of scriptwriting and image generation using AI tools to support visual storytelling will be provided.

8. Ethical and art-theoretical issues

Finally, the module raises ethical and art-theoretical issues. It will guide participants' thinking on issues such as the authorship and originality of content created by AI, the extent of human involvement, and the redefinition of digital art. Their critical thinking is supported by questions on the concept of art, criteria for evaluation and the social responsibility of technology.

Skills developed and results achieved

The module will develop a range of skills. Participants will not only learn basic technological concepts, but also develop their creative thinking, narrative skills, problem solving and visual abstraction. Particular attention will be paid to independent thinking, the ability to "dialogue" with artificial intelligence, and the development of a critical attitude towards the relationship between technology and art.

Skills developed through the curriculum:

- Learning to use AI tools
- Creative thinking and storytelling
- Fine-tuning technical writing and prompting
- Visuality-driven narrative and image-based thinking

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Teaching method

The teaching method is integrated and didactically thoughtful: the curriculum provides a theoretical foundation, a historical framework and practical inspiration. The role of the instructor is not only informative, but also accompanying and stimulating. The presentation of knowledge alternates between explanations of concepts, concrete examples, reflective questions and illustrative material. The methodology is well suited for independent processing, but also provides opportunities for mentoring.

Summary

Module 1 lays the foundations for the whole training mindset: it teaches not just how to use software, but how to develop a critical, creative and creative relationship with AI. Its accessible language and style makes technical content accessible, while also placing a strong emphasis on developing visual thinking. The module is therefore informative, motivating and educational at the same time.

2. module M02 Image from Text with Artificial Intelligence

The aim of the module

The module explores the potential of Artificial Intelligence for image-based content generation. It introduces participants to the basics of prompt writing, in particular the basics of text-based prompts and their conversion into visual content using AI-based image generation tools, and the use of the Midjourney tool. The backbone of the content is a narrative and direct style text by the lecturer-teacher, highlighting the democratising role of AI in the visual arts.
In addition to technical use, the module develops creative thinking and visual design skills, while gradually encouraging independent content generation. Module M02 aims to develop strong visual and practice-oriented competences. The curriculum is motivating, up-to-date and aims to democratise creativity. The "you don't have to draw well, you just have to ask good questions" approach fits perfectly with digital and creative pedagogical guidelines.

Topics of the curriculum

The module will focus on image generation with artificial intelligence, including the operation of the Midjourney platform, and the practical application of prompting techniques.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

the introduction of. Participants will learn about the principles of AI-based imaging, the parameters used in the generation process (e.g. aspect ratio, style, lighting, technical settings) and gain insights into the capabilities of AI visual tools.

It will help the target group to learn how to write precise, goal-oriented prompts and how to refine, recreate or develop them step by step. In addition to the practical aspects of image generation, the course also focuses on the development of visual thinking. Beyond practical skills, the curriculum also shows that the use of artificial intelligence as a visual tool is not a technological game for its own sake, but opens up new possibilities for creativity.

3.1. Narrative introduction: the module starts with a friendly tone to get you interested: 'you don't have to be Picasso' to create a spectacular piece of art.

3.2. Prompt writing practice: participants will learn how to structure prompts in English. ChatGPT will play an important role as a prompt translation tool.

3.3. How to use Midjourney: step-by-step tutorial on how to use the Midjourney bot through the Discord interface, how to register, log in and generate your first pictures.

3.4. Parameterisation: participants will learn to use aspect ratio (-ar), style (-style) and size parameters.

3.5. Presentation of alternative tools: Leonardo, Ideogram, DALL-E, Stable Diffusion, Runway, Tengr.ai, NightCafe, Deep Dream Generator, comparing their functional and artistic aspects.

Presentation of the topics and knowledge covered

1. Interactive introduction - experiential learning and engagement

The module starts with a personal, direct address that focuses on experiential learning. The instructor uses a direct style to introduce participants to the visual capabilities of AI, emphasising that no prior artistic training is required to successfully generate images, but that imagination, experimentation and an understanding of the tools are sufficient. This approach breaks down barriers and creates an open, motivated learning environment.

2. The basics and logic of image generation

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

The tutorial introduces the principle of artificial intelligence-based image generation, in particular the steps of how Midjourney works. Participants will learn how to use the Discord interface, the integration of the Midjourney bot and the practical process of image generation using the /imagine prompt command. The logic of generation (image building from noise, image variation, parameterization) will be demonstrated in clear, live examples through . The aspect ratio, style, lighting and technical settings such as optical parameters (e.g. 50 mm lens, ISO values) play an important role to fine-tune the mood and technical appearance of the generated images.

