



## Immersive Learning and Inclusivity: Raising Awareness, Identifying Opportunities and Challenges, and Adapting Practice

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**Abstract.** Immersive learning research and practice cannot hold their promises without setting inclusivity as a high priority. This workshop aims to raise awareness of inclusivity and accessibility in education; identify opportunities and challenges for inclusivity when creating and deploying immersive learning experiences; share good practice; and induce reflection on one's own practice and research agenda. A 90-minute hybrid interactive event is proposed during which participants will work in small groups on several activities, and then discuss how these activities enabled them to reflect on their own practice. Participants will then be asked to discuss their reflections with the whole group, and facilitators will summarize with a call to action, which will be either a collaborative project or a white paper to capture the findings of the workshop.

**Keywords:** Immersive Learning, Inclusivity, Accessibility, Practice, Research Agenda.

### 1 Introduction

Researchers and practitioners from the immersive learning community have been striving hard to create the most effective and engaging learning experiences using opportunities brought by new and emerging virtual reality (VR), augmented reality (AR), and mixed reality (MR) technologies, across the full span of learning. But just how inclusive are these new immersive learning experiences?

Inclusion in education implies that all learners are able to access and gain equal opportunities to education and learning; successful inclusive education attends to physical, cognitive, academic, social, and emotional learners' differences. Considerations of inclusivity should be set as a high priority in any immersive learning research agenda and practice as new immersive technologies create both opportunities and challenges to inclusive education. According to [1], AR/VR technologies are uniquely positioned to reduce barriers and create opportunities for marginalized groups, being highly adaptable and customizable to individual users and specific use cases, but further research is needed to better understand these technologies and leverage their potential for inclusivity.

Alongside inclusion we will also discuss accessibility in education. Accessibility means providing equal access to people at all levels of human ability and experience. Accessibility encompasses the broader definitions of compliance and refers to how practitioners and organizations accommodate the unique characteristics that each individual brings.

Fig. 1, adapted from [2], gives an overview of the trends, challenges and opportunities for inclusivity, accessibility, equity, and diversity in relation to the immersive learning technologies and environments (such as the metaverse). Although the figure captures all related elements (inclusivity, accessibility, equity, and diversity), we will focus on inclusion and accessibility as they relate to the research interests and expertise of the facilitators. However, discussions will not be limited to inclusion and accessibility, equity and diversity will be discussed if participants feel that it is relevant to their research or practice.

iLRN fully embraces inclusivity as demonstrated by the many contributions made in the IDEAS track (Inclusion, Diversity, Equity, Access, & Social Justice) of the past iLRN conferences. For example, at the iLRN

2021 and 2022 conferences, IDEAS track's presentations and special sessions addressed the following areas of concern: learners with disabilities [3][4][5]; minority populations [6]; disadvantaged socio-economic status [7]; accessibility and equity of immersive learning environments [8]; biases [9]; and ethics [10]. Initiatives such as this workshop will contribute to stepping up awareness of inclusivity and accessibility among the iLRN conference participants and to setting inclusivity as a high priority in their practice and future research agenda.



Fig. 1. The trends, opportunities and challenges of immersive learning seen with an inclusivity lens - Adapted from [2].

## 2 Aims of the workshop

The aims of the workshop are:

- To raise awareness of inclusivity and accessibility in education, especially among early career researchers and practitioners.
- To identify opportunities and challenges for inclusive education when creating and deploying immersive learning experiences.
- To induce reflection on one's own practice and research agenda.
- To output recommendations for the creation of truly inclusive immersive learning experiences and for good practice.

## 3 Format and participants

A 90-minute hybrid interactive workshop is proposed. After introducing the topic and describing the aims and purpose of the workshop's activities, pre-set group tasks on accessibility will be proposed to raise awareness of difficulties experienced by specific groups of learners, and to establish a common understanding and appreciation of the issues at hand. This will be followed by discussions where the aims and questions raised in the introduction of the workshop will be revisited. Finally, a reflective exercise on practice will lead to a call to action where recommendations for good practice, collaborative links and project ideas will be formulated (see Fig. 2 for an illustrated overview of the workshop's format and activities, and Fig. 3 for an example of a task on accessibility).

Inclusivity should be a concern for all immersive learning researchers and practitioners. The two workshop facilitators will bring expertise and practice in the higher education domain, hence participants working in other

education contexts would be most welcome as it will broaden the discussions and allow to compare and contrast different experiences.

This is a hands-on workshop, about 20 participants are expected for the activities which will be proposed. Early career researchers are especially encouraged to participate.



Fig. 2. Workshop format and activities.

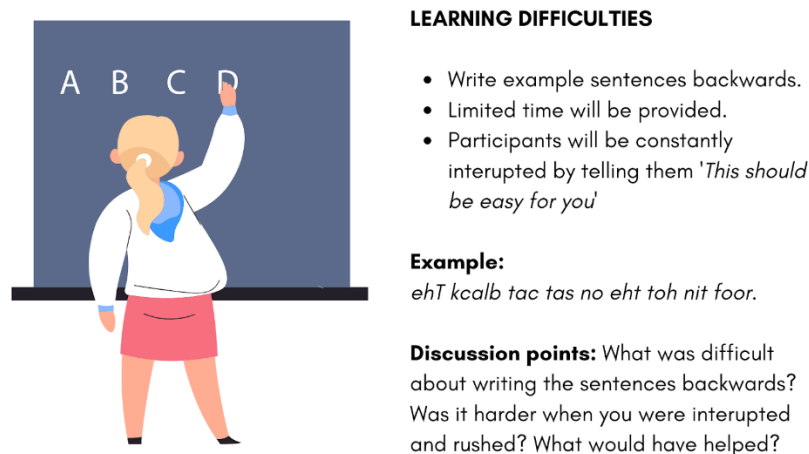


Fig. 3. Example of a task on accessibility.

#### 4 Intended outcome

Intended outcomes include:

- A collaborative article developing the lessons learnt and discoveries made during the workshop;
- New calls for papers, for example a special session at iLRN 2024 and a special journal issue;
- Collaborative projects and grant proposals.

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