CALL Scotland
Communication, Access, Literacy and Learning

ANNUAL REPORT

April 2015 – March 2016

CALL Scotland
The University of Edinburgh

National Support for Learning
through
Assistive Technology (AT)
and
Augmentative and Alternative Communication (AAC)

THE UNIVERSITY OF EDINBURGH

CALL Scotland's Vision

Every child / young person in Scotland with a disability or additional support needs has the curriculum materials, the Assistive Technologies and/or Augmentative and Alternative Communication tools they may need - and the support to use them effectively – in order to participate effectively and fulfil their potential through learning and achievement.

CALL Scotland's Mission

To help children and young people to overcome disability and barriers to learning created by their environment, and to fulfil their potential, CALL Scotland provides pupils and families, local authorities and professionals with -

- Strategic Leadership
- Specialist Pupil Assessment and Support
- CPD and Training
- Information and advice
- Equipment Loans and Technical Services
- Knowledge Transfer, research and development

Contents

Summary

CALL Scotland is funded by Scottish Government to lead and develop the use of Communication and Assistive Technologies for learners with additional support needs in Scotland.

Professor Andy Hargreaves (a member of the International Council of Education Advisers that has been formed to advise the Scottish Government[1]) writes that effective use of Assistive Technologies is fundamental if learners with additional support needs are to access the curriculum successfully and subsequently raise their attainment.

> *The use of assistive technology to support the needs of special education students has been a revelation and has begun a small revolution in student achievement, so that many students are now able to access, develop and display what they know in ways that have never been possible for them before.*
>
> *Assistive technologies, the results of this study show, can increase participation, enhance inclusion, develop positive identity and self-confidence and raise achievement in the community of students with special educational needs. They can also enhance, extend and engage learning among all students.*
>
> Hargreaves, A. & Braun, H. (2012). Leading for all: Final report of the review of the development of essential for some, good for all: Ontario's strategy for special education reform devised by the Council of Directors of Education. p. 53, Toronto, Ontario: Council of Directors of Education.

Moreover, the benefits of Assistive Technologies are not confined to learners with additional support needs: in his keynote presentation at the Scottish Learning Festival in 2013 Professor Hargreaves notes that *"What is essential for some students is good for all students"*.

Assistive and Communication technologies have never been more effective, or cheaper, or more readily available, but it is a rapidly changing and developing field, and learners and practitioners require accurate and impartial advice, and professional learning, to make effective use of these tools.

This Report describes the activities and achievements of the CALL team in 2015-16, working with colleagues and learners in local and national agencies across the country. There are some impressive indicators of impact:

- 88,161 books in accessible format were downloaded from the Books for All Scotland Database, an increase of 260% on the previous year.
- There were 872,686 visits to the CALL Scotland web sites, and 286,192 resources were downloaded.
- 653 staff attended CALL Professional Learning courses in Edinburgh or in schools and local authorities.
- 44% of Scottish schools requested Digital Question Papers for learners who required Assessment Arrangements in the 2015 examination diet.
- 215 staff attended the free ICT and Inclusion conferences in Edinburgh and Clydebank.

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[1] http://news.scotland.gov.uk/News/International-education-panel-confirmed-26f8.aspx

- The world's first Scottish Gaelic computer voice was created by Scottish firm CereProc and is now available from CALL's Scottish Voice web site.
- 72 learners with complex additional support needs across 17 local authorities were supported directly in school by the CALL team.
- Practitioners borrowed 213 items or equipment, worth £41,000 for evaluation with learners with complex additional support needs.
- CALL Scotland collaborated with local, national and international agencies, including for example Scottish Government, Education Scotland, NHS Scotland, Scottish Qualifications Authority, the European Agency for Special Needs and Inclusive Education, the National Parent Forum Scotland, local authority ASN and technology experts, and learners, teachers, parents and carers.

However, it is also clear from this report that access to and support for using assistive and communication technology is very uneven across the country. Some learners experience excellent provision, while others do not. As Professor Hargreaves reports, Assistive Technologies are key to raising achievement and closing the attainment gap, and so Scotland must tackle this inequality if we are going to fulfil the aspirations of the National Improvement Framework.

The National Commissioning Group for Education Provision for Children and Young People with Complex Additional Support Needs, formed as part of the Doran Review, is currently drafting a Strategy for the next ten years, and CALL Scotland is developing proposals for building capacity to ensure that all children with complex additional support needs have equal opportunities to access the curriculum and to participate using technology.

Funding

CALL is funded primarily by the Scottish Government Learning Directorate to help learners, practitioners and parents and carers get the most from technology to access the curriculum and for communication. We also have a small annual grant from the Scottish Government Care, Support and Rights Division that funds information, advice and equipment loans for adults. SQA funds out partnership and development work around digital exams and assessments, while assessment and support of individual pupils in schools is undertaken via partnership agreements with local authorities. Lastly, we generate income through delivery of professional learning in Edinburgh and on site in schools.
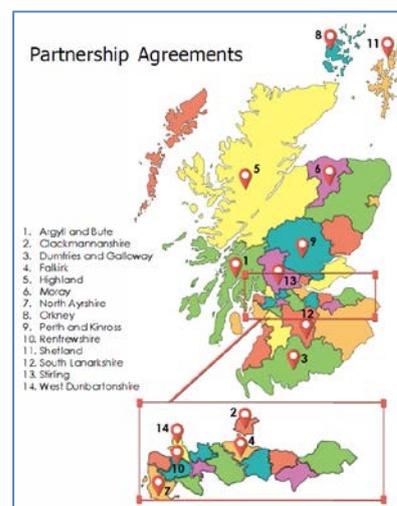
Staff

Dr. Stuart Aitken retired at the end of March 2016, after working in the CALL team since 1987: 29 years! Stuart has been part of almost everything that's good about CALL: he has worked directly with learners in schools; he has developed and delivered innumerable courses over the years; took a lead in wide and varied projects such as *Listening to Children* and *Books for All*; and provided a canny, strategic mind to CALL's overall direction and philosophy. He's not getting away though, and will be helping us to formulate plans and proposals for national commissioning as part of the Doran Project.

Paul Nisbet, Director.

CALL Staff Team 2015 - 16

Paul Nisbet (1.0 FTE)	Director; Engineer and Educational Technologist
Dr. Stuart Aitken (0.4 FTE)	Psychologist and Visual Impairment Specialist (until 31/3/16)
Sandra O'Neill (0.4 FTE)	Specialist Teacher
Joanna Courtney (0.6 FTE)	Specialist Speech and Language Therapist
Shirley Lawson (1.0 FTE)	Development Officer & Professional Learning Coordinator
Gillian McNeill (0.8 FTE)	Specialist Speech and Language Therapist
Craig Mill (0.6 FTE)	Assistive Technology Specialist
Robert Stewart (1 FTE)	Technology Resources, web designer/manager
Allan Wilson (1 FTE)	Information Coordinator (General Enquiries)
Sarah Marjoribanks (0.8 FTE)	Office Manager
Rebecca Gow (0.9 FTE)	Resource Developer/Assistant Administrator

Sally Millar, formerly Joint Coordinator, retired in April 2015, but continues to provide consultancy.

Stuart Aitken retired at the end of March, but will also provide consultancy for CALL Scotland.

CALL Steering Group 2015 - 2016

Dr. Mike Gibson	Chair of Steering Group
Gill Scott	The Scottish Government (until 08/15)
Deborah Walker	The Scottish Government (from 08/15)
Professor Sheila Riddell	Moray House School of Education, University of Edinburgh
Trevor Baxter	South Lanarkshire Council (ASLO representative) (until 06/15)
Joanne Dryburgh	Scottish Borders Council (ASLO representative) (from 09/15)
Barry Syme	Principal Psychologist, Glasgow (ASPEP representative)
Martin Vallely	Professional Services Manager: Children & Families, City of Edinburgh Council (ADES representative)
David Watt	Education Officer Supporting Learner, Education Scotland (until 12/15)
Tina Woolnough	National Parent Forum of Scotland (until 08/15)
Marie Foley	Manager, Learning Support Service, East Dunbartonshire (until 06/15)
Joan McKay	Principal Teacher, Eildon Support Centre, Scottish Borders
Irene Houston	Inclusion Development Teacher, South Lanarkshire Council

Strategic Leadership & Collaboration

Funded by: Scottish Government Core Grant

OBJECTIVES

Development and delivery of effective policy and good practice in the use of AT and AAC for pupils with additional support needs or disabilities in Scotland through:

- collaboration with colleagues in The Scottish Government, Doran Project Board, Education Scotland, Scotland, SQA, local authorities and voluntary organisations;
- collaboration with AAC Leads in NHS Health boards and their partners and with NES and SCTCI;
- collaboration with parents, particularly through the National Parent Forum of Scotland;
- participation in UK and international committees and working groups;
- submissions to legislation and policy-making bodies;
- development of new initiatives & pilot schemes.

OUTCOMES

Scottish Government: Statutory Guidance on Accessibility Strategies

The Scottish Government published new guidance on Planning improvements for disabled pupils' access to education on 31 October 2014 and CALL contributed substantially to the document and particularly, to the Checklists in the Appendices that provide useful planning and self-evaluation tools for evaluating the accessibility (or otherwise) of school computers (see right).

Throughout 2015-16 we have been raising awareness of the guidance with schools, local authorities, learners and parents, through our Professional Learning programme and also for example through presentations to ASLO, Dyslexia Scotland events, and the National Parent Forum Scotland conference. A paper was prepared for ASLO and a new web resource on Computer Accessibility was created to help schools and local authorities meet the requirements for reasonable adjustments.

Many education authorities and corporate ICT managers have been appreciative of the information about free tools and resources, such as *WordTalk* and the Scottish Voices provided by CALL and funded by Scottish Government, to support them in complying with the guidance from Scottish Government.

We know that the recommended accessibility tools such as text-to-speech and the Scottish voices are available as standard on computers in many local authorities but we also know these tools are not available in others. Consequently, learners with additional support needs or disabilities have difficulty accessing the technology, and if they require this technology to access the curriculum, they are therefore disadvantaged.

ICT Accessibility Survey

We ran an online survey throughout the 2014-15 academic session to research the accessibility of school ICT, and although there were there were insufficient returns (only 176) to get an accurate picture of the situation across the whole of Scotland, the responses were illuminating. The responses suggest that:

- access to equipment in the classroom is patchy, but improving;
- learners are increasingly able to use their own devices;
- two thirds of respondents did not have text to speech software on their computers, or did not know what it was;
- *Ivona MiniReader* is the most frequently used computer reader software;
- 30% of respondents cannot access Control Panels, including Ease of Access;
- 40% of respondents reported that it was difficult to have specialist software installed on computers;
- many schools reported issues with purchasing and installing apps on iPads;

- good use is being made of accessible learning materials;
- it is becoming easier to transfer work between home and school.