3. Prompt writing - the key to creative use of AI

The module focuses on the principles of prompt writing, as accurate and visually rich language is the key to quality imaging. The module will show how to write clear, detailed and purposeful prompts in English, what elements (style, size, colour, settings) to include in a prompt, and how to include ChatGPT in the English prompts translation of English prompts. During the prompt writing process, they will develop their drafting, logic and editing skills, as well as experience the relationship and feedback mechanism between the instructions and the visual results generated.

4. AI tools and platforms - Midjourney and alternative solutions

The tutorial not only describes the use of Midjourney in detail, but also introduces several alternative AI-based image generation platforms, including:

- Leonardo.Ai - creative industries application optimized for the application tool, using reference images;
- DALL-E (OpenAI) - text-based imaging, integrated into the ChatGPT interface;
- Ideogram - integrating text into visual content (e.g. logo design, posters);
- Stable Diffusion - open source, style-driven image generation;
- Tengr.ai - Hungarian developed, precisely tunable image generator;
- Runway - multimodal content generation platform (video, audio);
- Night Cafe Studio, Deep Dream Generator - visual style experiments, surreal images.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Comparing platforms helps to choose the right tool for your own creative goals and supports the conscious use of the tool.

5. Practical use of Midjourney step by step

The tutorial describes in detail the technical use of Midjourney, including:

- the creation of the Discord server and the integration of the Midjourney bot,
- the operation of various commands (/imagine, /describe, /info, /settings, /subscribe),
- the stages of image generation (base image, variation, zoom in, zoom out),
- the possibilities for reproducing images (V1-V4 variations, upscaling, remix mode).

Special attention will be given to personalised image refinement, such as skin tones, lighting effects, texture adjustment, and the benefits of new versions of Midjourney (e.g. 6.1) - including realistic finger rendering or new skin surface generation capabilities.

Skills developed and results achieved

The curriculum is designed to develop a range of competences, resulting in the target group:

- learn about the basic functions of Midjourney;
- learn to create, refine and re-generate prompts in English;
- can perform style and format adjustments using basic parameters (e.g. --ar, --v, --q);
- consciously apply the concepts of "visual thinking" and "creative control".

Teaching method

Experiential and project-based learning: the structure of the module builds strongly on project-based and experiential learning. The module not only imparts theoretical knowledge, but also allows participants to generate images at their own pace, along individual themes, using the learning material to write prompts, create variations and fine-tune the content to produce increasingly higher quality content.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Summary

The module contributes to the development of digital and visual competences of the target group in a complex way. By understanding how Midjourney and other AI tools work, by applying the prompts in practice and by following the steps of the autonomous image generation process, it will enable the autonomous, conscious and goal-oriented use of AI. The module imparts technical knowledge, while the practice-oriented methodology, the facilitative attitude of the instructor and the experimental learning environment allow the target group to engage as creators in the process of digital content production.

3. MODULE: Sound and video generation with artificial intelligence

The aim of the module

Participants will learn about the possibilities of text-to-voice and motion graphics, gain insights into industrial and artistic applications, and learn how to operate and use state-of-the-art AI tools (Eleven Labs, Respeecher, Runway, Suno). The module will develop participants' media literacy, technical tool competences and aesthetic sensibility, while opening up new dimensions of multimodal content creation.

Topics of the curriculum

The complexity of the M03 module makes it a key module for deepening the understanding of AI. The lecturer, Zsolt Hátszegi, will present the tools and their use through his own experience, with an emphasis on the balance between creative control and technological efficiency.

3.1. The relationship between the creative industries and AI: an introduction to the main phases of the film and animation industry: development, pre-production, production, post-production. It shows how AI can be integrated into these phases.

3.2. Speech Generation - Eleven Labs: this module introduces the basics of generating speech from text, with a special focus on the limited support for the Hungarian language. Participants will learn how to choose a model, fine-tune the speech style, set stability and emotional parameters.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

3.3. Tone change - Respeecher: Respeecher is the practice of replacing the existing sound material with a new sound character. When selecting a model, they can filter by age, gender and tone. The retention of accent is important.

