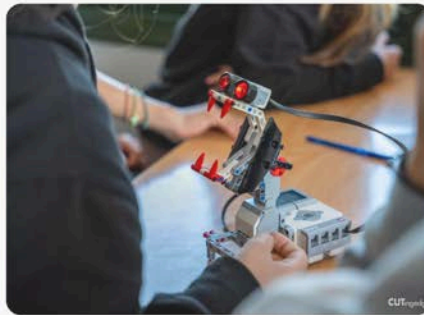
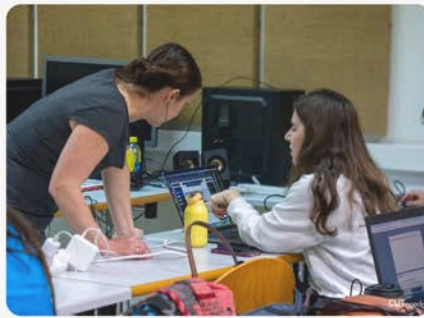


# CYPRUS INTERACTION LAB

ANNUAL

# NEWSLETTER

2025



## Inside this issue

Welcome	2
Meet the Lab	3
New Research Projects	7
Current Research Projects	8
News & Events	9
Featured Publications	14
Contact us	17

\*We design with people and the community in mind, aiming to produce research with real-world impact.



## Welcome Note

The Cyprus Interaction Lab (CIL) of the Department of Multimedia and Graphic Arts at the Cyprus University of Technology is an interdisciplinary research lab specialising in Educational Technology and Human-Computer Interaction. Co-founded in 2011 by Panayiotis Zaphiris and Andri Ioannou, it is the first lab of its kind in Cyprus, distinguished by high-quality research output and state-of-the-art facilities. The CIL has merged with the EdMedia Research Group and maintains a strong partnership with the HCI Research Group, both at the CYENS Centre of Excellence, strengthening its capacity to drive transformative work.

At CIL, we place people and communities at the heart of our design philosophy, striving to generate research that delivers tangible, real-world impact. Our mission is to explore the pivotal role of technology in promoting learning, communication, collaboration, social change, and inclusion across diverse contexts and environments.

Co-directors,  
Antigoni Parmaxi & Aekaterini Mavri

# Research at CIL is driven by two foundational pillars:

## PILLAR I: Technology-Enhanced Learning & Skills Development

This pillar focuses on how technologically-mediated activity can enrich the learning experience and support the development of knowledge and skills. Our approach is grounded in the premise that learning occurs as we play, engage, and interact with both physical and digital environments. By tapping into this dynamic process, we aim to create innovative educational interventions and tools that foster active, experiential, and embodied learning experiences.

## PILLAR II: UX, LX Design & Social Innovation

This pillar focuses on the design of user experiences (UX), learning experiences (LX), and socially innovative solutions. Our research investigates human-centered design approaches that enhance usability, accessibility, and engagement in various interactive systems. This work supports the creation of environments and tools that drive social change and inclusivity, ensuring equitable access to opportunities for all community members.



CIL's research and educational activities emphasize Learning (Experience) Design and Human Centered Design, while making use of a wide range of interactive and emerging technologies, including augmented and virtual reality (AR/VR), 360° video, and extended reality (XR). Our work also experiments with multimodal and multi-sensory technologies, like multi-touch smart devices and biometric sensors (e.g., eyetrackers), and investigates embodied and immersive learning setups, robotics, and makerspaces.

The lab's activities further involve educational and user research around the use of generative AI and data-driven systems, responding to the evolving needs in STEAM+ and general education across K-12, higher, and vocational contexts. This orientation also informs our current research, practice, and academic activities and is already being realised through a growing set of initiatives. Our efforts continue to shape the future of learning, communication, and interaction, reinforcing our commitment to meaningful societal impact. Through these, the CIL remains at the forefront of research and development in Educational Technology, Human-Computer Interaction, and Social Innovation.

