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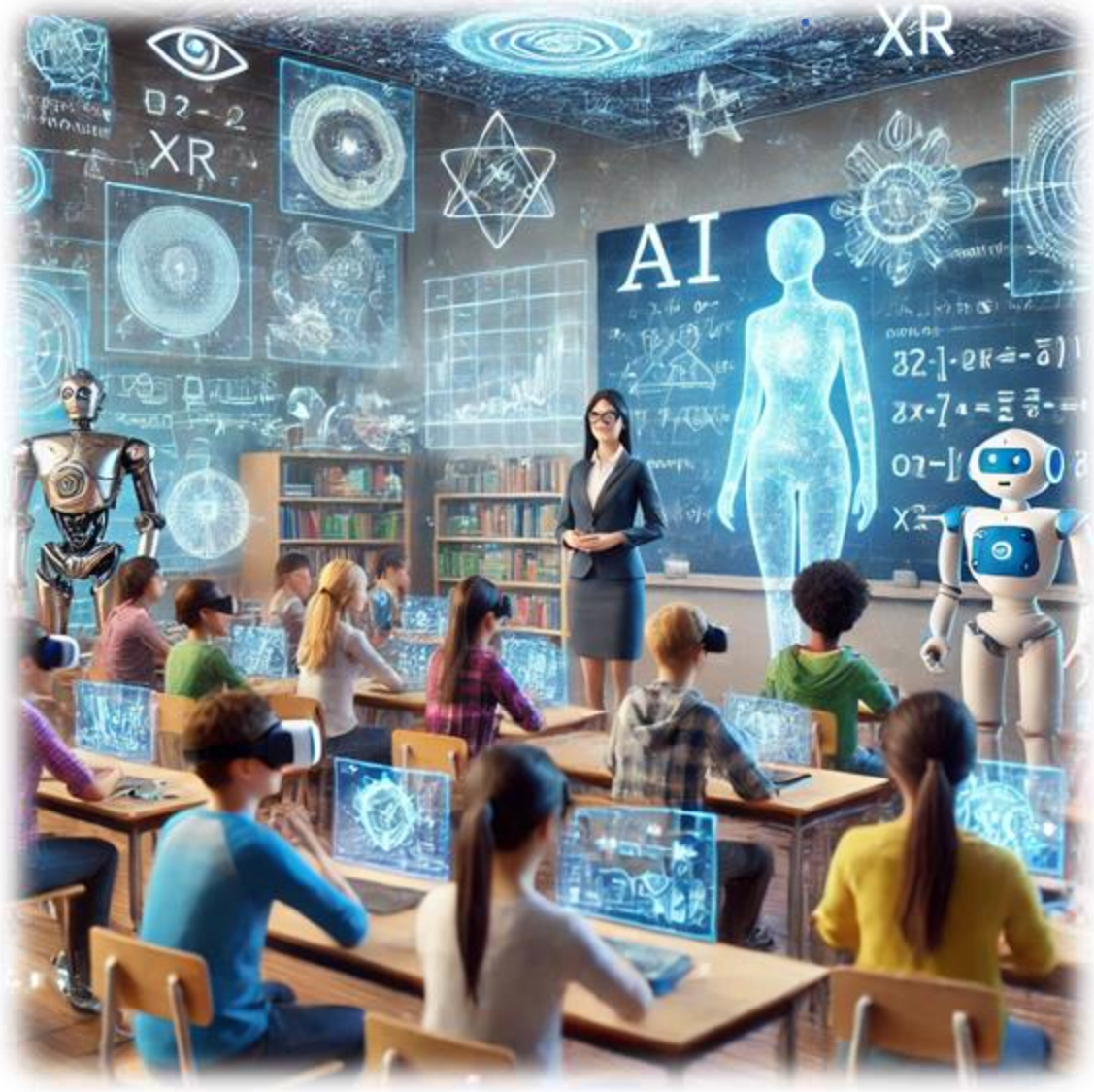
Navigating the AI and XR Opportunities for Education: Case Studies and Critical Perspectives

Exploring the Intersection of Artificial Intelligence and Extended Reality in Modern Learning Environments



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Organisers: CARDET · University of Nicosia · university of groningen · University College Dublin

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Introduction to AI and XR in Education

What is AI?

Definition and examples of AI in everyday life

Applications in education (e.g., adaptive learning, predictive analytics)

What is XR?