3.4. Music creation - Suno, AIVA: Participants can create their own film music with AI support. They can set the tempo, instruments, complexity and rhythm of harmony changes. The tool gives the opportunity for structured creative work.

3.5. Video Generation - Runway: shows how to create AI videos from text or simulate a new scene from existing footage. Describes first frame re-styling, posture matching and First Frame Control.

Presentation of the topics and knowledge covered

1. Interactive introduction - overview of multimodal AI applications

The module starts with a personal and practical introduction, linking what has been learned before with the new topic: while the first two modules focus on language and visual AI engines, this unit focuses on voice and video generation tools. The curriculum highlights that video and sound generators work on the same basic principle as other AI tools: they learn by processing large amounts of data and then generate new content based on that data. Through real-life examples, participants will learn about the aesthetic peculiarities and flaws of the generated videos, as well as the possibility of reinterpreting them artistically.

2. The role of artificial intelligence in filmmaking

The curriculum describes in detail the main stages of filmmaking (development, pre-production, production, post-production) and how AI can be integrated into the different processes. Participants will be provided with examples of how ChatGPT can help in the creation of a production plan, scene description or dialogue, while visual and sound AI tools can support the creation of visual and audio content. A particular focus will be on creative control: while AI will make production processes significantly faster and more efficient, aesthetic quality and human interpretation will remain in the hands of the users.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

3. Text-to-speech generation - Eleven Labs and Respeecher

Participants will learn about the principles and tools of speech synthesis supported by artificial intelligence. A highlight of the course was Eleven Labs, which offers models in English and the possibility to upload your own voice samples. Features presented include voice stability, speech tempo, tone adjustment and fine-tuning of emotional expressiveness. The module also introduces the Respeecher platform, which offers advanced tools, in particular for voice tone replacement, accent modelling and voice correction. Students will get hands-on experience of how to read, modify or style text using various AI-based voice engines.

4. Generating music with artificial intelligence - Suno

Participants will learn about the possibilities of generating musical sounds using the Suno application. The presentation of the program will not only explain the basic logic of music generation (text

→ music or style→ music), but also the aesthetic and editorial possibilities: beat, tempo, key, instrumentation, structure, stylistic setting. By designing and fine-tuning the moods for their own project, the target group can create complex musical content, which they can even use for their audiovisual creations.

5. Video generation - tools, mistakes, possibilities

A central theme of the module is the generation of video from text or images. The course will focus on the characteristics of generated videos, typical errors (e.g. blurring of body parts, coordination problems) and their aesthetic reinterpretation. The RunwayML interface was demonstrated to the participants:

- how text-based video generation engines (Gen-2, Gen-3 Turbo) work,
- how to create an image to video (image to video),
- how the Motion Brush function (object movement control) works,
- how video to video can be used (e.g. style changes, animation effects).

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Using Runway's toolkit, participants can create their own scenes, generate cinematic transitions, and try out the basics of camera movements (e.g. dolly out) and style-driven creation.

Teaching method

The instructor will also provide a critical perspective, posing mindset-shaping questions for students, highlighting the issues of AI aesthetics, originality, creative control and artistic reinterpretation of mistakes. The methodology relies heavily on experiential learning: students acquire meaningful knowledge by trying, comparing and recombining different tools.

Skills developed and results achieved

In Module 3, participants will:

- understand the processes of generating speech, music and video from text;
- will be able to generate and customise artificial sound (Eleven Labs);
- are able to change the tone (Respeecher);
- can compose music using AI (Suno, AIVA);
- can produce and edit video content (Runway);
- are capable of consciously interpreting the aesthetic distortions of AI and reinterpreting them artistically.

Summary

This module will introduce participants to one of the most dynamic and exciting areas of artificial intelligence. Through the use of sound and video generation, learners will understand how to create complex audiovisual content using AI, while critically reflecting on the tools' functionality, limitations and potential. The strength of the module lies in its ability to build on technological understanding, creative experimentation and the development of aesthetic sensibility - all in a language and methodology that supports the development of an independent, reflective and conscious creative attitude.

4. MODULE - Advanced AI tools and video techniques for art projects

The aim of the module

The aim of the module is to further deepen the basic and intermediate AI tool usage previously acquired and to provide participants with a comprehensive overview of advanced AI

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

visual application possibilities at the level of. The emphasis was on fine-tuning the creative process, ensuring image processing, composition and stylistic consistency.