The results suggest that far too many learners with disabilities and additional support do not have access to text-to-speech software and the Scottish computer voices, cannot adjust settings to enable access, or have difficulty accessing specialist software. It is unacceptable that these (often free) tools are available in some parts of Scotland, yet not in others.

Following the introduction of National Literacy Units, where computer readers are acceptable but human readers are prohibited when assessing reading, Scottish government commissioned research into support for disabled learners in national literacy. The final report published in August 2014[2] noted that *"it was apparent that there is significant variability in access to technology between schools in the same area and between schools in different parts of Scotland."*

This finding is supported by the responses to our survey and CALL will be working with local authorities, schools, learners, parents and Scottish Government and Education Scotland to raise awareness of this essential provision in 2016-17.
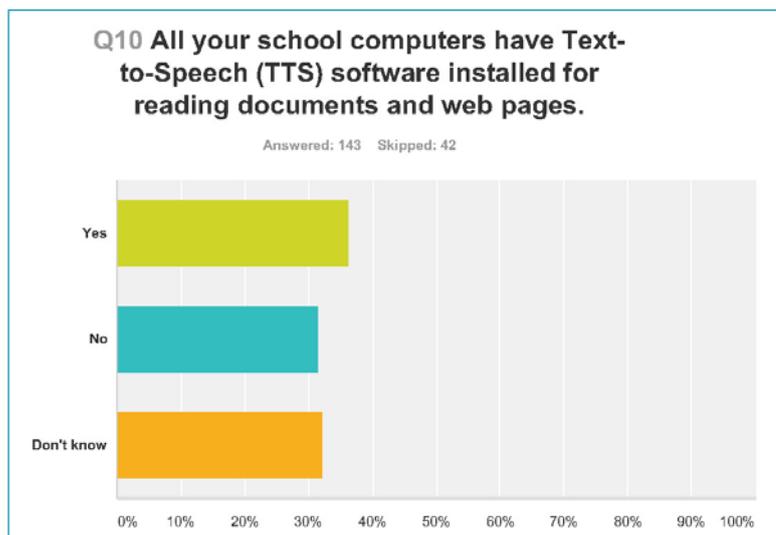
Education Scotland

CALL continued to contribute to Education Scotland's Inclusion Team events in 2015-16 (see *Conference and Study Day Presentations* on p.51).

In December 2015, Fran Ranaldi was appointed Development Officer for Dyslexia and Inclusive Practice within the Inclusion and Equalities Team, Education Scotland, and the CALL team have had initial discussions about professional learning opportunities and the developing *Inclusive Friendly Practice Self-Evaluation Framework*.

In March 2016 CALL met with Kirsty McFaul and Louise Foreman of Education Scotland's Technology Team to discuss the findings of the ICT Accessibility Survey and how accessibility of school technologies can be improved for learners with additional support needs. This will be carried forward in 2016-17.

Paul Nisbet contributes to the National Digital Learning Forum, which has a strategic remit to make recommendations on the use of digital technology for learning and teaching.

European Agency for Special Needs and Inclusive Education: ICT for Information Accessibility in Learning (ICT4IAL)

CALL Scotland's contributions at an international level in 2015-16 included Stuart Aitken's representation on the European Agency's ICT4IAL (Information and Communications Technology for Information Accessibility in Learning) project. This 3-year project run by the Agency aimed to improve the availability and use of accessible information at all levels of lifelong learning, with an

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[2] EXECUTIVE SUMMARY DISCUSSION OUTCOMES: ROUND TABLE EVENT RELATING TO SUPPORT FOR DISABLED LEARNERS IN NATIONAL LITERACY UNITS August 2014, Ashbrook Research & Consultancy Ltd

ambitious objective to improve the practice of all stakeholders.

The project completed on time with a conference held in Portugal May 2015 at which the **Guidelines for Accessible Information** document was launched. Thirty EU countries have signed to the Guidelines to which CALL made a substantial contribution. They address how to make information accessible for learning where materials would include books, worksheets, video, audio, PowerPoints, PDFs and more. Following the steps set out in the Guidelines should mean that learners with visual impairment, physical disability, dyslexia or another form of support need have much better access to books, worksheets and other materials.

As well as contributing to the Guidelines CALL produced a short video presentation following which Education Scotland invited CALL to produce an extended version of the video as an example of improving attainment. The extended sub-titled video is available in a variety of formats from **Accessing Maths using Digital PDFs**.

Finally, together with the EU Agency's Marcella Turner-Cmuchal, Stuart Aitken co-authored a chapter[3] due to appear in a forthcoming major publication as part of the ***International Perspectives on Inclusive Education*** series published by Emerald Insight.

National Improvement Framework

CALL's response to the draft National Improvement Framework considered matters of policy that relate to inclusion of learners who are either disabled or have additional support needs in the assessment process. We also offered technical detail on potential specification criteria that will need to be in place to meet legal requirements on accessibility for the proposed standardised Assessments.

The proposed standardised assessments will be considered and designed in the context of Equality and Accessibility legislation and it is essential that they are accessible for learners with additional support needs. In our response we suggest that Scottish Government should consider the implications of emerging international policy and practice, in particular from the USA (Universal Design for Learning[4]) and from the European Union[5]. In doing so, we encourage consideration of how a new language of intervention might play its part in developing agreements from all stakeholders on the positive intentions behind the Framework.

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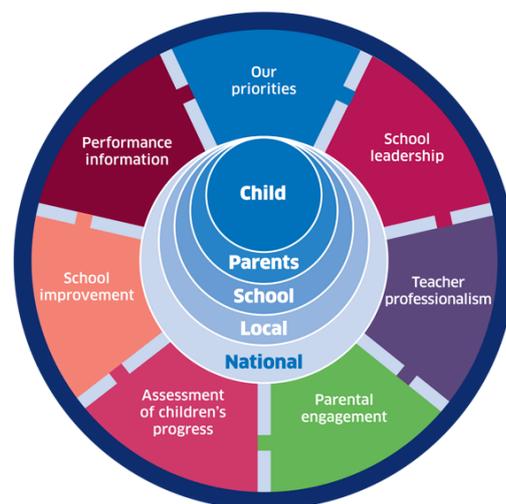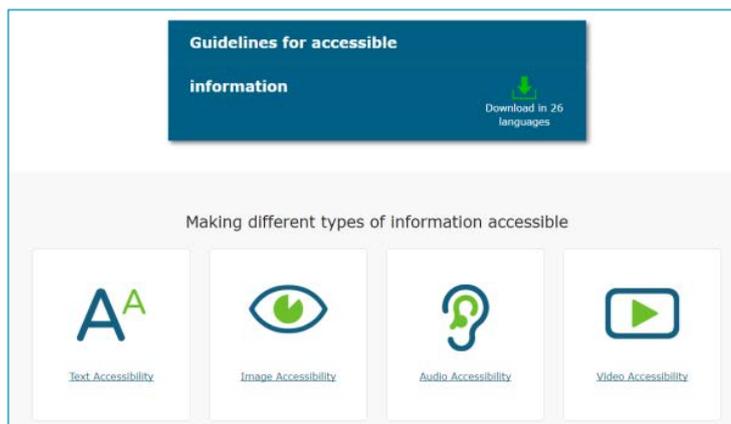
[3] Turner-Cmuchal M & Aitken S (2016**) ICT as a tool for supporting inclusive learning opportunities. In Implementing Inclusive Education: Issues in bridging the policy-practice gap**. Edited by Amanda Watkins and Cor Meijer – European Agency for Special Needs and Inclusive Education. Vol. 8 In development due 2016.

[4] Universal Design for Learning, http://www.udlcenter.org/

[5] European Agency for Special Needs and inclusive Education ICT for Inclusion, https://www.european-agency.org/agency-projects/ict4i

CALL Scotland subsequently met with officials from Scottish Government to draw attention to the need for assessments to be fully accessible, and offered to provide assistance as the assessments are developed and piloted in 2016-17.

Digital Learning and Teaching Strategy for Scotland

CALL Scotland's response to the Consultation on the development of a Digital Learning and Teaching Strategy for Scotland raised a number of important issues. The draft strategy is built on five principles: Local Leadership, National Support; Partnership Working; Opportunities for All Learners; Evolution; Integration.

In our response, we raise concerns over the proposed balance between *Local Leadership and National Support* and propose that greater national leadership is required to improve outcomes and raise attainment. We also argue that the strategy should be based instead on *equity* rather than *opportunity* for all learners, not least to achieve consistency with the National Improvement Framework. To further develop 'joined-up thinking' we suggest that the four key themes identified in the digital strategy should clearly articulate how they will help address the five priorities described in the NIF and that the European Agency for Special Needs and Inclusive Education *ICT for Inclusion* project Policy Monitoring Framework could be used to bring greater focus on outcomes to the Digital Learning and Teaching Strategy.

Access to digital learning for learners with additional support needs is inconsistent across Scotland (see the discussion on Scottish Government: Statutory Guidance on Accessibility Strategies above) and so we propose an action to *"ensure that senior leaders are aware of legal obligations to provide access to the curriculum using digital technology, and support them to make provision"*.

Under curriculum and assessment, we propose an amendment to one of the priorities for action, to wit: *Work with SQA and other key partners to support, develop and embed accessible approaches to assessment that make full use of digital technology.* This is particularly important in the context of the proposed National Standardised Assessments given that that one fifth of learners may have additional support needs, and that 11% of candidates sitting SQA examinations in 2015 required Assessment Arrangements meet their support needs.

We argue that neither the Strategy, nor the Literature Review from which evidence is drawn, pay adequate attention to the needs of learners with ASN given that this group constitutes approximately 20% of the school population and that technology is essential for some learners to even participate in education. In comparison with its potential contribution to the wider population of learners, the importance of digital learning technologies in raising the attainment of learners with additional support needs and disabilities is far greater.

Scottish Qualifications Authority

CALL continued to support schools using SQA Digital Question Papers and technology in assessments and examinations.

Paul Nisbet has advised SQA and BTL Learning and Assessment on accessibility requirements for the development of SurpassPaper+, a digital system for candidates to type responses in examinations. Disabled candidates, and those with additional support needs, can use technology in examinations as an assessment arrangement, but a word processor can be used by any candidate in an examination as a matter of preference. As learners in schools make
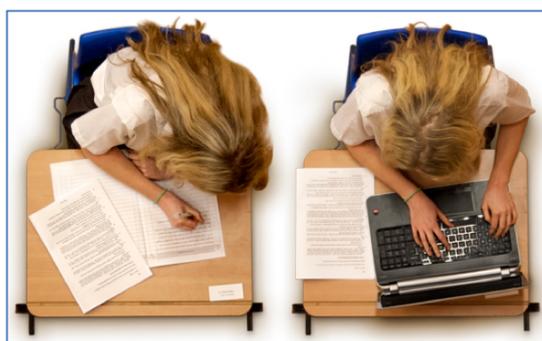
greater use of technology, they expect to use it in assessments and examinations, but external examination delivery and processes remain resolutely paper-based. The Paper+ system is intended to provide a cost-effective solution that can be implemented on a large scale for a very large number of candidates.