# Management



## Aekaterini Mavri

Lab co-Director (since 2023)  
Senior Researcher and Assistant Professor

### Research Interests

Social/situated Learning, Technology Enhanced Learning, Communities of Practice, Human-Computer Interaction, User Experience, Learning Experience Research & Design.

## Antigoni Parmaxi

Lab co-Director (since 2023)  
Senior Researcher and Special Teaching Staff

### Research Interests

Digital media for equality and social inclusion, community-driven design of digital media, constructionist learning via digital media, Computer-Assisted Language Learning, participatory design methodology.



## Andri Ioannou

Lab Director (2015-2023)  
Professor

### Research Interests

Learning Technologies, Technology Enhanced Learning, Game-based Learning, Emerging Technologies for Learning.



## Panayiotis Zaphiris

Lab Director (2011 - 2015)  
Professor and Rector at the CUT

### Research Interests

Human-Computer Interaction, Social Computing and Inclusive Design with an emphasis on the design of interactive systems for people with disabilities.



# PhD Graduates



## Dr. Dora Konstantinou

The overall goal of this PhD study was to develop a comprehensive framework through a Design-Based Research (DBR) approach by creating a conceptual model for integrating Digital Making Activities into undergraduate Computing courses, with the aim of fostering students' 6Cs. The Digital Making Model was refined and finalized over three iterative DBR cycles. Alongside this model, an evaluation tool for assessing the derived artefacts was also developed. The proposed framework consists of the model and the evaluation tool. The Framework was further tested and validated through an external validation process, and the derived work was the outcome of this PhD dissertation.

### Research Interests

Educational Makerspaces, 21st-century skills development.

## Dr. Giorgos Pallaris

The overall goal of this PhD study was to develop a structured framework for integrating academic makerspaces into undergraduate Computing curricula through a Design-Based Research (DBR) approach. Across three iterative DBR cycles, the MIHEC Framework—an eight-pillar model guiding meaningful makerspace integration—was developed, refined, and validated. The framework was tested in courses such as Programming, Operating Systems, and Web Development, focusing on active, hands-on, and collaborative learning. The study explored how makerspace activities support student engagement and foster key 21st-century skills, including critical thinking, creativity, communication, and collaboration. The validated MIHEC Framework represented the main outcome of this PhD dissertation, offering a scalable model for enhancing computing education.



### Research Interests

Academic Makerspaces, design, and evaluation of computer science curriculum, 21st-century skills development

# PhD Candidates



## Antonia Christou

PhD candidate on Sustainable Entrepreneurship Education

### Research Interests

Environmental sustainability in entrepreneurship education for engineers, eco-preneurial skills and intentions development

