TECHNOLOGY & EDUCATION

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IMPROVING DIGITAL EDUCATION FOR ALL LEARNERS

Accessibility and inclusion in digital learning

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Literature review

- ❖ Practical focus – accessibility and inclusion in digital learning in higher and further (vocational) education

- ❖ 4 parallel searches using Google Scholar – refereed and non-refereed papers, reports, resources

- ❖ 672 discrete items → 99 abstracts read → 77 papers downloaded

- ❖ 38 full papers included.

Main themes

1. Policy, vision, and mission

2. Accessibility for learners and practitioners

3. Contextualisation

4. Discipline, subject and mode specifics

5. Role of perception and models of dis/ability

6. Universal Design Principles (UDP) including for assessment

7. Additional barriers

Main themes (2)

8. Digital as divider or bridge builder

9. Frameworks including UDL, WCAG, CAST

10. Underpinning pedagogy

11. Engagement

12. Content including non-textual

13. Implementation at design/teaching and institutional levels

Definition

"Digital accessibility refers to the design of electronic materials that are usable by all people, regardless of disabilities or environmental constraints"

(Mancilla & Frey 2020, p.3)

Scope

❖ Accessibility and inclusion can relate to disabilities, different ways of perceiving and working, gender, economic social ethnic and cultural context, age, access to resources and connectivity, digital literacy, the environment from which digital resources are being accessed … and more.

❖ There can be barriers in the **environment** that digital resources and media are being accessed from (e.g. learners' homes and workplaces) as well as in the virtual learning environment itself.

❖ Digital poverty can be caused by poor access to resources and connectivity, but increasingly it is a factor of **low digital literacy** – limited skills in using ICTs generally, narrow digital experience e.g. only gaming and social media, or low self-efficacy.

Practice recommendations

❖ Approach accessibility from a learning environment (social) perspective, not initially a deficit (medical) one. **Ask how the learning environment is limited, NOT the learner.**

❖ Aim to design for all learners from the outset rather than relying on adjustments or assistive technology later: Universal Design Principles.

   UD and related principles are available here:
   https://www.washington.edu/doit/universal-design-process-principles-and-applications

❖ Accessible learning can be undermined by inaccessible assessment: UD for Assessment applies the same principles as UD for Learning, but also aims to eliminate the need for 'access' skills – skills that are assumed in the design of assessment tasks but do not relate to what is being assessed.

Practice recommendations (2)

- ❖ Make accessibility features easy to use but unobtrusive: for instance, a sign language box that can be minimised, resized, and moved around.

- ❖ Design (and create content) from the learner's perspective: how will (diverse) learners use the learning environment and resources?

- ❖ Approach commercial software and platforms critically, from the viewpoint of accessibility for both learners and tutors. Some platforms are not as accessible as they could be.

- ❖ Involve learners with different disabilities, perspectives and ways of perceiving and working in the design and testing of learning environments, materials, and methods.

- ❖ Where possible build in learner monitoring to identify how each learner is using the learning environment. Use the results to evaluate and make changes.

Practice recommendations (3)

❖ Individual adjustments and assistive technology will remain important for some learners.

❖ Ensure that design supports the use of assistive technology.   Tutors and learning designers need to be familiar with how assistive technology interacts with relevant devices and platforms.

❖ Approach adjustments and assistive technology critically. Where possible ensure that they:

- enable the most effective use of online learning

- provide access to the richness of the learning environment

- avoid restricting learners' abilities to develop self-directedness and digital proficiency.

References

❖ More detail and references at:

https://www.idealdigital.info/ongoing-research/

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