Paul contributed to the development of *Minimum Standard for the use of Accessible PDFs for Assessment* which were published by the UK Association for Accessible formats (UKAAF) in January 2015. The standards will help assessment and examination providers deliver digital assessments that are accessible for learners with disabilities or additional support needs.

Scottish Gaelic Computer Voice

The world's first Scottish Gaelic computer voice ('Ceitidh') was created by the leading Scottish firm CereProc and formally launched by Dr Alasdair Allan on 19th January 2016. The voice is licenced for the entire Scottish public sector, and for third sector organisations, and is available from CALL's Scottish Voice web site. Development of the voice was funded by the Scottish Government Gaelic and Scots Unit; the Scottish Funding Council; SQA; and Bòrd na Gàidhlig. Ceitidh received a very warm welcome from Gaelic Medium Education. When assessing reading in Gàidhlig Literacy Units, computer readers are permitted but human readers are not, and so the Ceitidh voice provides parity of provision in terms of accessibility for GME learners.

Scottish Government: Doran Review

Dr Stuart Aitken represents CALL, SSC and Enquire on the Doran Project Board and also on Workstream 2 (Needs Analysis) while Paul Nisbet is on Workstream 3 (National Commissioning).

A National Commissioning Group for Education Provision for Children and Young People with Complex Additional Support Needs was formed following from Workstream 3, to develop a 10 year Strategy and a commissioning plan for services in order to make recommendations to Ministers. The group in chaired by Margaret Orr and had its first meeting in October 2015. A draft 10 year Strategy was developed by the group and CALL contributed substantially to the second draft which will be published in summer of 2016.

Paul Nisbet was featured in an article in the fifth Doran Newsletter published in October 2015.

Augmentative Communication in Practice: Scotland (ACiP:S)

CALL staff (Allan, Gillian, Joanna) as members of the ACiP:S executive committee provide leadership and participation on national AAC issues. Other committee members represent AAC services across Scotland.

- Facilitating the transfer of the AAC Leads from across Scotland to the ACiP:S network, to ensure sustainability following the completion of the Right to Speak project in March 2015.

- Organising Professional Learning and User events. This year's main event was the 'Introduction to AAC' Study Day on 11 November 2015 at the Emirates Stadium in Glasgow. This was part funded by ACIP:S with NHS Glasgow and free for delegates to attend (80 attended). Delegates came from across Scotland, including a number of practitioners nominated by CALL staff. CALL staff were also involved with an exhibition stand (Allan) and a workshop titled - AAC in an Early Years Setting (Joanna, Gillian). The father of a young AAC user

(supported by CALL) gave an account to the whole delegation on AAC from a family's perspective.

- Leadership of the planning for the Family Fun Technology Day to take place on 16th April 2016 at CALL Scotland.

Communication Matters

- Representation at the annual Communication Matters conference, held in Leeds (September 2015), including both exhibitor stand and CALL workshop on the AAC in Education Module in construction (Sally).

- Member of Blissymbols UK Committee and Blissymbolics Communication International Symbol Panel (Sally).

A Right to Speak, National AAC project in association with NES

The *A Right to Speak* project funded by NHS Education for Scotland finished at the end of March 2015, and the final report (Now Hear Me) was published in June 2015. The report summarises the projects and developments over the 3 year £4 million programme of work to implement the recommendations in the 'Right to Speak' report (2012) by Scottish Government, on the development of Augmentative and Alternative Communication provision in Scotland.

Right to Speak funded research, professional learning and development, partnership projects, AAC equipment and development of awareness-raising resources. CALL received funding to develop online modules giving an introduction to AAC, and these went live in 2014 on the new AAC Scotland website. These modules have been well received and CALL bid successfully for a second project to develop similar online resources on AAC in Education. These are still in development.

The *Now Hear Me* final report made a number of recommendations to Scottish Government; NHS Education for Scotland; health boards, schools and services; and AAC users and their families. In September 2015 work began by Scottish Government to take this forward through legislative processes.

HEALTH (TOBACCO, NICOTINE ETC. AND CARE) (SCOTLAND) BILL: PROVISION OF COMMUNICATION EQUIPMENT

In September 2015 the Scottish Government announced plans to bring forward an amendment to the Health (Tobacco, Nicotine etc. and Care) (Scotland) Bill to provide a statutory right to "voice equipment" for people with communication support needs. This was in response to Now Hear Me and a long campaign by Royal College of Speech and Language Therapists (RCSLT), Capability Scotland, ACiP:S and more recently, involving Gordon Aikman and MND Scotland. Scottish Government published an Impact Assessment[6] of the proposed legislation, to which CALL responded.

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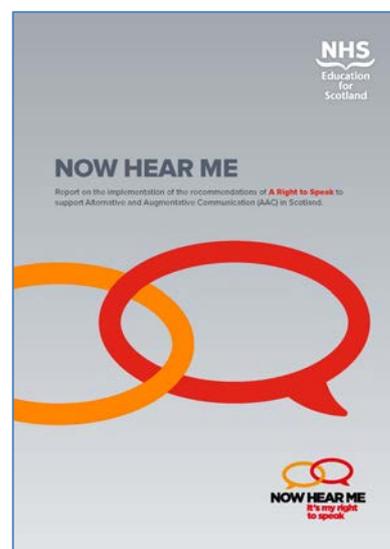
[6] Final Business and Regulatory Impact Assessment - The Health (Tobacco, Nicotine Etc. and Care) (Scotland) Bill -

The Bill was passed on 3 March 2016, and received Royal Assent on 6 April 2016 and places a duty on Scottish Ministers to:

"meet all reasonable requirements, provide or secure the provision of—

   a) communication equipment, and
   b) support in using that equipment,

to any person who has lost their voice or has difficulty speaking."

Implementation of the new duty will be the responsibility of Health Boards and Scottish Government will develop and issue Directions[6] to Health Boards about how this should be achieved. The Bill has obvious implications for children with communication support needs and CALL Scotland has contributed to a working group that was set up to develop the amendment, and the future Directions. This work will continue in 2016-17.

Local Authorities

Through its service level agreements (SLAs) CALL continues to offer expertise in the areas of assessment support, professional learning, technical expertise tailored to individual local authority contexts. Partnership agreements were made with 17 local authorities; see *Pupil Assessment and Support* and *Continuing Professional Development and Training*.

Scottish Book Trust

CALL continued the partnership with the Scottish Book Trust to produce accessible versions of the shortlisted books for the annual Scottish Children's Book Awards. As well as creating accessible digital versions in PDF, we produced digital versions of the early years 'Bookbug' titles for learners who use switch, touch screen, eye gaze and also iPads, with corresponding symbol-based resources for teachers.
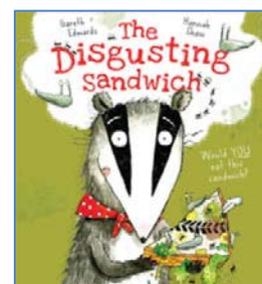
National Parent Forum of Scotland

Paul Nisbet presented on *Attainment for All: raising attainment for learners with Additional Support Needs by using technology* at the annual National Parent Forum of Scotland conference in October 2015.

ICT SUPPORT FOR LEARNING, SCOTLAND (ICTSLS)

The ICTSLS network is a Scotland wide community of specialists working with Assistive Technology in schools. Sandra chairs the ICTSLS group and CALL organised meetings on 4/11/15 (in Fife) and 2/3/16 (in Glasgow).

The ICTSLS meetings and email forum continue to offer an effective and efficient way for sharing good practice amongst colleagues specialising in the area of ICT and ASN.

In 2016-17, Shirley Lawson will take over responsibility for developing the ICTSLS community.

Other Collaborations

- Discussions with software and communication aid suppliers, making an input to product development.

- Support to Scottish Parliament on accessibility of their Digital Strategy (Stuart and Robert).

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[6]Provision of Communication Equipment. http://www.gov.scot/Publications/2016/03/7711/1

- Exhibition and presentations at Dyslexia Scotland roadshows and events (Allan, Craig, Paul, Stuart and Sandra).
- Participation in the Right to Read Alliance and eBook Working Group (Paul).
- CALL staff attended meetings and contributed to the Autism Education Network.
- Paul contributed to the Addressing Dyslexia Toolkit working group.

Advisory Group memberships

- Scottish Sensory Centre (Stuart).
- Enquire (Stuart).

Submissions to legislation and policy-making bodies

Contributions to legislation and policy are described in the text above and listed below:

- CALL Scotland's response to the draft National Improvement Framework.
- CALL Scotland's response to the Consultation on the development of a Digital Learning and Teaching Strategy for Scotland.
- CALL Scotland's response to Final Business and Regulatory Impact Assessment; HEALTH (TOBACCO, NICOTINE ETC. AND CARE) (SCOTLAND) BILL: PROVISION OF COMMUNICATION EQUIPMENT.
- Papers provided to the Doran Review workstreams and Project Board.

National Provision of Core Assistive Technologies

OBJECTIVES

- **Books for All:** provision of learning materials in accessible formats for pupils with additional support needs. (Funded by Scottish Government Core Grant).
- Provision of high quality **Scottish Computer Voices** for Scottish schools and public sector. (Funded by Scottish Government Core Grant).
- Ensure that National Standardised Assessments are accessible. (Funded by Scottish Government Core Grant).
- Development and support for **SQA Digital Question Papers and Assessments**. (Funded by SQA).
- Provision of **WordTalk** text reader. (Funded by Scottish Government Core Grant).

Books for All

Funded by: Scottish Government Core Grant

Awareness raising and CLPL

The Books for All web site received 90,530 visits in 2015-16; this is a reduction compared to the previous year and we think that this reflects the fact that the site is now several years old. In 2016-17 we plan to refresh the site and content using the same design that was developed for the main CALL web site.

Books for All Scotland Database

A remarkable 88,161 books were downloaded by schools from the Database in 2015-16, compared with 31,315 the previous year. We do not know exactly how many learners with additional support needs are benefitting from access to these learning resources in accessible formats, but it must be many thousands.