# Staff - Researchers



Dr. Sonia Andreou



Dr. Stella Timotheou



Dr. Andreas Papallas



Dr. Eleni Pashia



Dr. Salomi Papadima  
Sophocleous



Stephanie Papalla



Eirini Christou



Leda Solomonidou



Maria Adamou



Konstantinos Charilaou



Dr. Maria Christofi



Andreas Stroumpoulis

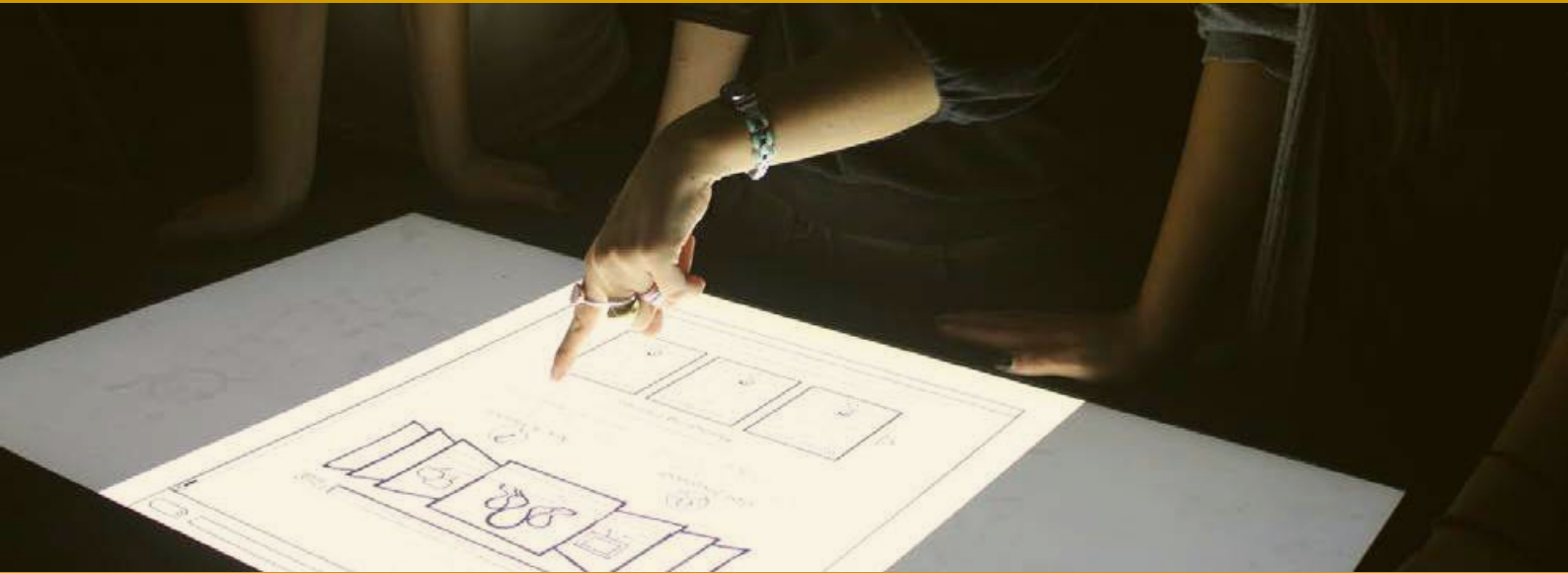


Charis Avraam



Marina Pasia

# New Upcoming Research Projects



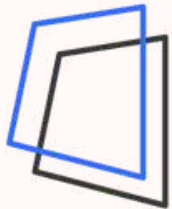
## RAISE-UP: Responsible AI Strategy for Education in Universities Project/ ERASMUS-EDU-2025-PI-FORWARD (“Digital education: ethical & effective use of GenAI”)

The newly funded RAISE-UP [RAISE-UP 101259940, 2026–2028, ~€1M total funding] project responds to the rapid and often unguided spread of generative AI (GenAI) in higher and vocational education, which has created urgent gaps in digital skills, responsible AI deployment, and institutional preparedness. It aims to develop actionable guidelines for integrating GenAI into teaching, learning, and assessment; enhance AI literacy among educators, students, and policymakers; pilot and validate tools within public universities; and generate evidence-based policy recommendations for national and EU-level adoption.

To achieve this, the project brings partners from six countries together to share best practices for ethical AI governance, to co-organise workshops and policy dialogues, collaborate on key deliverables such as landscape analyses and dissemination, and support joint applications for future EU initiatives.

The lab is currently recruiting researchers for the RAISE-UP E+ project. Please email your CV to [andri@cyprusinteractionlab.com](mailto:andri@cyprusinteractionlab.com)

# Current Research Projects



**META  
CIVIC  
EDU**

**EMPOWERING FUTURE CITIZENS  
UNLEASHING XR EDUCATION FOR CIVIC IMPACT**

Applying modern metaverse-enabled pedagogical techniques for civic learning and supporting K-12 teachers and students [MetaCivicEdu 2024-2026, KA220-SCH-DA0A14F7]. This 400K EUR cooperation partnership in school education addresses the weaknesses in the provision of civic education in primary schools. The aim of this project is to improve teachers' skills and competencies in using metaverse technologies XR (Extended Reality) to support civic learning and to better prepare them to use advanced modern technologies to help young students develop and practise the knowledge, beliefs, and behaviours they need to participate in civic life and make an impact on their community.

