

KEYNOTE 5: Assistive Technology to Access and Develop Maths:  
Opportunities, Hurdles and Barriers

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***Biography***

Dr. Abi James is an assistive technology consultant and product management specialist with iansyst, a company that specialises in providing software and technology to help overcome the difficulties associated with dyslexia and other disabilities. Having worked closely with both developers and dyslexic users for many years, Abi has extensive knowledge of the solutions that are available to help dyslexic users and frequently contributes to conferences, courses, websites and publications on the subject. This has included presentations to the British Dyslexia Association International Conferences, the Dyscalculia and Dyslexia Interest Group and the review by Sir Jim Rose on the identification and teaching of children with dyslexia in 2008 on behalf of the BDA New Technologies Committee. Abi has collaborated on a number of research projects looking into the effectiveness of assistive technology including projects with the University of Manchester and TechDIS. Dyslexic herself, Abi has personal experience of using computers to overcome her difficulties and is an advocate for using technology to empower dyslexic children and adults to make the most of their abilities.

***Abstract***

Online learning materials and computer-based support activities can provide many benefits for those students with specific learning difficulties such as dyslexia and dyscalculia. Assistive technology can also remove many of the barriers to learning for these students. However, mathematical notation, language and diagrams currently pose significant hurdles to these technologies. Therefore, to make the most of online learning materials, accessibility for students with specific learning difficulties should be considered at the early planning and design stages.

This session aims to:

- Give a brief introduction to specific learning difficulties and why online learning can benefit these students.
- Demonstrate some of the assistive technologies currently used by students in higher education.
- Discuss how learning materials on maths topics can be made accessible for use with assistive technologies.