

Research

Visual Literacy  
Education  
Through  
Sustainability

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# Education and research at the Academy of Fine Arts and Design of the University of Ljubljana

The Academy of Fine Arts and Design is a member of the University of Ljubljana and the oldest and foremost national educational and research institution in the fields of art, conservation and design. Our mission at the Academy is to educate critically thinking creators who will be equipped to create, research and lead independently. As an educational, research and art institution we are committed to identifying and addressing social challenges through critical engagement with the aim of creating change and promoting development. In our work, we respond to climate and environmental emergencies by actively participating in the shaping of the green transition towards a zero carbon footprint. In the long term, we strive to make sustainable development a part of all of the Academy's activities and processes.

In the development of the study programmes we emphasise individual work with students, striving to maximise the transfer of knowledge and experience from the professional staff to the students. In our educational process we therefore focus on:

- ↪ creativity
- ↪ innovation and practical learning
- ↪ the broader social context
- ↪ transdisciplinarity
- ↪ a strong emphasis on theory
- ↪ critical and independent thinking
- ↪ sustainability

## 40 years of higher education in the field of design

In 1984, after years of professional efforts, the higher education study programme for design was launched under the Department for Design at what was then the Academy of Fine Arts. At the time of its establishment, the Department for Design covered the industrial and graphic design study courses. With the further development of higher education in design, this has grown to five study courses (Industrial Design, Applied

Arts, Graphic Design, Illustration and Photography) under careful and thoughtful ongoing development by the Department of Industrial Design and Applied Arts and the Department of Visual Communications Design. Both of the design departments work to foster the development of gifted individuals trained in design research and development. Through their studies, students acquire knowledge in the broader field of design thinking and visual literacy, which empowers them to work independently and innovatively, with the ability to thoroughly conceptualise the most complex tasks in the context of transdisciplinary teamwork, and to assume an attitude of critical responsibility for environmental and social issues.

## Research Institute of the Academy of Fine Arts and Design

The Research Institute of the Academy of Fine Arts and Design is the leading organisation in the field of art, design and cultural heritage research. Our research involves an examination of past, present and emerging practices in art, design and conservation-restoration and is based on creative, critical and innovative practices. They focus on current, social-environmental and other global challenges and actively build on collaboration between disciplines. The Academy's research activities drive collaboration with the local community and promote international collaboration. One of the priorities of the Research Institute at the Academy is the presentation and publication of research results.

Research in the field of sustainability has been especially prominent in the last three years, as the Academy made a deliberate commitment at the end of 2021 to start actively addressing the climate and environmental emergencies. It was the first Slovenian educational institution to join the global initiative of universities for transitioning towards a zero-carbon world, initiated by the Alliance for Sustainability Leadership in Education. Today, the Academy actively participates in one research programme and 11 research projects that directly address sustainability topics. The stand-out projects include those we manage and implement together with other partners within the *UL for a Sustainable Society – ULTRA* programme with funding by the Ministry of Higher Education, Science and Innovation of the Republic of Slovenia and the European Union – NextGenerationEU.

As part of the *Natural Resources and Food* pilot, we are participating in the project "Urban agriculture for a green transition to a smart and

sustainable society and inclusive growth” under the leadership of the Biotechnical Faculty of the University of Ljubljana. Under the *Innovative Learning Environments* pilot, we are pursuing three research projects: one, “Promoting innovative learning environments for teaching engineering students on the topics of green transition”, led by the Faculty of Electrical Engineering of the University of Ljubljana, and two projects led by the Faculty of Mechanical Engineering of the University of Ljubljana, namely: the “Digital study programme for Mechanical Engineering” and the “Open Laboratory”. Under the *Environmental Technologies* pilot we are conducting the following research projects: “Optimised study environment in Society 5.0: Developing a model for measuring environmental parameters and their effects on the participants of the study process with the aim of supporting the transition to a green and sustainable academic society” and “Additive digital technologies for the fabrication of composite elements”. The first project is led by the Faculty of Electrical Engineering of the University of Ljubljana, and the second by the Faculty of Civil and Geodetic Engineering of the University of Ljubljana. The research project “Developing (future) educators’ competences to promote green transition, sustainable development and environmental literacy in early childhood” is conducted under the *Environmental and Digital Literacy* pilot. The project’s lead partner is the Faculty of Education of the University of Ljubljana. At the end of 2023, we also secured the project “Educational ecosystem for the acquisition of digital competencies of educators and university students,” which is led by the University of Ljubljana and which we are launching in partnership with that institution in 2024.