<https://metacivicedu.prima.academy/>



**Children as Creators of  
Augmented Reality Stories**

Children as Creators of Augmented Reality Stories [CARS 2024-2026, Grant No: 63F0F8B9]. This 250K EUR cooperation partnership in school education aims to promote Augmented Reality (AR) as a medium children can use to create and share their own stories as part of their language learning experience. The project studies the use of AR in schools and develops technical and pedagogical training for teachers. This will enable teachers to integrate the use of AR in language learning classes. The results emerging from the testing and evaluation will gauge the project's impact and disseminate findings to contribute to this research field. <https://www.carsproject.eu/home>

For a complete list of current and previous projects, click [here](#).

# News & Events

## Workshop on ‘Metaverse-Enabled Civic Education Scenarios in Primary Schools’ Limassol, January 2025



On January 20, 2025, EdMedia hosted at The Heritage Private School in Limassol, Cyprus, a workshop titled “Metaverse-Enabled Civic Education Scenarios in Primary Schools”. This event, part of the Erasmus+ funded MetaCivicEdu project, showcased innovative metaverse-enabled learning scenarios designed to engage young learners in civic education through immersive technologies. Teachers presented various metaverse environments, demonstrating how these tools can make civic concepts more accessible and engaging for students. The workshop highlighted the potential of integrating advanced technologies into primary education to foster active and informed citizenship among students.

## MetaCivicEdu E+ Consortium Meeting and Teacher Training Athens, February 2025



The EdMedia Research Group participated recently to a successful consortium meeting in Athens for the MetaCivicEdu Erasmus+ project. The partners discussed project milestones and next steps. Additionally, a Teacher Training took place at Avgouleia-Linardatou School in Athens on the 7th of February, bringing together teachers from The Heritage Private School (Cyprus), St. Lauren’s National School (Ireland), and Avgouleia-Linardatou School (Greece). During this collaborative session, teachers were equipped with the necessary skills to implement the upcoming pilot programs in their schools over the next three months. They also had the chance to run demo pilots, gaining hands-on experience in delivering the program effectively.

## The 'Making Democracy' Project at the Makerspace Limassol, February 2025



The Making Democracy project hosted a highly engaging and successful half-day workshop at the 'Makes Will Make' makerspace.

The workshop explored Human Rights Education (HRE) through the lens of collaborative design and making. Participants were immersed in experiential HRE activities, reflecting on the importance of empathy as a core element in empowering both learners and educators to actively contribute to social justice. Rooted in these foundational HRE principles, participants worked together to co-design solutions that embody values of dignity, inclusion, and human rights for all.

The workshop culminated in an exciting co-design session, where two interdisciplinary teams of professionals came together to create innovative toolkits that promote democratic competencies such as critical thinking, empathy, and the ability to understand diverse perspectives.

Using hands-on experimentation with materials and tools from the makerspace, participants transformed abstract values into tangible components, including game rules and scripts that will guide the use of their toolkits in practice.

## Successful Completion of the CARS Project Pilots in Cyprus February 2025



The successful completion of the CARS Erasmus+ project pilots in Cyprus, took place in the first half of February. Through the use of Augmented Reality (AR), sixth-grade students had the opportunity to create their own interactive stories in teams, fostering collaboration, creativity and engagement.

Students shared their experience with their peers and parents, who also had the opportunity to interact with the AR stories using tablets and smartphones. These pilots, conducted in collaboration with Dimotiko Scholeio Agias Napas-Antoni Tsokkou, demonstrated the potential of AR in education, offering students an immersive and dynamic way to develop storytelling and language skills.