Definition of XR, including Virtual Reality (VR), Augmented Reality (AR), and Mixed Reality (MR)

Applications in education (e.g., immersive simulations, interactive learning environments)

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The Current Landscape of AI and XR in Education

- **Adoption and Trends**
  - Statistics on AI and XR adoption in education
  - Popular use cases (e.g., language learning apps, virtual field trips, lab simulations)
- **Driving Forces**
  - Technological advancements
  - Educational demands (personalization, engagement, accessibility)
  - Pandemic impact and remote learning acceleration

Case Study 1: AI in Personalized Learning

The "best" AI for personalized learning can vary depending on specific educational needs, goals, and contexts

dreambox By Discovery Education

Knewton Alta A Wiley Brand

CARNEGIE LEARNING

SMART SPARROW

CENTURY

Squirrel Ai Learning

Quizlet

Factors to Consider When Choosing an AI for Personalized Learning:

- **Age and Grade Level:** Some platforms are better suited for specific age groups or subjects (e.g., DreamBox for K-8 math).
- **Subject Focus:** Ensure the platform aligns with the subjects you need (e.g., Carnegie Learning for math).
- **Integration:** Check if the AI integrates well with your existing LMS or teaching tools.
- **Data Privacy:** Consider platforms that prioritize data security and privacy.
- **Customization:** Some platforms offer more customization options for educators than others.

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Case Study 2: XR in Immersive Learning Environments

The "best" XR (Extended Reality) tools for immersive learning environments can vary based on specific educational needs, the target audience, and the desired learning outcomes

CLASSVR

zSpace

VirtuARealities

MEL Science

ENGAGE

AltspaceVR

Microsoft

Factors to Consider When Choosing an XR Tool for Education:

- **Content and Curriculum Alignment:** Ensure the XR tool offers content that aligns with your educational goals and curriculum standards.
- **Ease of Use:** Consider how easy the platform is for both teachers and students to use, including setup, navigation, and integration with existing classroom technology.
- **Hardware Requirements:** Some XR platforms require specific hardware, such as VR headsets or specialized screens. Evaluate the cost and accessibility of these tools.
- **Interactivity and Engagement:** Look for platforms that offer highly interactive and engaging content, as these are more likely to enhance learning and retention.
- **Accessibility and Inclusivity:** Ensure the platform is accessible to all students, including those with disabilities, and consider the platform's approach to inclusive learning.

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Critical Perspectives: Challenges and Concerns

Challenges of AI and XR in Education

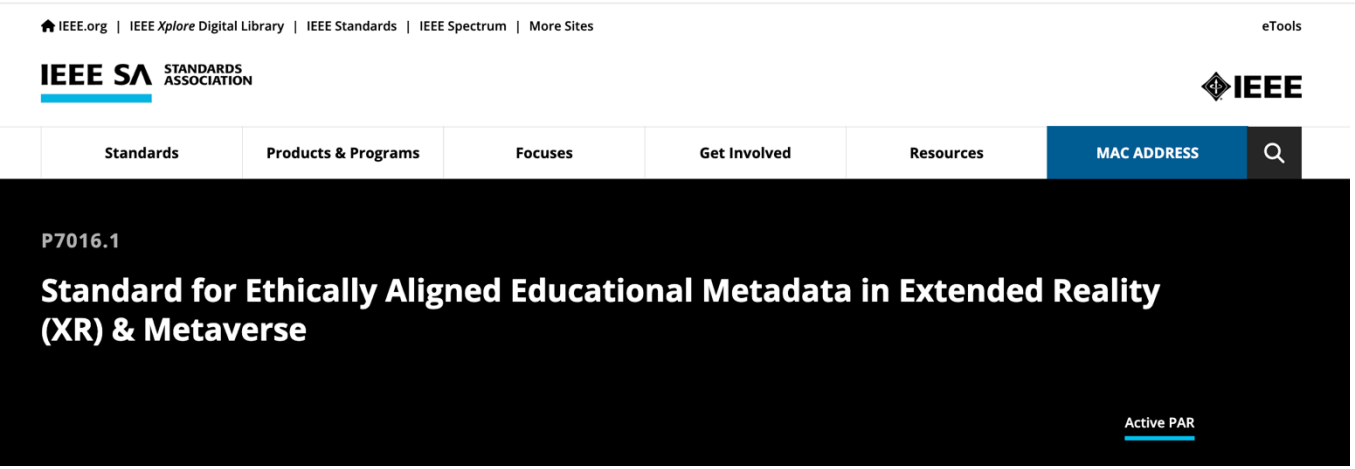
- Equity and access: Digital divide concerns
- Data privacy and security issues
- Potential for dependency on technology

