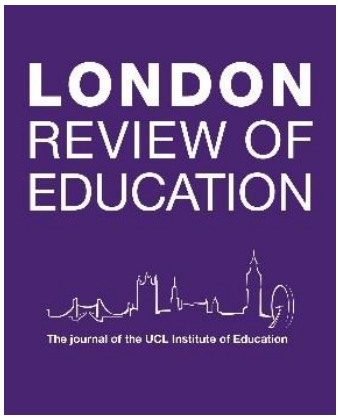

SPECIAL FEATURE CALL FOR PAPERS
CULTURALLY RESPONSIVE STEAM EDUCATION
For publication from winter 2023

Edited by Wilton Lodge and Alexis Stones
Expressions of interest accepted until 31 March 2023
Deadline for draft papers 1 September 2023

With increasing awareness of the need for an inclusive curriculum across all educational subjects, Science, Technology, Engineering, the Arts and Mathematics (STEAM) education, in particular, is in huge need of contemporising itself in relation to an epistemologically diverse landscape. Discourses concerning the culturally sensitive nature of STEAM education have been thrown into the public sphere following the COVID-19 pandemic, the subsequent availability of vaccination programmes, and worldwide responses to the climate change crisis. Indeed, the adverse effects of these phenomena are experienced disproportionately across different communities, with countries of the Global majority less likely to receive vaccination resources, more prone to rising sea levels and less protected against the effects of droughts, fires and floods. The classroom is not immune to this discourse. Arguably, STEAM education is in danger of remaining in a homogenous cultural bubble that ultimately serves to exclude learners and teachers who see themselves as part of more diverse worlds (Hernandez et al., 2013).

In addition, educational research continues to be concerned about historically excluded students' access, participation and achievement in STEAM education. Indeed, the underrepresentation of these groups has been described by some researchers (see, for example, McKinley and Gan, 2014) as a major barrier to social and economic progress in industrialised countries. In addressing these issues, social justice advocates have called for a greater focus on pedagogies that can enable students to be both academically successful and culturally competent, demonstrating engagement with socio-political issues (Villegas & Lucas, 2002).

Given the growing emphasis on culturally responsive STEAM teaching and learning as part of the social justice framework (Bassey, 2020), authors are invited to submit original articles of around 6,000 words on this topic. We welcome both conceptual and empirical submissions.

Illustrative rather than exhaustive themes include:

- Diverse perspectives in STEAM, e.g. epistemological paradigms, social contexts, funds of knowledge, nature of science.
- Religious and other cultural perspectives of educators and students.
- STEAM in the public sphere in relation to cultural responsiveness.

- Interdisciplinary approaches to STEAM education, including arts, psychology, humanities.
- 'Sciences' and combinations of sciences in the academy, public sphere and school curriculum; for example, biology, physics, chemistry, molecular biology, chemical engineering, philosophy and history of science.
- Intersectionality in STEAM education research.
- Relationships between public, academic and school STEAM education regarding cultural competences and responsiveness
- STEAM curricula for inclusion.
- Controversies and sensitivities, e.g. eugenics, epistemicide, teaching evolution, socio-scientific issues.
- Decentring and dominant paradigms in STEM education.
- Conceptual work, empirical studies and case studies that teacher educators and trainee/teachers can apply to school curricula and classroom settings.
- Culturally responsive STEAM's significance for addressing 'wicked problems' relating to environmental degradation and a need for an effective and systemic approach to policy to reflect the complexity of meaningful change (OECD 2017).
- The relationships that culturally responsive STEAM education has with the Sustainable Development Goals (SDGs) (UN 2015), especially in relation to the socio-scientific aspects that highlight the interconnectedness of the SDGs.
- The contribution of STEAM to STEM.
- Rationales for further research.

This special feature aims to bring together high quality conceptual and empirical papers that build on the pioneering work of researchers such as Gay (2000) in highlighting the affordances, challenges and barriers in culturally responsive pedagogies, while at the same time giving a voice to those on the fringes of mainstream STEAM education.

Please consult the notes for authors on the *journal's webpage* of the UCL Press website.

The **deadline for early expressions of interest is 31 March 2023** in the form of an abstract of 300-500 words, up to six references, and a 50-word biographical statement should be sent by email to the handling editors, Wilton Lodge and Alexis Stones: wilton.lodge@ucl.ac.uk; a.stones@ucl.ac.uk

The **deadline for submission** of articles is **1 September 2023**, through the journal's *submission site*.

References

Bassey. M. (2020). Where is social justice in culturally responsive teaching? SCIREA Journal of Education, 5, 59-73.

Gay, G. (2000). *Culturally responsive teaching: Theory, research, and practice*. New York: Teachers College Press

Hernandez, C.M., Morales, A.R. & Shroyer, M.G. (2013). The development of a model of culturally responsive science and mathematics teaching. *Cultural Studies of Science Education* **8**, 803–820.

McKinley, E., & Gan, M. (2014). Culturally responsive science education for indigenous and ethnic minority students. In N. G. Lederman & S. K. Abell (Eds.), *Handbook of research on science education* (Vol. II, pp. 284–300). New York: Taylor & Francis

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Villegas, A. M. , & Lucas, T. (2002). *Educating culturally responsive teachers: A coherent approach.* Albany: SUNY Press.