Students provided highly positive feedback, emphasising the engaging and immersive nature of the experience. Students' interactions were observed, and teachers were interviewed to gain further insights into the impact of AR on storytelling and language skills development. The feedback was positive, highlighting AR's ability to enhance both engagement and creative expression. The findings will contribute to the ongoing development of innovative educational approaches using the affordances of AR technology.

## Open webinar on AR and AI in language learning of ARIDLL project Online, August 2025



The ARIDLL project successfully hosted its final webinar, bringing together teachers, instructional designers, researchers, and technology developers to explore the integration of Augmented Reality and Artificial Intelligence in language learning. During the session, the team presented the project's key outputs, including a practical guide for language educators and technical recommendations for applying prompt engineering in instructed language learning. Participants also had the opportunity to see pilot results from the development of AI-powered virtual humans and AR learning activities, and to engage in a hands-on demonstration where they collaboratively built an AI-supported learning activity. All ARIDLL resources will remain available to support educators interested in implementing AR and AI in their teaching practice available [here](#).

## ARIDLL Project Reaches Successful Completion: Advancing Language Learning Through Augmented Reality October, 2025



The Cyprus Interaction Lab (CIL) is proud to mark the completion of ARIDLL – Augmented Reality Instructional Design for Language Learning, an Erasmus+ project that has explored how augmented reality (AR) can transform language education across Europe.

Over the past three years, ARIDLL brought together universities, researchers, and language-teaching experts to empower educators to become AR learning designers. The project developed practical instructional design guidelines, innovative AR language learning experiences, and training resources to help language teachers integrate immersive technologies into their classrooms.

As a partner, the CIL contributed to the project's research, design, and development of the Instructional Design Guide (available [here](#)). CIL also contributed to the co-development of AR guidelines, supported pilot implementations with Cypriot educators, and organised local workshops and dissemination events.

ARIDLL's impact is already visible. Teachers trained through the project now apply AR to design interactive lessons, cultural simulations, and communication activities that engage students in new ways. The project's open resources—including instructional guides and AR content modules—are available to educators and institutions interested in enhancing digital language learning practices (see here: <https://aridll.eu/>).

Beyond its tangible outputs, ARIDLL has fostered a vibrant community of educators and researchers committed to exploring immersive learning. The project demonstrated that AR can make language learning more active, contextual, and motivating, while also helping educators build digital confidence and innovation capacity.

To learn more about the project and access its resources, visit [aridll.eu](http://aridll.eu) and watch the project's exemplary work come to life through these videos <https://www.youtube.com/@aridll-eu>

## Upskilling Creatives in AI: Workshop series wrap-up Cyprus, March - April 2025



The Upskilling Creatives project, co-funded by the Cyprus University of Technology and CYENS, combines expertise in Generative AI, Applied Arts, and Instructional Design. Targeting Design and Applied Arts students and graduates, it explores the integration of Generative AI into the creative practice through investigation and a series of workshops. The project, initiated in 2024, has officially wrapped up in 2025, after several inspiring weeks of engaging with a diverse community of learners and professionals from Design and Applied Arts. Throughout the programme, participants explored both the potential and the challenges of integrating Generative AI into creative practice—delving into diffusion models, legal considerations, hands-on design applications, critical perspectives, and effective prompt-crafting strategies. The workshop series featured contributions from over five expert presenters who shared their knowledge and facilitated in-depth discussions. The 35+ participants, representing a diverse range of fields such as art, design, engineering, research, and law, actively engaged throughout the sessions, contributing to the overall success of the programme.

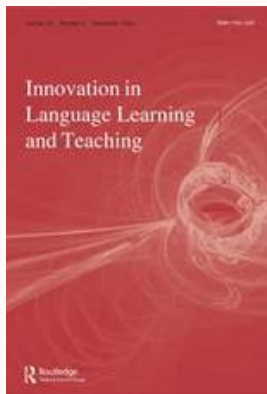
## MetaCivicEdu Project, Cyprus Piloting Completed Cyprus, April 2025



The Metaverse Learning Scenario piloting at The Heritage Private School in Limassol, Cyprus was successfully completed. As part of the project's central theme of Civic Education, students explored the important topic of gender stereotypes through immersive Metaverse experiences. The activity sparked meaningful dialogue and helped students reflect on the impact of stereotypes in everyday life. This milestone marks an important step toward reimagining how we teach civic values through innovative, technology-enhanced learning.