Table 1: Number of downloaders and books downloaded from the Database

Books for All Downloads	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
Number of individual downloaders	289	523	862	1,230	1,033	**1,453**
Number of books downloaded	2,012	3,923	7,257	11,067	31,315	**88,161**
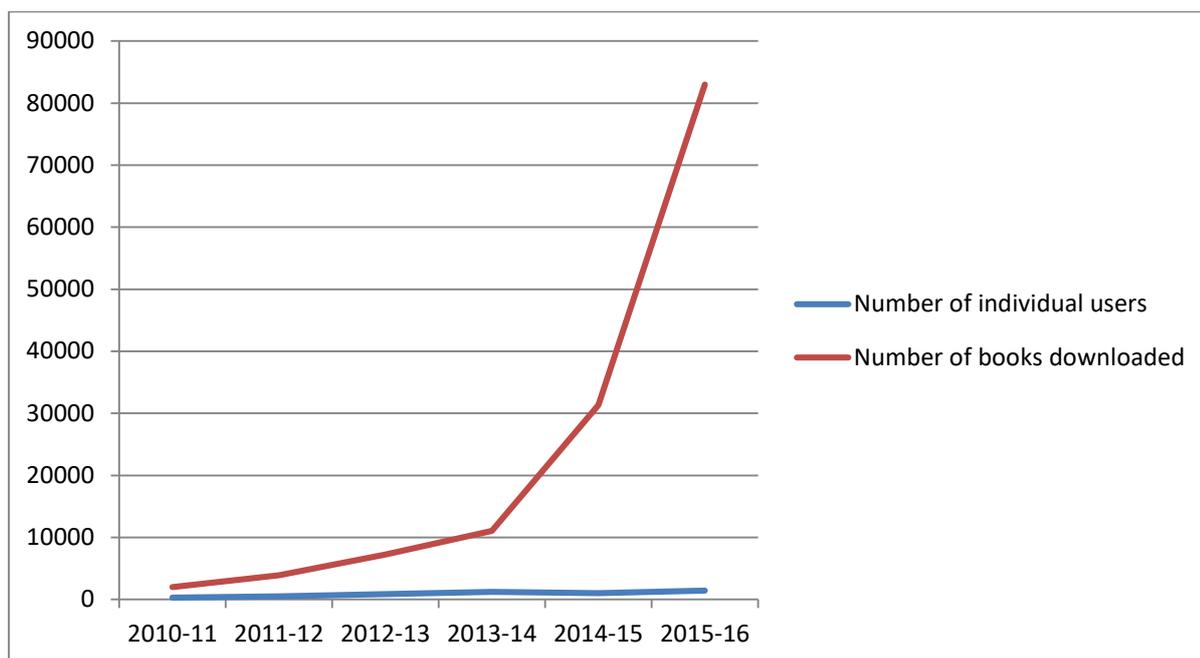
Figure 1: Number of users and books downloaded from the Books for All Database

The need for national provision of accessible resources was first identified in the *Books for All Report*[7] by Paul Nisbet and Dr. Stuart Aitken in 2007, and the Books for All Scotland Database was created by CALL, Scran and Education Scotland in 2008. The number of files downloaded has increased from 2,012 to 88,161 in five years.

Each 'user' downloaded 60 books on average, compared with 30 the previous year. A 'user' on the

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[7] Nisbet, P.D. & Aitken, S. (2007) Books for All: Accessible curriculum materials for pupils with additional support needs. http://www.gov.scot/resource/doc/178998/0050923.pdf

Database is in most cases a member of staff in a school and so it is clear that establishments that are aware of the database are making greater use of the resources. The largest single user was a secondary school where 2,260 files were downloaded (compared to the average of 60). There is therefore considerable scope to increase usage given that we have 2,569 schools in Scotland.

Hodder Gibson textbooks accounted for over half of these downloads (48,288, Table 2) followed by TeeJay and then Heinemann. We have agreements with Hodder and TeeJay to distribute digital files of their titles to learners with print disabilities, and BrightRED also agreed to provide their files in July 2015: these books have been downloaded 3,650 times in 2015-16.

Table 2: The top 10 most downloaded publishers

Publisher	Number of downloads 2014-15	Number of downloads 2015-16
Hodder Gibson	14,642	**48,288**
TeeJay Publishers	5,692	**10,141**
Heinemann	4,051	**9,534**
BrightRED	0	**3,650**
Nelson Thornes	1,473	**3,140**
Oxford University Press	771	**3,078**
Puffin	551	**1,299**
Ginn	487	**703**
Collins	316	**624**
Leckie & Leckie	216	**535**

The most popular book was Hodder Gibson's *How To Pass National 5 Biology*, which was downloaded 18,721 times, followed by *National 4 Maths* (Hodder Gibson) and then *TeeJay Maths Curriculum for Excellence Book 1a* (5,170 downloads).

83% of the books downloaded were eText files in PDF; the majority of the others were Large Print (Table 8). This is the first year that Daisy audio books and iPad Keynote files were downloaded.

The Scottish Heinemann Primary Maths textbooks that we created in 2013-14 with interactive 'answer boxes' were downloaded 3,948 times compared to 2,191 the year before.

Table 3: Downloads by format

Format	Number of downloads 2014-15	Number of downloads 2015-16
eText	25,264	**72,866**
Large Print	5,850	**9,524**
Large Print 24	62	**2,300**
Large Print 36	43	**1,366**
Large Print 18	25	**964**
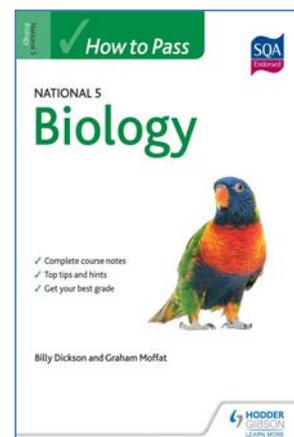
Format	Number of downloads 2014-15	Number of downloads 2015-16
Large Print 48	0	**291**
Large Print 26	13	**224**
Large Print 28	0	**224**
Large Print 14	15	**221**
eText Powerpoint	25	**51**
Daisy	0	**49**
Keynote	0	**33**
Audio	13	**16**
eText Clicker 5	3	**2**

Books for All Scotland Database Content

Hodder Gibson

In 2014 we obtained permission from Hodder Gibson to distribute digital textbooks via the Books for All Database rather than manually on CD, and the availability of these files has driven the enormous increase in use. In 2013-14, we distributed 429 books on CD; in 2014-15 there were 11,171 downloads from the database, and last year there were 72,866 downloads.

Distribution of learning resources in this way is of huge benefit to learners with Print Disabilities, who would otherwise be unable to read and access the books, and is also helpful to the publisher, who does not have to respond to individual requests from schools to source and provide digital files of titles. New titles are added as they are published, and there are now 293 Hodder Gibson textbooks on the database.

TeeJay

TeeJay Maths is one of Scotland's leading maths textbook publishers, and we have an agreement to provide accessible digital copies of their books. Following the success of the Scottish Heinemann Maths books with 'answer boxes', we adapted the TeeJay 1a and 1b books to make them similarly accessible, and these are available on the Database.

This 'answer box' technology was first developed by CALL for use in SQA Digital Question Papers and the same technique works very well with many textbooks.

The answer boxes are particularly helpful for learners with more complex physical or visual difficulties, because the learner can quickly and easily type the answer and then 'tab' to the next answer box, which is much faster and easier than navigating with the mouse. The resources are also very popular with learners who have literacy difficulties, or who are on the autistic spectrum.
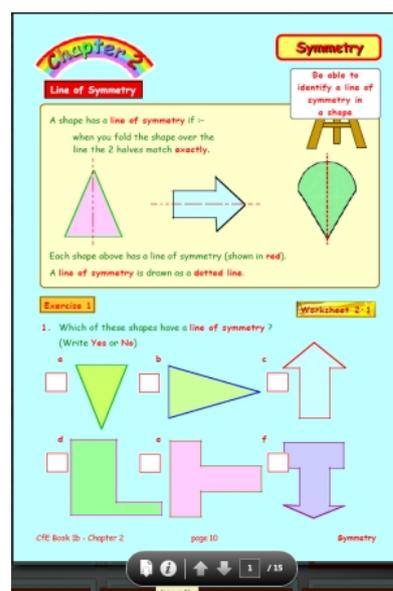
BrightRED

In April 2015 we approached BrightRED, a Scottish secondary school textbook publisher. 34 BrightRED titles have been uploaded to date.

VTSS, Edinburgh and Lothians

One of the reasons for creating the Database was to provide a mechanism for Visual Impairment Transcription teams across the country to share accessible resources more easily, and the very first files uploaded to the database came from the service in Edinburgh and Lothians. In December 2015 we obtained another 15,000 individual files from VTSS and Rebecca Gow, our Resources Editor, has systematically edited, adapted and then uploaded another 652 titles created from these individual files. Most of these books are Large Print.

Other contributors

Marie Lawson, a specialist VI transcription editor in Shetland, contributed more Large Print versions of New Maths in Action books. In November 2015, Elaine Smith and Dr. Barry Begg from Glasgow Caledonian University offered to record audio versions of books, and in discussion we agreed that audio versions of Scottish Set Texts for National 5 and Higher would be most useful. So far they have recorded four books.

Scottish Children's Book Awards

Since 2010, we have produced accessible digital versions of the nine shortlisted books for the Scottish Children's Book Awards. These resources enable pupils who find it hard to read the standard 'print' books to take part in the awards along with their peers in the classroom.

For the 2016 awards, we created switch accessible Powerpoint versions with human speech narration. Learners can turn the page by pressing a switch, clicking a mouse button, or even by using eye-gaze systems. Recognising the increasing popularity of iPads, we researched and then developed a similar format based on the free Keynote app for iPad, and these versions of the Bookbug books were made available on the database for the 2016 awards.
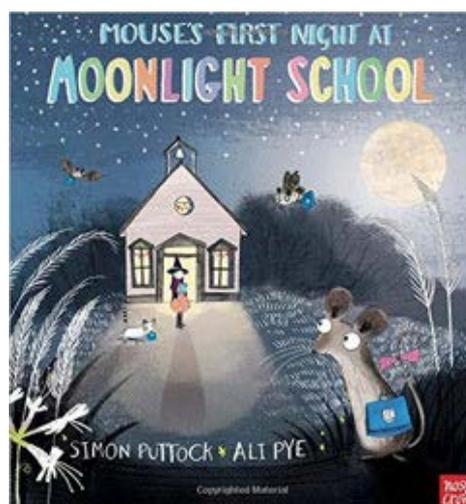
For this year we again created symbolised resources for each of the three Bookbug books to enable children to participate in the stories and to vote for their favourite entries. These are symbolised overlays for communication aids together with vocabulary sheets and hints and tips for teachers.

Joanna Courtney, Specialist Speech and Language Therapist, also created resources for use with the free **Sounding Board** app for iPads. The boards offer an opportunity for communication-disabled children to participate in reading, comment on the books, and also to vote.
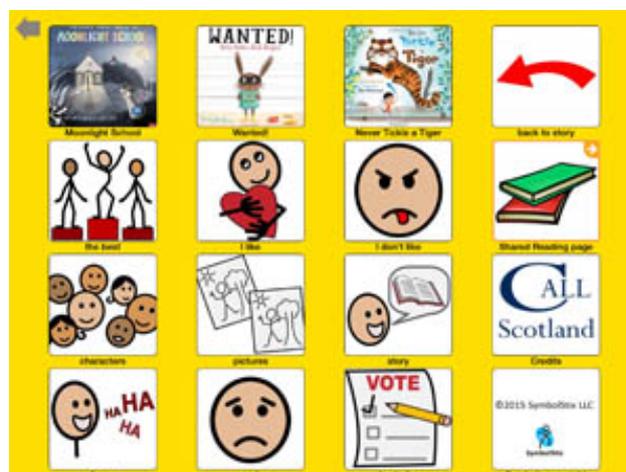
227 books were distributed this year in PDF or Powerpoint format, while a total of 4,479 of the symbolised resources and files were downloaded.