Topics of the curriculum

The module goes beyond the basic use of AI tools and aims to integrate AI into creative workflows. The content development teacher will use AI in the

is presented as an "artistic alternate", which does not replace the creator, but extends his possibilities. The module pays particular attention to the possibilities of creative self-reflection, digital image manipulation and aesthetic re-creation.

Photoshop techniques:

- Quick Selection, Select and Mask;
- Deletion, cloning, background replacement;
- Manage layers, export in different formats.

Combined use of AI tools:

- Homogenise your image style with Runway;
- Google AI Studio: remove image elements, change background, generate particle effect;
- Stylize the first frame of a video, First Frame Control.

Creative process and reflection:

- Filling (visual and conceptual inspiration);
- Practising expression (sketches, rehearsals);
- Difference between content consumption and processing;
- A balance between artistic authenticity and technological experimentation.

Presentation of the topics and knowledge covered

1. Interactive introduction - a new approach to AI as an artistic tool

The introductory part of the module introduces AI as a technical tool that makes the creative process faster and more efficient, but does not replace it. It also reflected the possible reservations of the target group and encouraged them to use the technology for artistic purposes through open questions.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

AI should be recognised not as a tool, but as a "creative partner" that makes a new artistic language available to them.

2. Creative phases and the role of AI

After an overview of the phases of the moving image industry (conceptualisation - image-making - creation of the moving image), the curriculum compared the universal elements of the creative process (charging, expression, reflection) with the functioning of AI. The module showed how AI can become an integral part of the multi-level creative workflow and support aesthetic and conceptual research - for example, by accelerating the testing of visual ideas or generating alternative solutions.

3. Photoshop and manual preparation - masking, layers, enhancement

The target group was introduced to basic manual image preparation techniques using Photoshop, such as:

- create and manage layers,
- masking and brushing,
- remove or move picture elements,
- Quick Selection Tool, Select Subject and Select and Mask functions.

The focus was on how to manually correct generation errors in Midjourney or other AI tools, and how to extract image elements for further animation. Photoshop thus played the role of a "bridge" between AI-based and human editing.

4. AI-based image manipulation - using Google AI Studio (Gemini)

The module introduced Gemini AI Studio as an advanced image editing tool that can perform image modifications (e.g. deleting a character, generating a new background, changing a style) on natural language commands. Participants experienced how certain image modifications, such as ensuring a homogeneous style or removing errors, can be performed faster and more efficiently using AI than manually.

5. Motion control and animation - video control with reference shot

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

The tutorial showed how to control the movement of an AI-generated character using your own video footage (motion reference). The target group could learn how to use the Runway First Frame Control and how to recreate the first frame of a video in a stylistic way (Leonardo.ai) and then use it to ensure style consistency in video generation.

6. Compositing with After Effects

The tutorial guided the participants step by step through the basic features of After Effects:

- creating compositions, scaling, duration management,
- image layer management, masking, timing,
- detach green background images (Keylight),
- layer blending, shadows, masking refinements.

The aim was to ensure that the target audience would not only use the AI-generated content, but would also be able to refine it aesthetically and technically afterwards - ensuring a homogeneous visual outcome.

7. Camera movement management and image stabilisation

The module addressed a common error in AI-generated videos: unwanted camera movement. Participants were introduced to the stabilisation options in Runway and After Effects:

- 3D camera tracker,
- Warp Stabilizer effect,
- separation of video and character output.

The aim was for participants to be able to create visually consistent camera images, even for videos compiled from multiple sources.

Skills developed and results achieved

Module 4 is designed to develop the following skills:

- image post-processing after image generation (Photoshop, Google AI Studio);
- the technical aspects of masking, highlighting, compositing and stylistic change techniques;
- learn how to use Runway and Gemini AI image editing tools;
- compositing moving images through image layer management;
- conscious use of effects in After Effects;

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

- autonomously implement visual concepts with AI support;
- develop their own AI artistic style and reflexive creative attitude.

This will enable the target group to produce and post-produce complex visual and video content independently, with a critical approach and artistic sensibility.

Summary

Advanced techniques will allow the target group to deepen their understanding not only of the use of AI tools, but also of how to combine them in a meaningful way, to achieve an artistic goal. The strength of the module lies in the way it treats human creative reflection and AI's automated capabilities as an integrated whole, while continuously feeding back to participants their own choices and aesthetic sensibilities. In addition to technical knowledge, it imparts an approach that makes AI usable in the long term in the practice of cinematic art.