# Featured Publications

## Augmented reality in language learning: a systematic literature review of the state-of-the-art and task design considerations



This systematic literature review (SLR) examines the use of Augmented Reality (AR) in language learning, covering 48 peer-reviewed studies published between 2019 and 2023, following the PRISMA framework. The review identifies and categorizes three primary AR-mediated task designs: information transmission activities, social constructivist activities, and constructivist/ionist activities. Within these designs, six distinct types of AR-mediated tasks are highlighted, including visualizing information, completing quests, collaborating in location-based exploration games, communicating with virtual avatars, and creating AR artifacts.

Christou, E., Vassiliou, P., & Parmaxi, A. (2025). Augmented reality in language learning: a systematic literature review of the state-of-the-art and task design considerations. *Innovation in Language Learning and Teaching*, 1–28. <https://doi.org/10.1080/17501229.2025.2504706>

## Product and process in collective creativity: A study of e-textile making with children

Collective creativity in K–12 education remains underexamined, particularly in computational making contexts such as e–textiles. This study explores how collective creativity emerges during an e–textile workshop with 11–14–year–old students working in dyads. Participants designed and constructed functional artifacts using BBC micro:bit technology, electronic circuits, and textile materials. Creativity was examined as both product and process. Ten final artifacts were evaluated using the Creative Solution Diagnosis Scale (CSDS), while video–recorded interactions from two contrastive dyads—one with the highest and one with the lowest CSDS score—were analysed using the Collective Creativity Dialogic Framework. All groups demonstrated some level of product–based creativity, although CSDS scores varied. Dialogic analysis revealed clear contrasts between the two focal dyads. The higher–performing group engaged more frequently in reflexive, divergent, and task–oriented exchanges, whereas the lower–performing group showed more premature closure, disaffection, and reduced engagement across dialogic dimensions. These differences suggest a relationship between interactional quality and the creativity manifested in co–created artifacts. By combining product evaluation with dialogic process analysis, this study offers an empirical account of collective creativity in children's e–textile making. The findings underscore the importance of understanding creativity as socially distributed and materially mediated, with implications for the design of collaborative, maker–based learning environments that support creative engagement.



Chandrashekar, A., Ioannou, A., Andreou, S., Timotheou, S., & Rode, J. A. (2025). Product and process in collective creativity: A study of e-textile making with children. *Behaviour & Information Technology*, 1–15. <https://doi.org/10.1080/0144929X.2025.2604055>

## Designing Assessmake21 for Self-Reflection in Maker Education: Insights from a Design Case

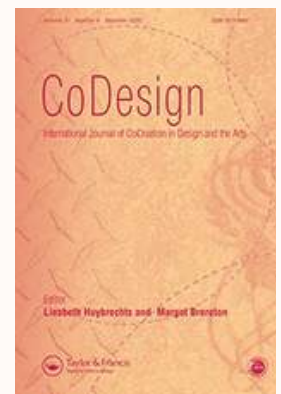


In this design case, we introduce Assessmake21, a digital self-assessment tool to foster self-reflection for learners' 21st-century skills in K-12 formal and non-formal maker education. We report on the extraction of user requirements and corresponding UI features through a four-phase design process, led by a multidisciplinary team of 29 members from four European countries. Using a methodological UX process model and requirements taxonomy, the design team translated theory-driven and data-driven evidence - gathered through literature reviews, design thinking workshops, interviews, and expert feedback—into tool design specifications. Assessmake21 aims to promote scaffolded and sustained self-reflection through gamified features (level progression, content unlocking, rewards) and customizable learning design options (approach, duration), while integrating the educator's role into the skills' assessment process. This comprehensive end-to-end design case is a valuable resource for researchers and practitioners, offering a precedent for similar long-term, multi-stakeholder, and multi-cultural incentives and advancing scholarship in learning experience design.