Books for All User Group

The Books for All Scotland database is an important part of CALL's work, and a Books for All User Group was formed in order to provide advice and feedback on the operation of the database. The first meeting of the user group was held on February 4, 2016.

Load2Learn

Load2Learn is a database that was set up by RNIB and Dyslexia Action, with £1.35 million funding from the Department of Education in Westminster, in 2013. CALL provided advice to RNIB and Load2Learn was built using the same Scran database technology as the Books for All Scotland Database. Load2Learn has now been redesigned and relaunched as RNIB Bookshare UK Education Collection. A considerable strength of RNIB Bookshare is that many UK publishers have agreed to provide digital files to the database (as Hodder, TeeJay and BrightRED do for Books for All Scotland Database). RNIB have suggested combining the Books for All Scotland Database with RNIB Bookshare. There are advantages and disadvantages with this proposal and following discussion at the Books for All User group, it was felt it was important to maintain the Books for All Database with its distinctive Scottish curriculum materials and identity for the time being.

Digital Exams and Assessments

Funded by: SQA

Requests for Digital Question Papers

CALL Scotland developed and piloted Digital Question Papers between 2005 and 2007 and following successful evaluation, they were introduced by SQA as a form of Assessment Arrangement in 2008. CALL has continued to work with SQA (funded by SQA) to develop the technology and to provide support and professional learning to schools and learners.

By using Digital Question papers, candidates with visual difficulties can zoom in and enlarge the paper; students with reading difficulties can use a computer reader to read the questions; and learners with handwriting or physical difficulties can type into answer boxes on screen.

The number of requests for Digital Question Papers (DQP) increased by 3.2% from 2014 to 2015, and the number of candidates by 7.5% (Table 4). The number of centres requesting DQPs also increased by 6.8%: 44% of Scottish state and independent schools requested Digital Question Papers in 2015.

Table 4: Digital Question Papers 2008-2015

Digital Papers	2008	2009	2010	2011	2012	2013	2014	2015	% Δ 2014 - 2015
Number of requests	514	1,167	2,000	2,832	3,694	4,291	3,540	**3,566**	**3.2%**
Number of centres making requests	46	73	101	149	173	188	191	**204**	**6.8%**
Number of candidates	204	422	675	1,069	1,327	1,677	1,487	**1,599**	**7.5%**
Mean number of requests per centre	11.17	15.99	19.80	19.01	21.35	22.82	18.53	**18.92**	**2.1%**
Mean number of candidates per centre	4.43	5.78	6.68	7.32	7.67	8.92	7.79	**8.28**	**6.4%**
Mean number of requests per candidate	2.52	2.77	2.96	2.65	2.78	2.56	2.38	**2.28**	**-4.1%**

The phasing out of Standard Grade examinations in 2014 meant that approximately 30% fewer examinations were entered overall, and as a result the number of requests for all types of assessment arrangements, including DQP, fell. The use of DQP increased as a percentage of the total number of requests (Figure 2 and Figure 3).

Figure 2: Number of DQP candidates and requests

Figure 3: DQPs as percentage of AA requests
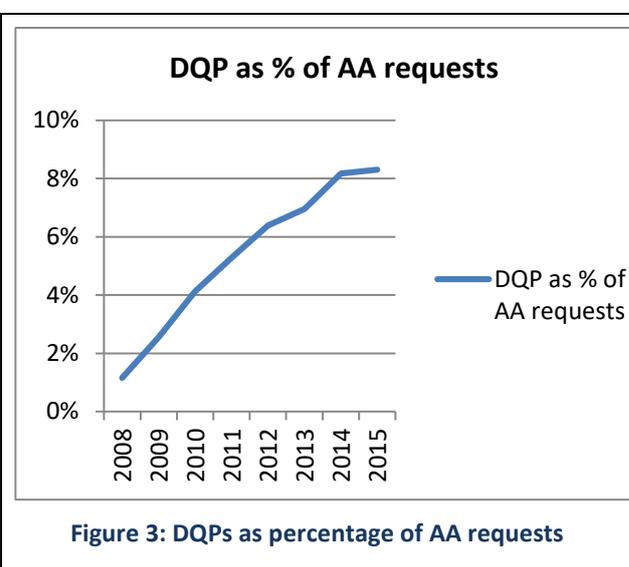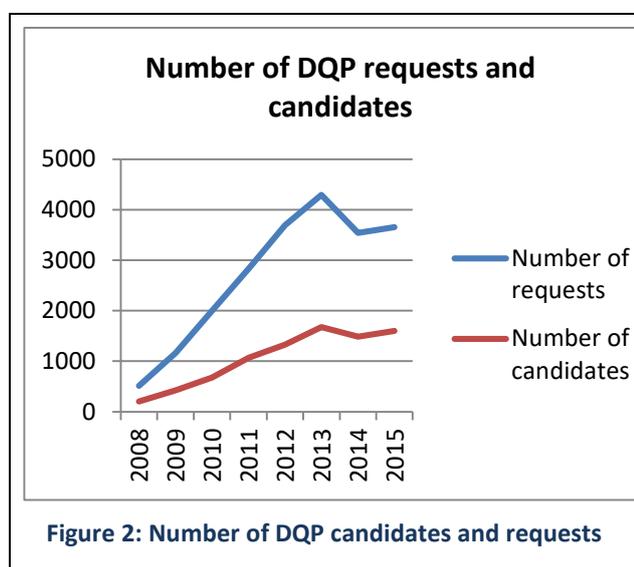
Use of technology compared to other types of support

One of the original reasons for researching Digital Question Papers was to provide a more independent alternative for candidates to read the examination paper than using a human reader, and a more independent alternative for learners to record answers, than using a human scribe.

In 2015 there were 43,997 requests for Assessment Arrangements on behalf of 14,489 candidates,

representing 11.1% of the total number of entries and 6.67% of the total number of candidates.

Figure 4 shows the number of requests for the most popular methods of support for the years 2008 to 2015 (excluding Extra Time, Separate Accommodation and Rest Period on the grounds that these are changes to the conditions rather than methods of support). Requests for ICT (including Digital Question Papers) increased by 10% to 11,383 between 2014 and 2015.

The number of requests for readers and scribes continued to fall in 2015: reader requests dropped to 7,819 from 9,399; while requests for scribes fell to 5,600 from 7,105. This follows the reduction of over 50% from 2013 to 2014.

It is clear that technology is replacing use of human scribes in many schools. There were 7,731 requests for ICT alone and 11,383 when DQPs are included compared to only 5,600 requests for scribes.

With readers, the picture is less clear. We do not know how many candidates used computer readers in examinations because the SQA does not record this information, but previous research suggests that about a third to half of candidates who request DQPs use text-to-speech, which equates to between 1,217 and 1,783 requests – a fraction of the number of requests for a reader (7,819).

In some cases, human readers are the most appropriate assessment arrangement, but comparing data from the SQA on the number of requests for readers, scribes and DQP it is clear that practices vary widely between local authorities and also between individual schools in local authorities. Some schools make numerous requests for human readers and scribes, and none for DQP.

Despite the progress made to date, there is therefore clear scope to further develop use of technology across the country given that less than half Scottish schools requested Digital Question Papers, and that use of readers continues to be the most popular method of support in [too] many schools.
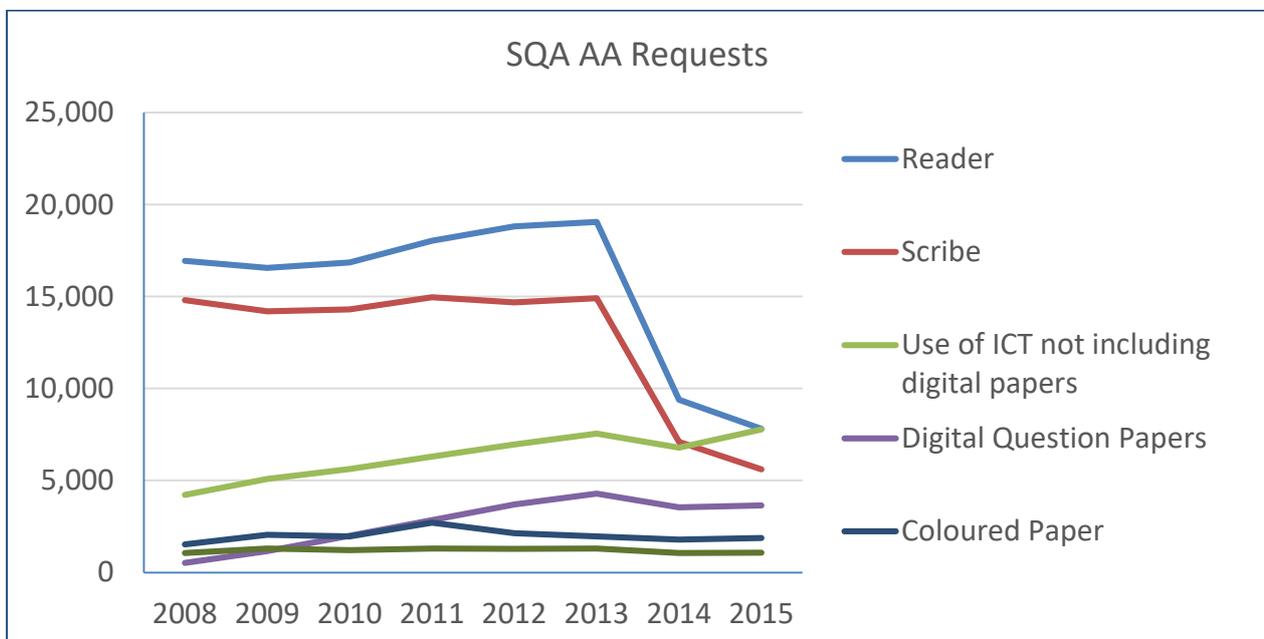
Figure 4: Number of requests for most popular methods of support, 2008-2015

WordTalk text reader

WordTalk is a free text reader for Microsoft Word that was originally conceived and developed by Rod Macaulay of TASSC in Aberdeen in 2005. Rod developed it because he had experienced the huge benefit of text-to-speech software for learners with Additional Support Needs, but at the time, the software available was relatively expensive and he wanted to provide a solution that he could distribute directly to schools and learners.

Scottish Government provided funding support to package it and make it freely available from CALL Scotland's web site. Rod later received a Microsoft Innovative Teacher Award for its development.

Since then WordTalk has been downloaded over 135,000 times by users and educators across the world. Thanks Rod for making this brilliant resource free!

WordTalk is installed as standard on school computers in many (but not all) local authorities in Scotland. The combination of WordTalk plus the free Scottish computer voices gives schools a high quality, low cost solution for accessing curriculum resources in Word format, such as National Literacy Unit assessments.