Ethical Considerations

- Bias in AI algorithms
- Misuse of immersive technologies (e.g., VR addiction, misinformation)

Standard for Ethically Aligned Educational Metadata in Extended Reality (XR) & Metaverse

Join our efforts – IEEE P7016.1



bitly

WORKING GROUP DETAILS

Society	IEEE Society on Social Implications of Technology Learn More About IEEE Society on Social Implications of Technology >
Sponsor Committee	SSIT/SC - Social Implications of Technology Standards Committee Learn More About SSIT/SC - Social Implications of Technology Standards Committee >
Working Group	EAEM-XRM - Ethically Aligned Educational Metadata in XR & Metaverse
IEEE Program Manager	Christy Bahn Contact Christy Bahn >
Working Group Chair	Eleni Mangina

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Case Study 3: Balancing Innovation with Responsibility

Finland's Approach to Digital and AI Literacy

- Finland's national initiative for digital and AI literacy in schools
- Emphasis on responsible use and critical thinking
- Results and feedback from educators and students

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XR & AI Case studies in my lab

ARETE

LUMINOUS
LANGUAGE AUGMENTATION FOR HUMANVERSE

augMENTOR

iSEED

fidal field trials beyond 5G

StandICT.eu 2023
ICT STANDARDISATION OBSERVATORY AND SUPPORT FACILITY IN EUROPE

INFINITE
AI in Higher Education

Digital4All

AHA
ADHD – AUGMENTED

VR-PAIN
Technology in Undergraduate Physiotherapy Education

XR FOR PED
Mixed Realities for Pedagogues

TINKER

VOL 3D EDU

BASE

BLOOMING
Inclusion and Diversity in STEAM

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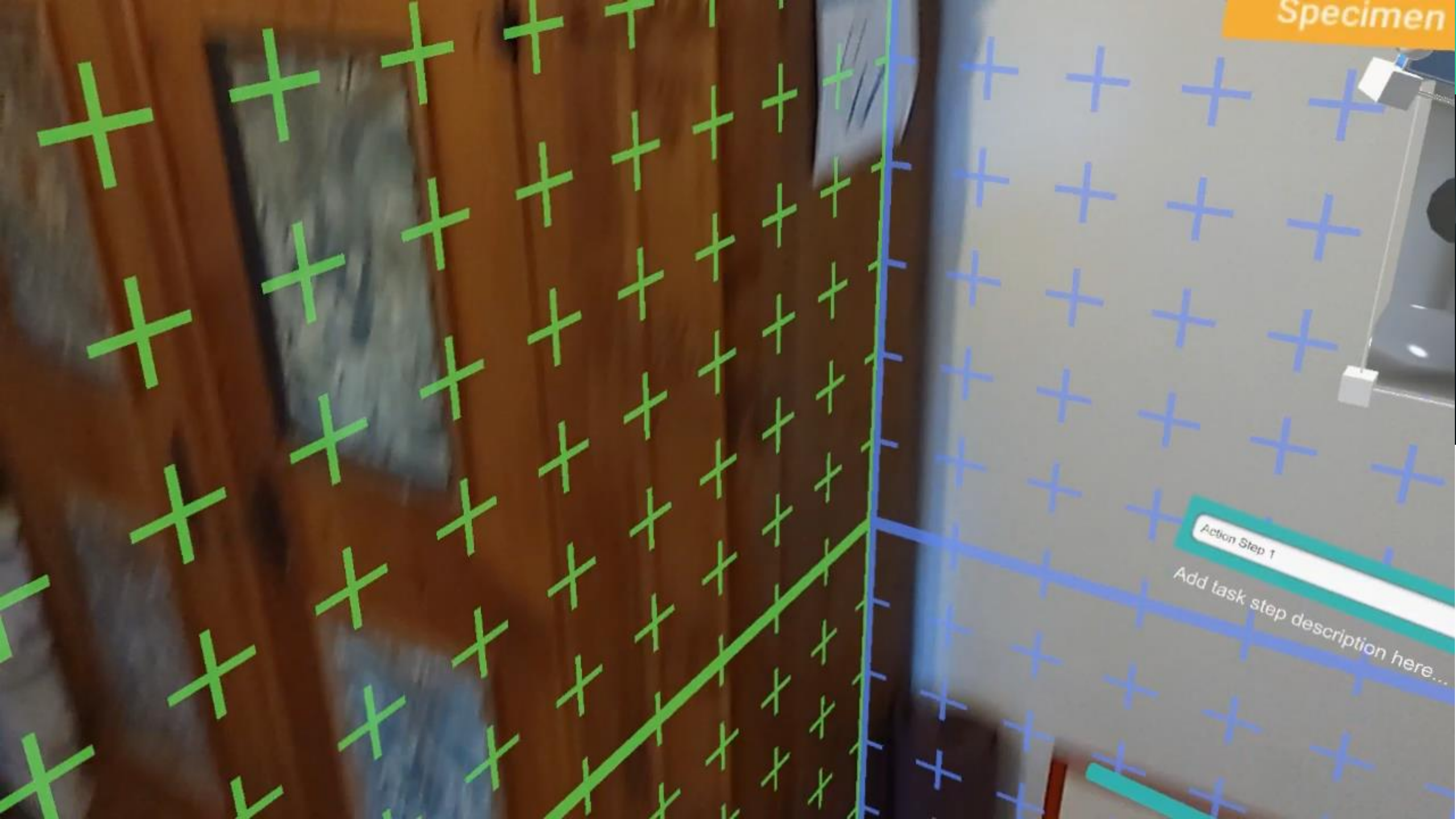