User guide for the digital curriculum

Modules - learning paths in Tanlet e-learnig

Within the Arts&AI group, you will find the 4 modules of the digital curriculum and the corresponding pathways on the Tanlet e-learning platform. Each of the 4 modules has a specific number of videos and a specific number of exercises. In some cases, 1 module was processed in the form of several pathways due to volume constraints.

The learning pathways for the 4 modules are:

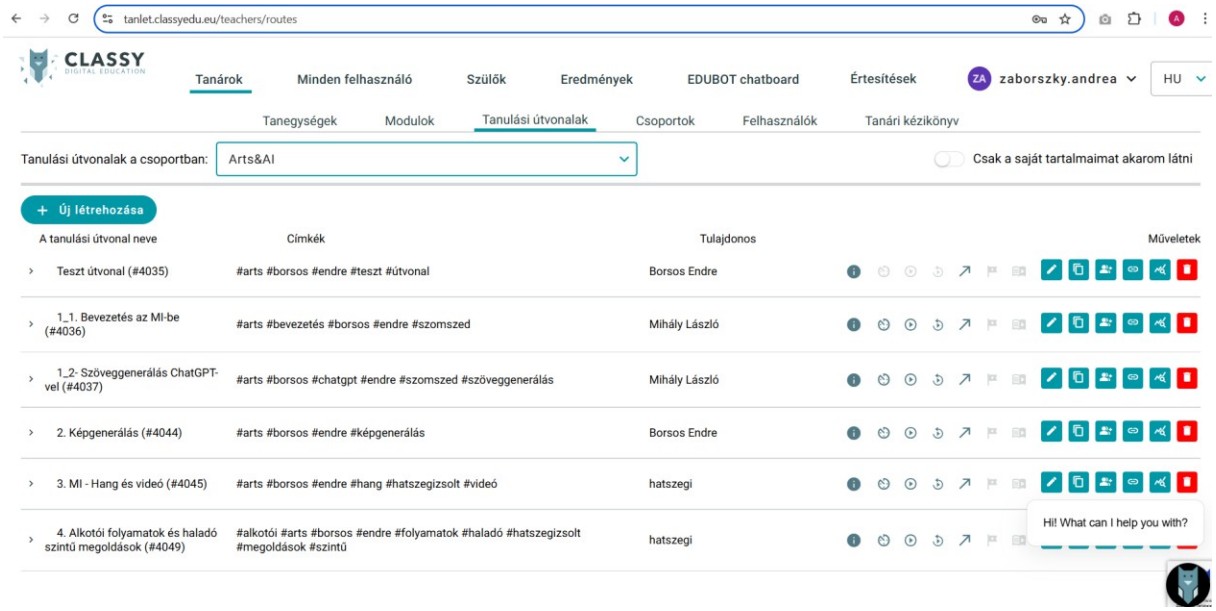
1.1. Introduction to MI

1.2. Text generation with ChatoGPT

2. Image generation
3. MI - Sound and video
4. Creative processes and advanced tasks

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union



Curriculum structure:

Within each module, the video learning material is divided into smaller sections according to thematic blocks, followed by follow-up questions in the form of interactive exercises to support content mastery and increase student engagement. Once the participant has processed a video block, the corresponding exercises follow. The e-learning interface has been designed with a varied set of 10 task engines for interactive tasks.

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

Access to the digital curriculum

The digital learning material is freely available to all, free of charge, on the Tanlet learning platform. Users can register with the system, which is designed to allow the e-learning platform to store the details of the learning activities they have completed.

The educational material can be used without registration. Links to the digital learning material are available on the project website: https://interregioforum.hu/artsai/

The course material is freely available via the following links. Click on the *Guest Login* button to play.

M1/1- Introduction to AI:

https://tanlet.classyedu.eu/app/?shareToken=8SLqdiXHAh4mtjtr8O5MiwrUJgoE8JFE

M1/2- Text generation with ChatGPT:

https://tanlet.classyedu.eu/app/?shareToken=7rJwH1mx571owb8FL5NrbWpP9YY2ejvz

M2- Image generation:

https://tanlet.classyedu.eu/app/?shareToken=4LoU1qz72stdANvgzI6UUr4glrZZEp23 **M3 - AI- Audio and video generation:**

https://tanlet.classyedu.eu/app/?shareToken=pB0nbh3Fpav6Gf6DsMcnuKjNwNgbPpxx

M4 - Creative processes and advanced solutions:

https://tanlet.classyedu.eu/app/?shareToken=EmDC2ILMyEdZcrixU7Qd7shMGkiEDYHw

Technical preparation of the Tanlet system

To start the learning activity, the technical preparation of the system is necessary, which includes the following activities:

- **Registration:** all users, both teachers and students, must register to use the system.

