

ABBYY® FineReader



ABBYY FineReader Answers the Call to Help Students with Learning Challenges

Communication, Access, Literacy and Learning (CALL) Scotland is a unit within the Moray House School of Education at the University of Edinburgh. It specialises in providing assistive technologies to Scottish students who have physical, communication or sensory difficulties and have trouble accessing standard curriculum materials.

The Challenge

More than 5% of pupils in Scotland need help in accessing the curriculum. The Scottish Government asked the CALL team to investigate how many pupils require books in more accessible formats, which formats were needed and where improvements could be made by using technology. The type of technology was not limited but any solution would need to be cost-effective and work on a large scale to meet the range of support required. Out of this research a report was published titled 'Books for All'.

The 'Books for All' project found that the needs of thousands of pupils in Scotland with sight impairments and those with physical disabilities, learning difficulties, or hearing impairment, were not being sufficiently addressed. These pupils often require digital versions that can be read out by a computer or other multimedia resources and 'Books for All' found these to be in short supply. To enable a computer to read text aloud it is necessary to scan the book, or other source material, into digital format and then convert the image to editable text. From this intermediate file, the 'Books for All' team can produce a variety of accessible formats. However, because the information in these source materials is 'trapped' in a format that does not allow for easy editing and reuse – in most cases as paper documents – the team determined they would need an optical character recognition (OCR) software program to read and convert the text within the scans before they could create further materials for students.

The Solution

The 'Books for All' team chose ABBYY FineReader Professional Edition as a best-fit solution for their document conversion needs. ABBYY FineReader is a leading OCR software for converting scanned documents, PDFs and camera images into searchable and editable formats, including Microsoft® Word and Excel®. Its advanced recognition capabilities provide full access to information locked on paper and images and virtually eliminates time-consuming retyping and reformatting. ABBYY's exclusive technology ADRT® (Adaptive Document Recognition Technology) ensures accurate results not only when recognising single pages of text, but also in multipage documents. It re-creates a document's logical structure, producing documents with precisely reproduced formatting attributes that will appear as native elements in a Microsoft Word document: tables of contents, hierarchical headings, headers and footers, footnotes, page numbers, and font styles.

"We picked ABBYY FineReader for its ability to output in multiple formats and cost effectiveness – both key considerations to making the 'Books for All' project a success, helping students with differing disabilities have access to various curriculum material" states Paul Nisbet, Senior Research Fellow at CALL Scotland.

About CALL Scotland

CALL (Communication, Access, Literacy and Learning) Scotland is a small unit within the Moray House School of Education, The University of Edinburgh. The Centre is co-located with the Scottish Sensory Centre. They recently celebrated their 25th Anniversary. CALL is both a Service and a Research Unit. Service activity is limited by the amount of staff time available, but is open to anyone in Scotland concerned with communication difficulties, particularly in a learning context.

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CALL Scotland run training courses for staff and faculty members of schools throughout Scotland on how to create accessible books by using ABBYY FineReader software on their laptops. Staff members are walked through the use of FineReader, how to convert scanned curriculum material into editable Microsoft Word documents and how to convert these documents into the formats required for student needs. They now produce the widest range of accessible curriculum materials from sources including reading books, textbooks, exercise worksheets and assessments. The results of this work are Large Print, Adapted Print, Braille, and audio books as well as various accessible digital formats such as Daisy, PDF, Word and eBook formats.

The Outcome

One example of the impact the 'Books for All' approach has had on the lives of Scottish students are digital versions of Scottish Qualifications Authority (SQA) exam papers. Previously, a staff member would read the questions aloud to the pupil and then would write down the student's answers. Now pupils with visual impairment or dyslexia can use text-to-speech to listen to the the digital version of the exams, or zoom in on questions in order to more easily read them and those with physical disabilities can work independently to type their answers.

The benefits gained from this program have been numerous. Students are more confident, independent and motivated when using digital exam papers. The number of employees required to staff an examination and the associated costs have been greatly reduced. The number of pupils now taking advantage of the Digital Exam papers has doubled year on year since they were first introduced, and in 2010 there were 1,962 requests to SQA for digital papers.

CALL Scotland is now trying to raise awareness of the use of accessible books and resources so that pupils throughout Scotland can take advantage of this work. The team are working on a means for sharing existing assistive tools with teachers and students in different schools. The Scottish Government is currently funding work with Learning and Teaching Scotland, a non-departmental public body that supports the development of the Scottish curriculum, to expand the 'Books for All' database.

About ABBYY

ABBYY is a leading developer of document recognition, document conversion, data capture and linguistics technologies.

ABBYY's products include: FineReader and PDF Transformer – end-user applications for document conversion; Recognition Server – a server-based OCR and PDF conversion solution; FlexiCapture and FormReader – data capture programs for processing forms, semi-structured and unstructured documents; FineReader Engine SDKs that provide a full spectrum of ABBYY's recognition technologies; and Lingvo – a line of dictionary software.

More information about ABBYY at

www.ABBYY.com

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