The WordTalk web site was updated with the new CALL design during the course of the year, and new content added to provide better support to users. The site received 208,088 visits and WordTalk was downloaded 21,472 times this year.

Table 5: Wordtalk visits and downloads

WordTalk	2011-12	2012-13	2013-14	2014-15	2015-16
WordTalk (visits to web site)	92,805	97,068	119,562	130,518	**208,088**
WordTalk (copies downloaded)	24,928	21,504	20,826	19,555	**21,472**

Scottish computer voices for Scottish schools and public sector

Heather and Stuart

Heather and Stuart continue to be downloaded from the Scottish Voice web site (Table 6) and are now in common use across the whole of Scotland. The voices can be used by learners with dyslexia, reading difficulties, learning difficulties, visual impairment and English as an additional language to access curriculum materials, books downloaded from the books for all database, and SQA digital examination papers. Scotland is the only country in the world, as far as we are aware, to make such essential technology freely available to learners, and by doing so, improve access to the curriculum and reduce the cost to the taxpayer. (The licensing scheme arranged by CALL with CereProc has saved over £2 million compared to purchasing computer text reader software with high quality voices for every school in Scotland.)

We know that the voices are installed as standard on all computers in many local authorities but results of the recent accessibility survey undertaken by CALL indicate that some local authorities have not made the voices available and are therefore failing to meet their obligations under
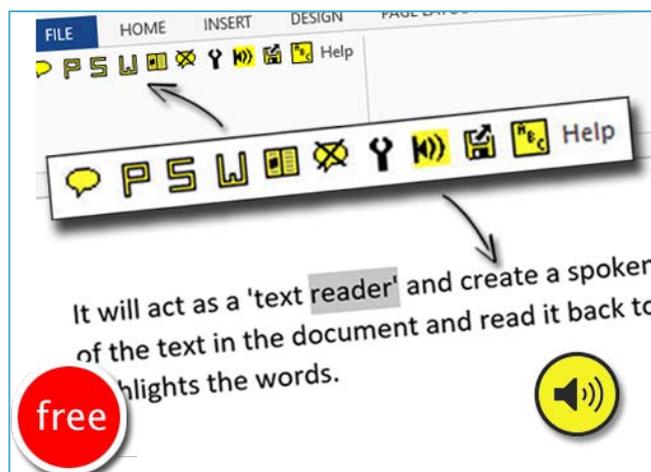
equality and accessibility legislation to make computers accessible and enable access to digital resources. CALL intends to work with local authorities, national agencies, the Scottish government and other partners to raise awareness of these obligations so that all learners in Scotland have access to technology and learning resources in all schools.

Table 6: Scottish Voice visits and downloads

The Scottish Voice	2010-11	2011-12	2012-13	2013-14	2014-15	2015-16
The Scottish Voice (visits)	15,487	16,347	13,317	19,973	23,890	**26,468**
Heather downloads	728	588	949	855	786	**912**
Stuart downloads		947	851	742	679	**644**
Ceitidh downloads (Jan - March 2016)						**288**

Ceitidh – the world's first Scottish Gàidhlig Computer Voice

In February 2015, The Scottish Government Gaelic and Scots Unit; Scottish Funding Council; Scottish Qualifications Authority and Bòrd na Gàidhlig, and committed funds for the development of a Scottish Gàidhlig voice. CereProc, the Edinburgh-based world-class text-to-speech company that created Stuart and Heather, developed the Gàidhlig language model and voice with Michael Bauer of Akerbeltz, and the voice was made available on 30/11/16 and formally launched by Dr Alasdair Allan, Minister for Learning, Science and Scotland's Languages, on 19th January.

The voice has generated considerable interest in Scotland and internationally, and has been warmly welcomed by Gaelic medium education schools:

> "Tha sinn air ar dòigh glan gu bheil Guth Gàidhlig a-nis againn. Às dèidh dha a bhith air a shealltainn do sgoilearan, dh'aithicheadh tu gun robh iadsan cuideachd a' coimhead air adhart ri cothrom a bhith ga chleachdadh." - Catrìona Chaimbeul, Iar-Cheannard, Àrd-sgoil Ghàidhlig Ghlaschu."

(English translation: "We are highly delighted that we now have the Gaelic Voice. Once it had been demonstrated to pupils, you could recognise that they were also looking forward to the opportunity to put it to use." - Catrìona Chaimbeul, Depute Head Teacher, Secondary School.)

> " 'S e deagh ghoireas a th' ann an dà chuid do sgoilearan le feumalachdan a bharrachd is luchd-ionnsachaidh na Gàidhlig." - Coinneach Combe, Tidsear Coimpiutaireachd.

(English translation: "It is a great resource for both pupils with additional support needs and also for learners of Gaelic. " – Coinneach Combe, Computing Teacher.)

Click the button below to here Ceitidh reading the text above

7.wav

Pupil Assessment & Support 3

Funded by: Partnership Agreements with local authorities (primarily)

OBJECTIVES

Multidisciplinary assessment, follow up and support of Individual referred pupils with complex ASN, in mainstream or special settings.

OUTCOMES

- 39 new pupils were referred for assessment and support (37 in 2014-2015).
- 50 pupils received a comprehensive assessment for ICT/AAC (41 in 2014-2015).
- 72 pupils were supported directly in school through assessment or follow up visits (71 in 2014-2015).
- 117 pupils in 17 local authorities were supported directly in school or indirectly through telephone or email advice (140 pupils / 19 local authorities in 2014-2015).
- 135 assessment and/or support sessions were delivered in schools (107 in 2014-2015).
- 17 Partnership Agreements or Service Level Agreements (SLAs) were made with local authorities for 189.7 days of work for 2014-15 (16 Agreements / 196.5 days in 2014-2015). The following local authorities had arrangements with CALL: Argyll & Bute, Clackmannanshire, Dumfries & Galloway, Dundee, East Renfrewshire, Falkirk, Highland, Inverclyde, Moray, North Ayrshire, Orkney, Perth & Kinross, Renfrewshire, Shetland, South Lanarkshire, Stirling and West Dunbartonshire.
- 42% of Assessment and Support staff time was spent in schools; the balance is taken up with support by telephone and email, equipment preparation, development work, report writing, etc. (35%) and travel (23%). These figures are almost identical to those from 2014-2015, with time spent in schools down by 1% and support time based in CALL increasing by 1%.

Table 7: Assessment and Support 2011-16

Number of …	2011-12	2012-13	2013-14	2014-15	2015-16
New referrals	57	49	43	37	**39**
Pupils assessed/supported on site	98	88	85	71	**72**
Assessment/support sessions	94	152	118	107	**135**
SLA/Partnership agreements with local authorities	14	15	15	16	**17**
(Number of days work)	161.5	228.5	191.25	196.5	**182.75**

Benefits of Pupil Assessment and Support

Direct work with learners in schools fulfils several goals that impact not only the individual learner and the team around the child, but also, as a result of CALL's national remit, other learners with complex additional support needs across the country. The service delivers:

- provision of assessment for technology to access the curriculum or for AAC for individual learners across Scotland, who would otherwise not receive input;
- loan of equipment, set up for their individual circumstances – for example, communication aids with personalised vocabularies ;
- a means of identifying needs to inform CALL's Strategic Leadership activities and Research and Development projects;
- an impetus to developing solutions for individual needs that are also of benefit for other learners, and which can be disseminated through Advice and Information, the CALL web sites, via Professional Learning opportunities.

Assessment and Support Procedures and Reporting

We have been using the SETT Framework, developed by Joy Zabala (2005), over the past two years and for some learners and contexts, it provides an efficient, productive and effective approach to reporting and follow up. The framework was shared with ASN Technology specialists at an ICTSLS meeting on 4th November 2015. However, we do not think that SETT suits all situations and so we will continue to develop it during 2016-17.

Evaluation of Impact

We have also been trialling an impact evaluation tool based on the four capacities of Curriculum for Excellence, and it has provided useful feedback in some cases. An example is given below.

Assistive Technology Impact Evaluation

What impact has the device had on the pupil's ability to access the curriculum?

The laptop has been very beneficial, allowing J to easily access a variety of different areas of the curriculum. J is now able to scan any worksheets on to the laptop, which then allows him to work at a much faster pace. He can also access TJ maths through the laptop, which also allows him to work much faster and without the strain of having to use a pencil.

J uses the tablet as a communication device but he also uses a variety of other features on the device, which help him in maths, such as the number section for counting on and back.

How has it impacted on his/her written work (quantity and quality), in comparison with what s/he was able to produce without it?

It has meant that J is able to produce work much faster and is now more likely to finish a task as it is much easier for him to type than it is for him to write with a pencil.

Has it helped him/her to develop the four capacities of Curriculum for Excellence?

- **Successful learner** – Definitely. J is at less of a disadvantage now that he has access to the laptop, scanner and tablet.
- **Confident individual** – J is confident when using the laptop and has shown others how to use its features which proves he is growing in confidence as this is something he may not have done previously.
- **Effective contributor** – J now contributes more easily in class with access to the tablet especially as it allows him to speak without actually talking.
- **Responsible citizen** – He takes responsibility for looking after the equipment, helps to update it and ensures it is used for the purpose intended.

Any further comments….

Having access to these writing tools has greatly improved J's daily life in school as it has allowed him to easily access tasks and has given him the chance to work as fast as others in the class and enjoy the feeling of finishing an activity at the same time as his peers.

Assistive and Communication Technology Assessment across Scotland

Some local authorities in Scotland have specialist ASN and Technology teams, and seventeen authorities have partnerships agreements with CALL, but some local authorities in Scotland have neither their own services, nor a service level agreement with CALL or other similar agency.

In these authorities, it is not clear whether learners' needs for assessment and support for Assistive and/or Communication Technology are being met, but feedback from parents and staff, and colleagues in ICTSLS suggest that provision is lacking.

We do not however believe that the solution to this need is for all learners to be referred to CALL for assessment and support: but rather that the most effective and efficient route is to build capacity in schools and local authorities at three levels that correspond with a) Girfec, b) Stages identified in the revised Supporting Children's Learning Code of Practice[8] and c) levels described in the European Agency for Special Needs and Inclusive Education ICT4I Policy Monitoring Framework[9] (Table 8).

Table 8: Girfec, Code of Practice and ICT4I

Girfec Level	Code of Practice Stage	ICT4I Policy Goal
1 - Universal	1 - Parents/pre-school staff/teachers/health or social services staff, other agencies identify child/young person needing support or planning which can be met within the existing pre-school or school setting.	1 - all learners are able to effectively use ICT in their learning in inclusive settings. 2 - all teachers are able to effectively use ICT to support learning in inclusive settings. 3 - all schools are able to implement and maintain an effective, sustainable ICT4I infrastructure.
2 – Single agency plan	2 - Situation not resolved and need for further action identified. Advice and support sought from specialists outwith the school or centre but from within educational services.	4 - the ICT4I infrastructure at national and/or regional level is able to effectively support the work of all schools and teachers working in inclusive settings.
3 – Multi-agency plan	3 - Situation not resolved and need for further action identified. Advice and support sought from specialists from agencies outwith education.	4 - the ICT4I infrastructure at national and/or regional level is able to effectively support the work of all schools and teachers working in inclusive settings.