Teachers can register for the Teacher Portal at the following link:

https://tanlet.classyedu.eu

Students could register on the Tanlet platform in the Web application:

https://tanlet.classyedu.eu/app

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

You can also use the Android app, which you can download from the playstore: https://play.google.com/store/apps/details?id=com.tanlet.classy&hl=hu&pli=1 Access the site: https://tanlet.classyedu.eu/login

- Create a study group and invite users

The study group contains the students who have to work through the given material. Users can be invited to the study group by e-mail address.

- Creating routes and system settings

The learning material to be used can be shared with the learning group in the form of a route. It is essential to set up the routes correctly.

- Sharing the routes with the study group

This makes the curriculum accessible to the learning group.

Preparing for the learning activity

To make the learning activity a success, it is useful to provide basic information to the participants and to carry out some preparatory activities. These include:

- Familiarisation route: it is always recommended to start learning on the learning platform with the familiarisation route, which allows participants to familiarise themselves with the interface and the different game engines, as the route includes all the task types created with the game engines.
- Methodological suggestions for the learning activity: it is recommended to work on the topics consecutively, scheduled at regular intervals, e.g. in 2 weekly blocks (this can be adapted as required). It is advisable to ensure that there is no significant overlap between the different topics, starting work on a new subject when the previous one has been completed.
- It is worth clarifying the navigation in the system, in particular the *Back* button, as this gives the possibility to start the task from the beginning.

Outcomes: monitoring of learning activities

The reporting data available on the platform can be used to track learning activity data, time spent learning, path taken, percentage of results achieved, rate of progress, etc. The results of the learning process can be viewed in the *Results* menu. Go to

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

results are available in graph format or downloadable in Excel format. It is possible to view data and analysis at individual, group and learning pathway level.

The outcome of the training

Feedback from participants, teachers and volunteers alike confirmed that the training successfully combined technological innovation with creative expression. The training provided real knowledge, triggered development and promoted the conscious, responsible and autonomous artistic use of AI. All aspects of the training were positively evaluated, including the curriculum and the online and face-to-face training sessions. Participants learned how to apply AI throughout the entire creative process - from idea to finished video - enabling them to work independently and purposefully. Their attitudes have also changed positively: the initial uncertainty has gradually been replaced by a conscious use of tools and a reinforced sense that AI supports rather than replaces.

The main outcomes include increased knowledge and skills of participants and the impact of the training on them

Impact on participants

- participants will acquire a broad knowledge of the cinematographic arts and be able to apply the techniques learned in practice
- the ability to carry out independently the planning, preparation, organisation and execution of film and *animation production*
- the skills they acquire will enable them to use the innovative tools provided by AI in an effective and creative way in the production of moving images
- the ability to apply AI-based image and sound generation techniques that meet the needs of the modern motion picture industry
- have the ability to carry out independent projects and manage creative processes

Broad development of participants' competences

- **a wide range of digital skills development** (learning to use AI-based creative tools, Midjourney for image generation; Runway for animation; ChatGPT for texting, etc.).

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

- **creative and creative competences:** learning the artistic language of the moving image; exploring artistic styles, story and script writing; developing artistic expression and cultural awareness

- **problem-solving and autonomous working skills**: working on projects independently, dealing with technical challenges, etc.

- **learning competences (LifeComp):** activation of independent learning and individual knowledge acquisition skills, development of independent learning strategies, knowledge acquisition and learning skills, etc.

- **personal and social competences: cooperation skills**: creative teamwork, peer feedback

- **critical and reflective thinking**: evaluating own work, recognising the ethical implications of AI technology

- **multilingual competence:** handling technical equipment in English, writing prompts in English

- **entrepreneurial skills:** the volunteers' problem-solving, communication and organisational skills and the ability to put creative ideas into practice were developed through their involvement in project implementation and organisational tasks.

Audiovisual works created

Also as a result of the training, participants used what they had learned to produce a presentation-ready audiovisual work that reflects what they had learned during the course. Total

24 independent audiovisual works created using AI-based tools. These creations reflect the entire learning process of the training, as the young people built on the knowledge acquired in the four modules: concept and scriptwriting, image generation, preparation, composition and video editing.