Mavri, A., Ioannou, A., & Kitsis, A. (2025). Designing Assessmake21 for Self-Reflection in Maker Education: Insights from a Design Case. *International Journal of Human-Computer Interaction*, 41(22), 14360–14378.  
<https://doi.org/10.1080/10447318.2025.2482752>

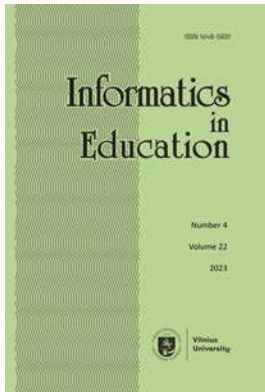
## Designing EdTech tools using a codesign model: a multi-stakeholder design case

This work presents a model to support the process of learning experience design (LXD) for educational technology. The model was developed and applied in the design of a self-reflection tool for 21st-century skills in maker education. Grounded in LXD, it integrates procedural and methodological perspectives from codesign and user experience (UX) design, by mapping three codesign dimensions - Staging, Negotiation, and Reframing – onto four UX phases - Analyse, Design, Prototype, and Evaluate. Enacted through an agile process involving 29 designers across four European countries, the model structured the collaborative activity across phases, dimensions, roles, and objects. It offered the necessary clarity and practical scaffolding required in navigating complex, multistakeholder, multicultural, and multidisciplinary initiatives. Key findings highlight process transparency, particularly between the preparatory and reflective dimensions that precede and follow the main design negotiations, designer role fluidity, inclusive participation, and the evolving role of design objects. The work offers a structured and transferable approach to EdTech design at the intersection of LXD, UX, and codesign.



Mavri, A., Ioannou, A., & Kitsis, A. (2025). Designing EdTech tools using a codesign model: a multi-stakeholder design case. *CoDesign*, 1–27.  
<https://doi.org/10.1080/15710882.2025.2540928>

## Generative AI in the Applied Arts: Workflow transformations, evolving professional roles, and emerging skill sets.



Generative Artificial Intelligence (Gen AI) is rapidly reshaping the landscape of creative practice in the applied arts. While these tools accelerate ideation and support iterative prototyping, they also challenge traditional notions of authorship, authenticity and professional identity. This qualitative study explores how applied arts professionals integrate Gen AI into their workflows, what challenges they face, and what new skills and literacies they see as essential. Through purposive sampling, ten professionals, including designers, art directors, and filmmakers from diverse cultural contexts, were interviewed using semi-structured interviews. Thematic analysis identified two central themes: AI-driven workflow transformations and shifts in professional identity. Participants described Gen AI as a co-creator that enhances early conceptual work but also raised concerns around creative homogenization and ethical use of training data. These findings reinforce broader discussions in the literature about the dual role of AI as both a catalyst for innovation and a force that challenges creative diversity and cultural representation. The study highlights the need for a balanced approach to AI literacy in creative fields, one that integrates technical fluency with critical and ethical awareness. These insights provide a foundation for more nuanced, culturally sensitive, and ethically grounded approaches to AI adoption in the applied arts.

Andreou, S., Perreira, W., Panayides, O., Korae, E., Mavri, A., & Ioannou, A. (2025). Generative AI in the Applied Arts: Workflow transformations, evolving professional roles, and emerging skill sets. *Informatics in Education*. 24(4), 681–696. DOI: 10.15388/infedu.2025.23

Please visit the [Cyprus Interaction Lab Google Scholar profile](#) to view a complete list of the publications of the Cyprus Interaction Lab team. Please browse below for [indicative videos](#) of our work within our research themes.



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