There is a need for Professional Learning to build capacity with regard to staff working with Assistive Technology and AAC at three levels:

1. **All staff** working in all schools: universal awareness and understanding on how to use readily available ICT to support learners, including use of standard applications and built-in accessibility tools to support learners with additional support needs.
2. **Support for Learning staff, and practitioners in Special Schools**: more targeted understanding and expertise with application of Assistive and Communication Technology

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[8] Supporting Children's Learning Code Of Practice (Revised edition) p.38, http://www.gov.scot/resource/doc/348208/0116022.pdf
[9] ICT4I POLICY MONITORING FRAMEWORK, https://www.european-agency.org/agency-projects/ict4i

to access the curriculum.
3. **ASN Technology specialists** within the local authority or local authority partnership: staff with a recognised remit and expertise in assessment and support of Assistive and Communication Technology.

The Doran Review, 10 year Strategy, and National Commissioning process offer an opportunity to develop capacity at each of these levels across Scotland and we intend to explore options in 2016-17.

EVALUATION AND FEEDBACK

A sample of comments from staff is given below:

"Provision of communication device for our pupil has enabled him to be involved with his peers. CALL staff were helpful and knowledgeable."

(Head Teacher, Primary School)

"Thank you, Shirley, for your very valuable and informative visit. We will use the action plan to put in place all of the suggestions you made."

(Principal Teacher)

"The teacher in X's room is so impressed she wants to refer 2 others in the same room for high tech or iPad apps that help with Communication"

(Speech and language therapist)

"Thanks so much for coming out to see X and thanks for preparing her report in such a tight timescale"

(Principal Teacher)

"Just to let you know the Grid cards arrived today and the webinars were brilliant - I'm going to give it a go on Monday. Thanks Again!"

(Speech and language therapist)

Specialist Information & Expert Advice

Funded by: Scottish Government Core Grant

OBJECTIVES

- Open access national information and advice service delivered in response to enquiries by telephone, letter, email.
- Publication and circulation of e-News, newsletter, books, information leaflets and the CALL Scotland web sites.
- Provision of a specialist library and web search facility for all enquirers.
- Provision of online Professional Learning resources on AAC (funded primarily by NHS Education Scotland).

OUTCOMES

Information and Advice

- 333 significant enquiries were received and given a response, compared with 268 the previous year.

- 55% of enquirers were from education (48% in 2013-2014), 14% from health/social work (8%), 20% from families and people with disabilities (24%) and 11% were from other sources (20%).

- 15% of enquiries related to Dyslexia / Supporting Reading and Writing; 14% to CALL services; 11% to iPads and apps. Other frequent topics included Books for All work (9%), Advice on Behalf of a Specific Child or Adult (7%) and Software 6%).

Web sites

The main CALL Scotland website was extensively revised over the summer of 2015 and relaunched in September. The site now has a 'cleaner', more modern appearance and it is much easier for people to find the information they require. New information for Autism Spectrum Disorder and Dyslexia has been added to the section on Additional Support Needs. Significant work has also been done 'behind the scenes' on Communication Disability, and Visual Impairment, and also a greatly enhanced resource on Dyslexia, which should all be available later in 2016. There is a new section on Technology, currently with information on Computer Accessibility, Books for All, Digital Exams and Assessments, Eye Gaze, iPads, The Scottish Voice, Speech Recognition, Text-to-Speech and WordTalk. Work is in Progress on Android tablets, Communication Aids and Mounts and Stands.
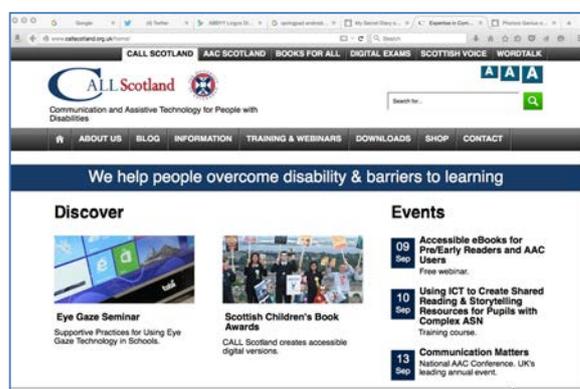
The WordTalk and Scottish Voice web sites were updated during the course of the year. Work is under way on the new site for Adapted Digital Assessments, which should be ready in April or May. It will be easier to find important information on deciding which students may benefit from digital papers, how to request them, how to set them up on PCs and iPads, where to get past papers and other topics.

- Visits to the CALL main site increased by over 25% compared to the previous year, reaching a total of 428,899, while the number of resources downloaded nearly doubled to 286,192 (Table 2; Figure 1).

- The two "App Wheels" continue to be the most popular downloads, illustrating the levels of interest in iPads and apps (Table 3).

Table 9: CALL web site visits and downloads

CALL Scotland Web Sites	2011-12	2012-13	2013-14	2014-15	2015-16
CALL Scotland main site (visits)	113,866	160,649	211,075	338,840	**428,899**
CALL Scotland (resources downloaded)	43,338	54,808	72,460	146,146	**286,192**
WordTalk (visits)	92,805	97,068	119,562	130,518	**208,088**
WordTalk (copies downloaded)	24,928	21,504	20,826	19,555	**21,472**
The Scottish Voice (visits)	16,347	13,317	19,973	23,890	**26,468**
Heather downloads	588	949	855	786	**905**
Stuart downloads	947	851	742	679	**646**
Books for All (visits)	37,893	48,770	70,935	112,318	**90,530**
Books for All (downloads)				28,668	**52,604**
Communication Passports (visits)	25,114	29,397	40,484	53,528	**54,603**
Digital Exams and Assessment (visits)	5,142	7,810	17,435	28,760	**27,279**
ICT & Inclusion (visits)				8,424	**11,407**
AAC Scotland (visits)				15,363	**25,412**
Total visits	**291,167**	**378,515**	**572,750**	**711,641**	872,686

Figure 5: Visits to CALL web sites 2011 - 2016
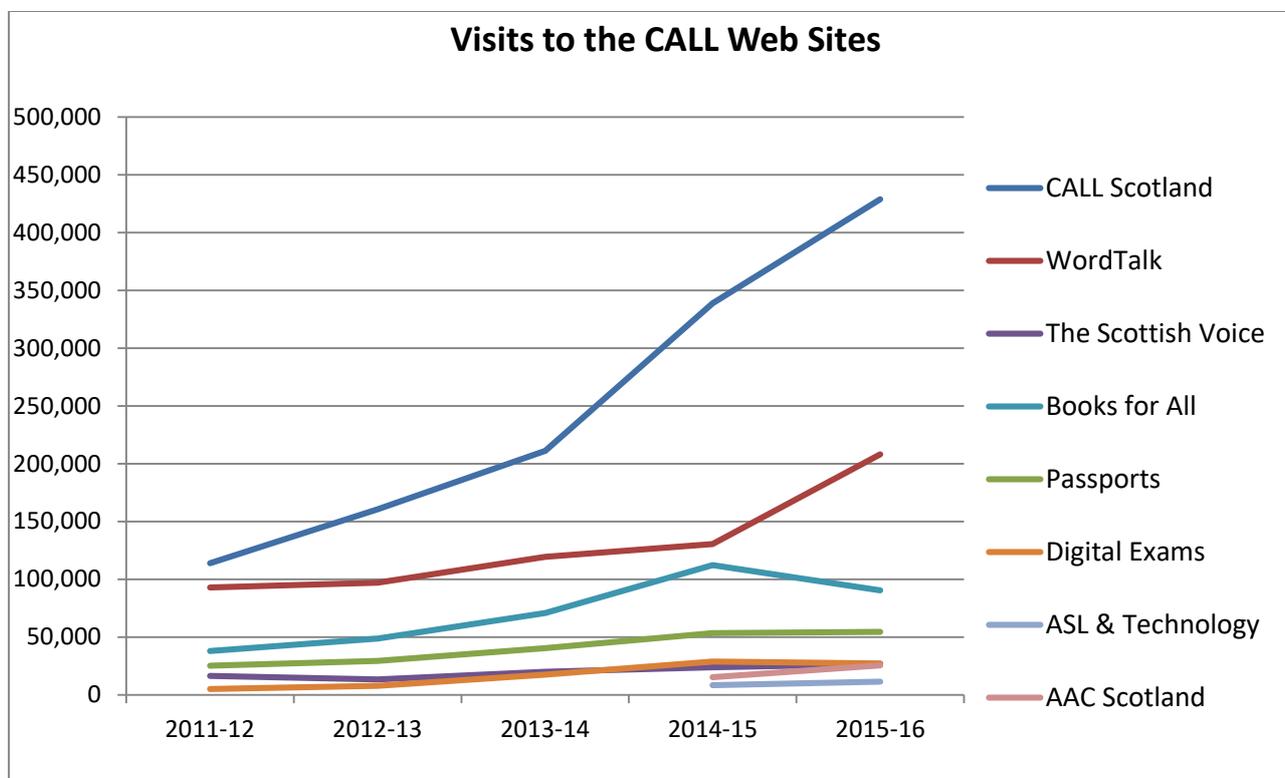
Table 10: The 'Top Ten' most downloaded resources from the CALL web site in 2014-15.