The artworks created are available on the project website: https://interregioforum.hu/artsai/

Adaptability of project results

One of the greatest values of the curriculum and methodological approach developed during the *Arts & AI - Using Artificial Intelligence in the Moving Image Arts* training is precisely

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

lies in its high degree of adaptability. The curriculum has been designed to meet the needs of a wide range of target groups - including people of different ages, backgrounds, qualifications and professional experience. The design of the training modules, the structure of the digital curriculum and the practice-oriented approach allow for relevant and developmental content for both beginners and advanced users.

The project mainly targets young people who are studying or working in the visual creative arts and related industries and who are open to incorporating AI tools into their own artistic practice. However, the mix of participants showed that the training can reach and serve a much wider audience, from animators to graphic designers and film students, to undergraduates studying non-art disciplines, and people working in career-changing or civic professions who are interested in the creative potential of AI.

This diverse background and interest made it clear that the curriculum and methodology is not only optimised for a specific target group, but can be flexibly extended, narrowed down and adapted to other training environments. The topics and training methodology offer the possibility to introduce AI-based visual tool use at different depths and levels - be it a high school level introductory course, a university programme, a leisure course or adult education for civic interested people.

The entire training methodology, including the digital curriculum, online workshops and the creation camp, forms a coherent framework that can be adapted to any educational environment. The individual workshops, the creation camp and parts of the online curriculum can be easily integrated into other educational programmes, whether in formal or informal learning environments. The methodology allows trainers and institutions to implement their own training courses based on existing content and methods or to flexibly integrate them into their existing programmes, adapting them to their own needs. The face-to-face online and offline sessions and parts of the online curriculum can be easily integrated into other learning structures, whether formal (e.g. higher education, secondary education, vocational training) or informal (e.g. workshops, adult education, community programmes).

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

The digital learning material can be effectively processed independently, thus offering the possibility to support individual learning processes. It is also valuable for those who do not have an artistic background but wish to enter the world of creative technology. Indeed, AI tools offer an excellent opportunity to start working with visual expression, animation or image generation without a technical background. It follows that the curriculum could be used in the future for career changers, self-developers, self-taught creators, as well as for further training or introductory courses at institutional level.

However, the curriculum can also be used on its own as a supplement to institutional-level curricula and as a basis for new courses. This methodological flexibility ensures the long-term, sustainable and wide-ranging use of the curriculum, at different levels of knowledge and by different target groups. The modular structure of the curriculum is also key to its adaptability. This allows instructors and institutions to freely combine the different parts according to their own educational objectives. For example, an art school may use the creative generative imagery module specifically, while an adult education centre may focus on introductory-level modules on tool use or ethics.

The results of the project can be adapted:

- by **educators, teachers and arts professionals** who can use the curriculum in their own teaching activities, who can integrate the curriculum into their own classes, workshops or courses, or who may wish to offer a similar curriculum to their students;
- for **institutions and organisations** (e.g. art schools, universities, cultural centres) interested in teaching the creative use of AI;
- for **different age groups**, as the introductory and advanced components of the curriculum allow for differentiated learning pathways;
- **for artists and non-artists** alike, as the use of technology does not require a high level of prior training, but opens up significant potential for visual expression;

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union

- institutions and educators in Hungary, Romania and possibly other EU countries who can adapt the results.

It's important to stress that the project's content is not static: it can be updated to keep up with the rapid evolution of AI technology. This further supports long-term exploitation and flexible adaptation to new educational contexts.

Overall, the educational material and methodology produced by the "Arts & AI" project is indeed a widely usable and easily adaptable knowledge base that serves the needs of individual creators, educational professionals and institutions. And the approach, based on openness, creativity and technological experimentation, allows any interested community to shape and use the content according to their own goals.

Free access and free use

In order to ensure the adaptability of the project, all relevant information, training results, methodological descriptions and the complete digital learning material are publicly available on the official project website free of charge**.** This allows any interested party - be they individuals, educators, arts professionals or institutions - to freely access the content and use it for their own learning, teaching or development purposes.
The project website can be found at: https://interregioforum.hu/artsai/

Funded by the European Union. The opinions and statements expressed herein are those of the author(s) and do not necessarily reflect the official position of the European Union or the European Agency for Education and Culture (EACEA). Neither the European Union nor the EACEA can be held responsible for them.

Co-funded by the European Union