



Open Educational PRactices for AIED (OEPRA)

Faculty of Wellbeing Education
and Language Studies (WELS)

Call for PhD projects starting in October 2024

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Project description

Unit

Institute of Educational Technology / Knowledge Media Institute

Members

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Aim

The central aim is to develop guidelines for the implementation and integration of OEP and related values into the use of artificial intelligence in education (AIED). A key focus is to ensure that AIED remains committed to openness, transparency, social justice, diversity, equity and inclusion (DEI). This will be the main legacy of the project and will have application in a wide range of contexts

such as higher education institutions; schools; scientific facilities; galleries, libraries, archives and museums (GLAM); and workplace training. These guidelines would also be a useful resource for UKRI which has a commitment to openness and is well placed to endorse recommendations to positively influence the next generation of educators and researchers.

Background

AIED refers to the use of artificial intelligence (AI) in education, an area which has seen a recent explosion of interest. Five years after their emergence, Large Language Models like ChatGPT have developed into generative tools that can be used to produce text relevant to a wide range of pedagogical and administrative tasks. Images (Midjourney, DALL-E, etc.) and video (Synthesia, Deepbrain, etc.) can also be easily produced from natural language. This emergence of AI technology into the popular imagination has fuelled speculation on its likely impact on education and training. Many can see the potential for AIED to reduce the workload of educators and learners by automating repetitive tasks; improve the personalisation and contextualisation of educational delivery; provide intelligent tutoring systems (ITS); and realise the full promise of learning analytics.

Existing and planned implementation of AIED have been criticised for lacking openness and transparency. The effects of AIED are also highly disruptive to existing academic practice, leading many to ask for practical and ethical guidance. A human centred, interdisciplinary approach to AIED is essential. This can be achieved by adopting a sociotechnical perspective and embracing open approaches. The strategic significance of Open Educational Practices

(OEP) is articulated by policies such as the [Cape Town Open Education Declaration](#) and [UNESCO Recommendation on OER](#). OEP include the use of open educational resources (OER); the use of participatory technologies and pedagogies; supporting innovation and creativity in education; reflective practice; removal of barriers to education; stakeholder engagement; and a commitment to social justice.

At The Open University, activities are aligned to supported open learning, which understands the value of open educational practices (OEP). Areas where AIED and OEP overlap include using open algorithms and open data to support smarter repositories and learning platforms; developing AI tools for search, discovery, reuse and sharing of OER; use of algorithms in open learning environments; new forms of pedagogy; ameliorating algorithmic injustice in education; and regulatory or policy support for “open” AIED.

Methodology

This research theme is designed to be flexible and can accommodate diverse lines of inquiry. Expertise in socio-technical inclusivity and creating online learning activities which is a recognised strength of The Open University. This includes areas like learning design, accessibility, human-computer interaction, use of open educational resources and pedagogical innovation. A mixed-method approach is anticipated, but there is scope for differences of emphasis.

Based on this, we anticipate the following kinds of activity:

- Desk research to find evidence of current guidelines and indicators of required competencies and skills for educators to use AI in accordance with OEP and inclusive principles
- Using Delphi method or interviews with expert practitioners to identify categories which are not currently present in the literature or not revealed by desk research
- Survey work with existing students of The Open University
- Running stakeholder focus groups and other collaborative activities to refine principles, protocols and assumptions regarding open AIED
- Prototyping AIED tools and proofs of concept.

PhD project

The central goal of the research is to develop guidelines for the implementation and integration of OEP and related values into AIED. A key focus is to ensure that AIED remains committed to openness, transparency, social justice, diversity, equity and inclusion (DEI). This will be the main legacy of the project and will have application in a wide range of contexts such as higher education institutions; schools; scientific facilities; galleries, libraries, archives and museums (GLAM); and workplace training. These guidelines would also be a useful resource for UKRI which has a [commitment to openness](#) and is well placed to endorse recommendations to positively influence the next generation of educators and researchers.

While it is not necessary to be a programmer/developer to conduct meaningful research in this area, having these skills and being able to contribute to the design or implementation of AIED tools online or through a virtual learning environment is advantageous. Expertise in ethics and/or policy work is also highly relevant.

The doctoral candidate is expected to engage in the following activities in support of their project.

- Research design
- Data collection & analysis
- Developing a stakeholder network communications plan
- Running knowledge exchange webinars to validate recommendations and practices

- Regular dissemination of the project through a website and blog and through internal communications
- Conference presentations and scientific publications.