Specimen
Action Step 1
Add task step description here...

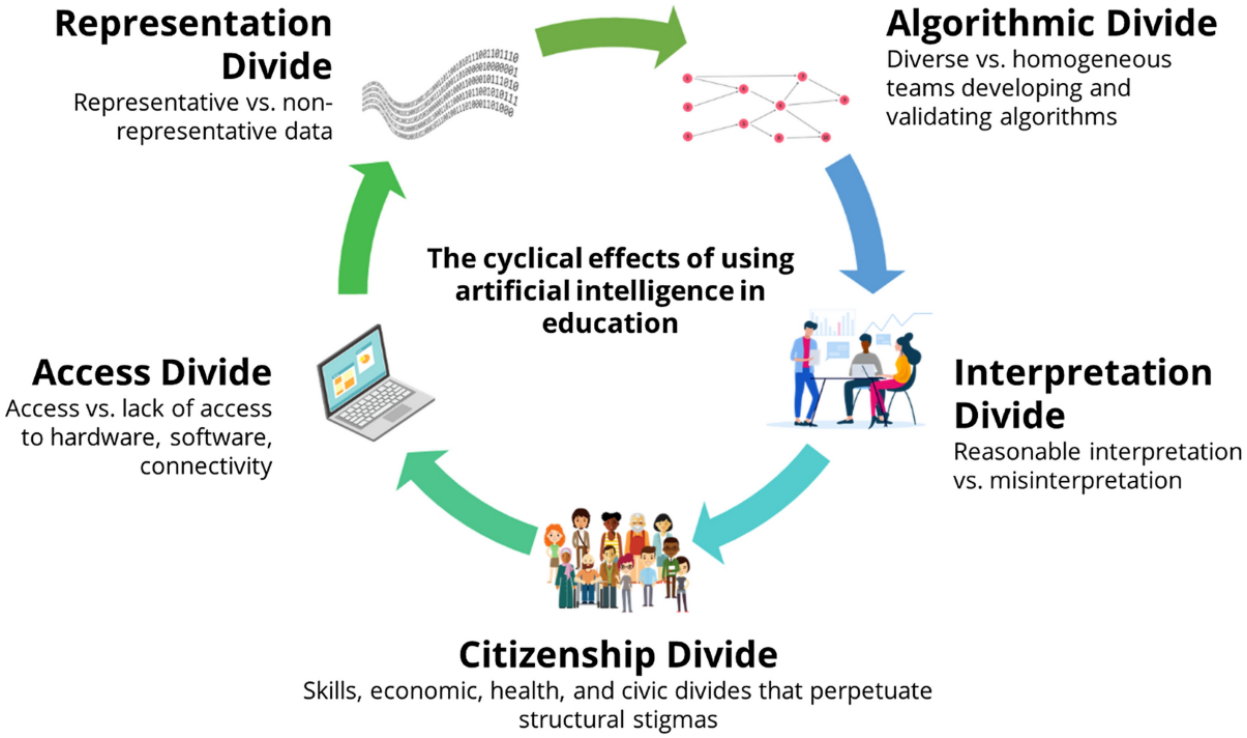
Conclusion and Call to Action

Key Takeaways

- The potential of AI and XR in transforming education
- Importance of addressing challenges and ethical considerations
- The need for ongoing research, dialogue, and collaboration

Call to Action

- Encouraging educators, policymakers, and technologists to collaborate
- Prioritizing equitable access and responsible use of technology
- Fostering a culture of innovation and critical thinking



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Q & A

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