



POSITION

On the Value of STEAM and Arts Education – Joint Response to the Horizon Europe Coordination and Support Action Calls 2023

The signatory organisations, representing the diversity of the cultural field in Europe and the higher arts education fields in particular, are alarmed by the framing of STEAM education, research, and innovation presented by the European Commission in the Horizon Work Programme 2023–2024 Coordination and the Support Action Calls HORIZON-WIDERA-2023-ERA-01 and HORIZON-CL2-2023-HERITAGE-01-08.

By choosing to reinterpret the STEAM (Science Technology, Engineering, Arts, and Mathematics) concept almost exclusively as a means to bridge the gender gap within the STEM fields, this framing undermines the original *raison d'être* of STEAM — its inherent potential to promote creativity and innovation.

Problematic elements in the Horizon Europe calls

One of the expected outcomes of HORIZON-CL2-2023-HERITAGE-01-08 is to increase understanding about the benefits of integrating artistic, cultural, and social scientific approaches in STEM education, research, and innovation. On its own, we would recognise the value of this outcome. **However, the call proceeds to unreasonably focus almost exclusively on STEAM as a means to increase participation by women in STEM disciplines.** The result is a STEM-centred narrative about closing the gender gap and how this relates to competitiveness and innovation. The other call (HORIZON-WIDERA-2023-ERA-01) referenced here similarly instrumentalises the 'A' (which stands for Arts) in STEAM.

While we recognise the persistent gender gap in the STEM disciplines and the importance of efforts to close that gap and work towards equal gender representation in all fields, as representatives of higher arts education and the cultural sector at large we cannot agree with the reductive narrative of STEAM proposed here. **By instrumentalising the arts as a tool for the benefit of STEM, this narrative delegitimises the STEAM concept and reinforces outdated gender stereotypes.** Furthermore, it gravely overlooks the much broader potential of the arts and creativity as key catalysts for innovation in an interdisciplinary framework. This is also an essential element for the achievement of the EU's green and digital transitions.

This reductive and concerning narrative already seems to be gaining credence. It was reflected in parts of the Digital Education Action Plan ([European Commission 2020](#)) and in the Staff Working Document – Progress towards the achievement of the European Education Area ([European Commission 2022](#)). If widely adopted, it would have damaging consequences for the cultural and higher arts education fields and beyond.

The need to re-establish a vision of STEAM that truly values the role of the artistic disciplines, as previously recognised not only by the signatories of this paper but also by the European Commission itself, is urgent.

The value of the ‘A’ in STEAM

The inherent value of the ‘A’ in STEAM has long been acknowledged in discussions around skills and competences. In the context of the Key Competences for Lifelong Learning ([European Union, 2019](#)), representatives of the culture and arts education fields already jointly advocated for the recognition of the full potential of STEAM education:

“The importance of adding the A — representing the arts — to the skills required for the 21st century is widely acknowledged. The World Economic Forum identified creativity as the third most valuable skill of the future and recommended changing curricula radically to focus learning on creative subjects. To us, creativity is unthinkable without the arts.” ([Open letter, 2018](#))

The value of adding the arts to the acronym STEM and thus transforming it to STEAM is based on the insight that it is not sufficient to equip learners with skills in science, technology, engineering, and mathematics in order to make them fit for the job market of the future, unless this goes hand in hand with the creativity, critical thinking, and drive for innovation which artistic disciplines provide.

Recently, the importance of these ‘transversal skills’ has been supported in the European skills agenda for sustainable competitiveness, social fairness and resilience ([European Commission 2020](#)) and the Creative Pact for Skills (C-P4S) Manifesto ([Creative Pact for Skills 2022](#)).¹ Moreover, the key role of creativity as part of the competences for the green transition is specifically stressed by GreenComp: The European sustainability competence framework ([JRC 2022](#)).²

Additionally, the EC Directorate-General for Research and Innovation report ‘Fostering Knowledge Valorisation through the Arts and Cultural Institutions’ outlines several ways in which **the arts can play a pivotal role within knowledge ecosystems and in research and innovation (R&I)** ([European Union, 2022](#)). Conversations on the value of the arts in an interdisciplinary context are also featured in the New European Bauhaus initiative of the European Commission.

The signatory organisations firmly believe that arts practices, education, and research, with their specific skills and methods, have a great potential to contribute to achieving the twin transitions and tackling major challenges faced by society.³ Therefore, STEAM should be used to valorise this potential of the arts and of arts education. More attention should also be given to understanding how including arts professionals in interdisciplinary teams can increase and unlock creative, imaginative, and innovative potential.

This view of STEAM and the key contribution of the arts is not new to the European Commission. In fact, the Commission Communication on a Renewed EU Agenda for Higher Education ([European Commission, 2017](#)) reads:

“The evolution from STEM to STEAM reflects recognition within higher education of the increased importance of interdisciplinary approaches. The interaction between STEM and art and design is driving substantive innovation and creativity.”⁴

The here undersigned networks, ELIA, AEC, CAE, and EMC, urge the European Commission, especially the Directorate-General for Research and Innovation

- to engage in dialogue with the higher arts education sector and cultural and creative sectors and industries (CCSIs) in order to adopt a more holistic view on STEAM and interdisciplinarity, to be integrated in future Horizon Europe Work Programmes and other strategic plans and policies;
- to be an advocate, through its policies and funding, for the importance of creativity and other transversal skills provided by arts education;
- to reconsider the narratives and focus areas presented in calls HORIZON-WIDERA-2023-ERA-01, HORIZON-CL2-2023-HERITAGE-01-08, and related documents;
- to come up with alternative strategies to address the gender gap in STEM.

Launched on ... May 2023 by the signatory networks:

AEC, Association Européenne des Conservatoires, Académies de Musique et Musikhochschulen

CAE, Culture Action Europe

ELIA, globally connected European network for higher arts education

EMC, European Music Council

Footnotes

¹ *The European skills agenda fails to acknowledge the important role that arts education can play regarding transversal skills, yet it also stresses the importance of these skills: “Beyond technical skills, the labour market increasingly needs transversal skills like working together, critical thinking, and creative problem solving. The increasing influence of robots and algorithms on our labour markets further increases the need for uniquely “human” skills such as empathy and adaptation to change in complex environments.” Page 13.*

² *Current discourse builds on previous frameworks such as the Key Competences for Lifelong Learning (European Commission, 2019), which acknowledges cultural awareness and expression as one of its key competences, and the Transformative Competences for 2030 (OECD, 2019), which stresses the importance of creativity and critical thinking to help students thrive and shape a world where well-being and sustainability is achievable.*

³ *Signatories support a sector-wide discourse on this topic, for instance, in forums such as the ELIA Biennial Conference 2022 “No Stone Unturned” and through recent Erasmus+ and Horizon Europe funded projects such as FAST45, CrAft - Creating Actionable Futures, Plastic Justice, and SHIFT Culture.*

⁴ *Pages 5–6.*