Within the programme *UL for a sustainable society - ULTRA: Lifelong Learning and Micro-credentials*, the Academy is the lead partner in the “Green Nudge” research project. The project is developed in collaboration with the Faculty of Arts, the Faculty of Education and the Faculty of Electrical Engineering. The research builds on Nudge Theory, which itself builds on the understanding of the psychology of decision making, with the aim of broadening the socioscientific perspective in the field of sustainable behaviour. The advantage of the project is that it combines behavioural sciences with design thinking approaches, as it builds on sustainable and innovative solutions to the pressing issues of global warming and encourages individuals (in the context of sustainability) to make better choices. At the same time, this interplay of knowledge and approaches can lead to new ideas and a shift in social values, giving a nudge the power to tangibly and effectively change environmental behaviour. The project therefore aims to develop an education programme based on:

- ↪ the importance and goals of promoting sustainable behaviour
- ↪ the opportunities for using green nudges to promote sustainable behaviour
- ↪ behavioural design
- ↪ the psychological processes impacting the decision to behave sustainably
- ↪ the effectiveness of green nudges
- ↪ the ways of quantifying it

In addition to the ULTRA programme, we are also involved in two basic research projects in the field of sustainability, which are co-funded by the Slovenian Research and Innovation Agency (ARIS). These projects are “Heritage for Inclusive Sustainable Transformation – HEI-TRANSFORM”, which is led by the Faculty of Architecture of the University of Ljubljana, and “Stucco marble altars in Slovenia: materials, conservation, and meaning,” led by the Institute for the Protection of Cultural Heritage of Slovenia. In the first one (HEI-TRANSFORM), the researchers are exploring the possibilities for improving the competitiveness of the Slovenian immovable cultural heritage with a clear focus on identifying its potentials and integrating them into the process of the green transformation. In the second, the research team’s focus is on preparing a comprehensive inventory of Baroque altarpieces in Slovenia and carrying out a scientific analysis with the aim of gaining a deeper understanding of the materials and techniques and pushing forward the development of sustainable conservation approaches in the form of reducing the use of organic solvents and choosing long-lasting materials in order to prolong their use.

Without doubt, one of the outstanding successes of the Research Institute of the Academy of Fine Arts and Design lies at the very intersection of scientific and artistic research—the establishment of the first research programme led by the Academy, “Visual Literacy.” It is the first research programme at the University of Ljubljana to combine scientific and artistic research on an equal footing and focus on visual literacy in the field of sustainability. Among the central activities of the research programme is the identification and definition of the basic principles of visual literacy in the post-pictorial turn period and the so-called digital reproducibility. The main emphasis is on exploring the influence of visual literacy in dialogue with new forms of knowledge, technology, culture, art, education, politics, medicine, digitalisation, communication practices and discourse. The reformulation and transformation of existing knowledge, arts and techniques, as well as the rise of new, transitional and

indeterminate theoretical endeavours that have yet to find an established place in the cartography of knowledge, call for a corresponding renewal of the methodological approaches of visual literacy, in order to participate in thought experiences as they emerge in the various fields of knowledge, culture and politics.

The research programme will therefore not focus solely on critical analysis with the aim of preserving or perpetuating the existing expertise in the field of visual literacy, but on developing the intellectual and practical potentials of visual literacy to make it even better suited to respond to the challenges of the modern world. This is a world flooded with an overwhelming amount of accessible data—but data in itself is not information. To be transformed into information, the data needs to be processed, properly contextualised and interpreted accordingly. An important step in this process is the visualisation of the data, and the choice of the data and the manner of its visual presentation has a major impact on the final interpretation. The research programme will explore, in a close inter- and transdisciplinary dialogue and through scientific and artistic research, the ways in which visual literacy is able to address key and complex issues of the modern world, such as climate change, inequality, technological progress, access to information and, last but not least, the fight against misinformation. The research programme “Visual Literacy” (P5-0452) at the Academy is co-financed by the Slovenian Research and Innovation Agency (ARIS).