West Partnership

Report by: Alex Evans

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Item 4

21st September 2023

West Partnership Artificial Intelligence in Education – A Scoping Review

1. Purpose of the report

1.1 To provide the Committee with an update in relation to the work undertaken to develop an AI scoping review, toolkit, and proposal for professional learning.

2. Recommendations

The Committee is asked to:

2.1 note and comment on the findings from the Artificial Intelligence (AI) and education review; and

2.2 review and discuss the AI toolkit and proposal for professional learning.

3. Background.

3.1 This paper summarises the key findings from the scoping review of AI, its potential use in education, and the risks that must be considered when using this technology.

3.2 From July-September 2023, two researchers conducted a scoping review of the literature base on AI and education. After reviewing 33 journal articles, reports, and journalistic pieces, a thematic analysis of the findings took place, with the themes produced from this forming the structure of this report.

3.3 In addition to the report, an AI toolkit and proposal for professional learning have been produced to assist practitioners with developing their understanding of this technology, and how it can be used to enhance learning experiences.

4. Scoping Review: Key Points

4.1 Since its development, AI has continued to expand across sectors and industries. As tasks continue to be automated, it is predicted that a large proportion of jobs could be lost, and those that remain will change significantly. Researchers have argued that ‘AI literacy’ will be a key skill for pupils to develop, which requires an ability to not only use AI, but also to critically evaluate the content it generates.

4.2 Research suggests that AI has the potential to support learning through personalising materials that suit the needs of each pupil and assisting with consolidating their learning. To prevent its potential misuse, practitioners

should make pupils aware of its limitations, and instead use it as a tool to promote active learning and further collaboration in the classroom.

4.3 A number of AI applications could be used to support practitioners with monitoring pupils' learning and performance. This may be particularly helpful for identifying pupils who may require further support, and for distributing resources based on each pupils' stage of learning.

4.4 In addition to supporting learning, AI applications may be effective tools for managing teacher workloads. Through saving time on administrative tasks such as marking and producing learning materials, practitioners may have more time readily available to interact and engage with pupils in the classroom.

4.5 Although there is potential for AI to support learning, practitioners must make pupils aware of the risks involved, and how this technology should be used safely, ethically, and transparently. As well as the risks to data protection and potential inaccuracies, research has highlighted issues related to bias within AI algorithms that users must be cautious of.

4.6 An 'AI Toolkit' is currently under development. Targeted towards practitioners, this resource provides a number of evaluative statements based on the key areas of this review, to enable readers to reflect on how this technology could be applied in their own classroom setting. It also provides a number of challenge questions to assess practitioners' level of understanding. Within each stage, a range of tools and resources are listed for practitioners to explore in more detail.

4.7 To support practitioners' understanding and confidence with AI further, a proposal for professional learning is also under development. This paper outlines the importance of AI literacy for both practitioners and pupils, as well as key areas that these opportunities may focus on, including the skills necessary for using AI efficiently, how these applications can be applied in educational settings, and the challenges and risks that must be considered.

5. Recommendations

The Committee is asked to:

5.1 note and comment on the findings from the Artificial Intelligence (AI) and education review; and

5.2 review and discuss the AI toolkit and proposal for professional learning.