Resource	2012-13	2013-14	2014-15	2015-16
iPad Apps for Learners with Dyslexia/Reading and Writing Difficulties (App Wheel)		11,979	23,780	**29,676**
iPad Apps for Complex Communication Support Needs (App Wheel)			12,573	**9,960**
iPads for Communication Access Literacy and Learning (book)	2,694	3,174	7,831	**4,089**
Supporting Writing Difficulties (Infograph poster)			2605	**2569**
Eye Gaze Software Curve (Infograph poster)				**2257**
Addressing Reading Difficulties				**2062**
Microsoft Word 07: Supporting Reading and Writing Skills				**2060**
The South Lanarkshire Framework for Supporting Pupils with Severe and Profound Learning Needs				**1948**
iPad Apps to Support Creativity (Infograph poster)				**1876**
Android Apps for Learners with Dyslexia / Reading and Writing Difficulties (Infograph poster)				**1803**

Publications

CALL did not publish any new books in 2015-2016, partly because of the time it takes to produce material, but also because technology changes so quickly that information quickly becomes out of date. Instead, in view of the popularity of recent information posters, such as the wheel of iPad Apps for Learners with Dyslexia / Reading and Writing Difficulties and the guide to Supporting Writing Difficulties, the main focus has been on producing additional posters for people to download and use. The infograph posters are proving

particularly popular as they provide key information that people are looking for in a concise, attractive format. They also help to raise the profile of CALL Scotland, both nationally and internationally.
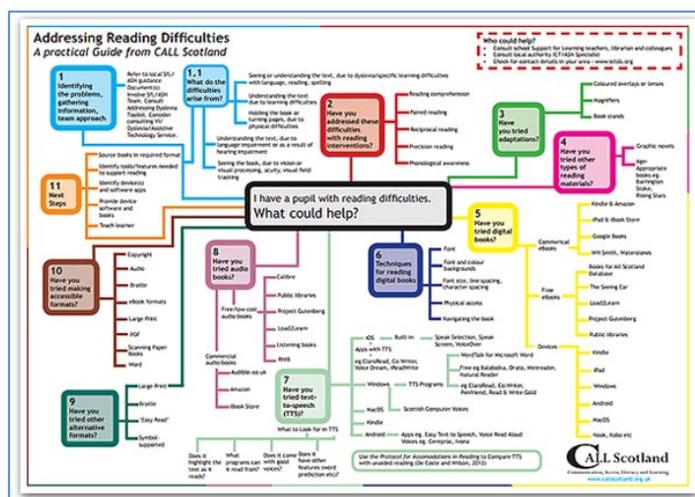
Previous posters have been updated regularly and six new posters were launched during the course of the year:

- Addressing Reading Difficulties (Jun. 2015)
- Eye Gaze Software Curve (Sep. 2015)
- iPad Apps to Support Creativity (Oct. 2015)
- Android Apps for Learners with Dyslexia / Reading and Writing Difficulties (Oct. 2015)
- Using the iPad to Support Dyslexia (Jan. 2016)
- Powerpoint Books for Young Readers (Mar. 2016)

Table 11: Downloads of CALL Scotland Posters

Downloads of CALL Scotland Posters	2015 - 2016	Total to date
Addressing Reading Difficulties	2,062	**2,062**
Android Apps for Learners with Dyslexia	1,803	**1,803**
Eye Gaze Software Curve	2,257	**2,257**
iPad Apps for Complex Communication Support Needs	9,960	**22,583**
iPad Apps for Learners with Dyslexia	29,676	**65,435**
iPad Apps to Support Creativity	1,876	**1,876**
Keep Talking!	1,798	**1,798**
Powerpoint Books for Young Readers	907	**907**
Supporting Writing Difficulties	2,569	**5,174**
Using the iPad to Support Dyslexia	1,621	**2,569**

- 34 publications were sold, with Personal Communication Passports (14) copies) and iPads for Communication, Access, Literacy and Learning (10) accounting for most of the sales. In addition, there were 4,106 free downloads of the iPad book, bringing the total number of downloads since its launch in May 2014 to 11,567.

- The format for the regular CALL Scotland email newsletter was updated in September. Five issues of the new format newsletter and three of the previous version were sent. The email newsletter had 3,176 subscribers by the end of March 2016, 49% of whom are based in Scotland.

- We continue to use social media for dissemination of information, particularly with regard to courses and webinars, but also for providing news of developments in technology and education. CALL makes regular use of blogging (59 blogs in 2015-16) and Twitter (519 tweets, 1,275 followers, 225,000 'impressions', i.e. views of individual tweets).

Library

- 51 items were added to the library during the course of the year. Some of these were donated by Sally Millar on her retirement. We are grateful for Sally's generosity.

- 12 journals are currently received.

Consultation Sessions

It has always been possible to visit CALL to try software, explore resources and to have informal discussions with the Information Officer, or another member of staff. We have formalised this process by offering Consultation Sessions, generally lasting up to an hour in which to explore a resource, or discuss a topic in depth. Such sessions are particularly useful for people with writing difficulties who want to try speech recognition as the software is expensive, but the only way to find out about whether someone can use it successfully is by trying it. Twelve Consultation Sessions were provided in the period from August until March, with various topics, including:

- Successful trial of speech recognition software for pupil with cerebral palsy who has good speech, but slow keyboarding, enabling her to produce work more quickly.
- Discussion and demonstrations with student doing dissertation on changing use of technology to support pupils with learning difficulties.
- Exploration of mouse alternatives for an adult with multiple sclerosis, leading to loan of two trackballs and a joystick.

Feedback

"Thank you so much for your time last Monday, I really appreciated it. It was a very helpful session and has opened my eyes to what is available from Google in addition to some excellent downloadable software for PDFs, voices etc. I will share all this with his teachers at school and get it downloaded on his tablet as soon as possible. I read the CALL newsletters with interest and am very impressed with the resources and expertise you have."

(Mother, P7 boy with dyslexia, following consultation session.)

"App wheels by @CALLScotland are terrific both for content & because they keep updating. Great resource!"

(Carole Zangari @PrAACticalAAC, AAC specialist via Twitter.)

Thanks so much for taking the time to provide me with this information - it was a very helpful discussion and I think the next step is for me to share some of these resources with C and continue to work with the school. Thanks for the offer of a visit to see you for a 'guided tour' of what's on offer - will let you know if we feel this would be useful. I was so pleased to get a response to my tweet with an offer to get in touch - much appreciated at a time when as a family we have been feeling very frustrated and despondent.

(Parent of S1 pupil with dyslexia.)

Career-Long Professional Learning (CLPL)

5

Funded by: (a) Scottish Government Core Grants (PL development)

(b) Charges to course participants (PL delivery)

OBJECTIVES

1. Identification of CLPL requirements in (complex) additional support needs, ICT & AAC for staff in both special and mainstream settings.

2. **Development and delivery of CLPL.**

OUTCOMES

CALL based Career-Long Professional Learning

Scottish education recognises the importance of high quality career-long professional learning (CLPL) for all teachers. In recognition of this CALL Scotland is working to inform and support the teaching profession. CLPL builds on the current strengths of Continuing Professional Development (CPD).

CALL's 2015-16 CLPL brochure was distributed to around 3,000 schools, organisations and individuals in May 2015. Throughout the year there was further promotion of courses via direct emails to schools via local authority intranets, Twitter, CALL blog posts and e-newsletters. Participants signed up by email or through the booking system on the CALL website.

146 people attended the 13 full day paid courses held in CALL during the year: an additional 57 attended the free Eye Gaze information morning.

We have undertaken research into why numbers are low for participation on day courses. We know there is the need for the training and that the course content is relevant, practical and professionally delivered. Reduced local authority budgets have meant fewer teachers being funded to attend courses and there is limited - and sometimes no - available supply class cover.

Table 12: CLPL Courses delivered in CALL

Course Title	Date	Number attended
ICT for Autism Spectrum Disorder	8.5.15	14
Dyslexia and the Use of iPads	14.5.15	13
Using Digital Exams and Assessments	3.9.15	18
Using ICT to Create Shared Resources for Pupils with Complex ASN	10.9.15	8
Eye Gaze in Education Seminar	30.9.15	57
Speech Recognition and Dictation on Windows and iPad	1.10.15	6
How to Make Digital Exams and Assessments	8.10.15	12
iPads - Accessibility Features & Use in Class	29.10.15	6
Using Eye Gaze to Support Learning and Communication	5.11.15	12
Using Picture Apps for Early Level Communication	12.11.15	9
How to Make Digital Exams and Assessments	16.11.15	5
iPads for Learners with Dyslexia & Literacy Difficulties	14.1.16	17
ICT & iPads for Learners with ASD	28.1.16	13
Dyscalculia - Can ICT Help?	10.3.16	13

ICT and Inclusion, 2015

The annual ICT and Inclusion conferences organised by CALL were held in Edinburgh and Clydebank, and attracted 215 delegates and 20 suppliers. There were presentations from manufacturers and suppliers and from expert practitioners on a diverse range of topics such as

"Using Technology to Improve Literacy Skills and Raise Attainment", "iPads & Maths" and "Live Remote Captioning (LRC) – lecture support for deaf and hearing impaired students".

INSET Professional Learning

The model of providing on-site Professional Learning is proving to be economically viable for schools and local authorities and promotes collaborative, collegiate learning opportunities with greater chance of embedding good practice because more than one person from a school has undertaken the training. Courses are bespoke in design and participants are able to have hands on practice with the assistive hardware and software under the expert tutelage of CALL staff.

During 2015-16 CALL staff provided 30 sessions of Professional Learning for 507 people (teaching staff, Support for Learning staff, classroom assistants, education psychologists, Speech and Language Therapists, parents/carers) across Scotland and in Galway, Ireland.

Table 13: INSET Courses provided in schools and local authorities

INSET topic / title	Date	Venue / Authority	Number attended
iPad Training	20.4.15	Perth & Kinross	14
OneNote	22.4.15	Wallace Hall, Dumfries & Galloway	20
iPad training	5.5.15	Redburn, North Lanarkshire	5
iPad Follow-up	26.5.15	Redburn, North Lanarkshire	5
SQA Digital Question Papers and Assessments	28.5.15	Highland	14
Dyslexia Apps	28.5.15	Bathgate	12
Digital Question Papers	29.5.15	Highland	14
VI & SQA	19.6.15	West Calder HS	6
Aberdeen Inclusion Event	23.6.15	Aberdeen	30
Aberdeen Inclusion Event	24.6.15	Aberdeen	30
Digital Question Papers	15.9.15	Aberdeenshire	24
Digital Question Papers	16.9.15	Aberdeenshire	24
Boardmaker 6	24.9.15	Glasgow	24
Communication Passports	2.10.15	West Lothian	12
Speech Recognition	13.11.15	Borders	60
ICT to support pupils with dyslexia	19.11.15	Renfrewshire	10

INSET topic / title	Date	Venue / Authority	Number attended
Boardmaker 6 Plus!	24.11.15	Glasgow	20
ICT to Support pupils with dyslexia	25.11.15	Renfrewshire	12
GoTalk Now App Training	13.1.16	North Lanarkshire	5
Forward Vision Dynavox training	21.1.16	CALL Scotland	6
Using DQPs	25.1.16	Moray	8
Using DQPs	26.1.16	Moray	9
Assistive Technology Training	2.2.16	Galway	24
Assistive Technology Training	3.2.16	Galway	24
Clicker 6 training	10.2.16	Perth and Kinross	9
Clicker 6 training	17.2.16	Dumfries and Galloway	25
Using iPads for early literacy	18.2.16	Dumfries and Galloway	21
AAC awareness training	24.2.16	Croftcroign School, Glasgow	22
Boardmaker Studio	23.3.16	North Lanark	10
Clicker 6 training	23.3.16	Dumfries and Galloway	8

CALL Webinars

CALL understands that modes of professional learning delivery must be wide and varied. Webinars are convenient live 20 minute presentations delivered to your computer, tablet or phone over the web. Viewers can listen to the presenter via audio and engage in discussion via instant messaging.

CALL hosted 22 webinars during the course of the year; 16 presented by CALL staff and 6 by suppliers.

The total number of people who signed up for the 22 webinars was 426. The actual number of people watching was lower but one person logging in could then be broadcasting the webinar to a whole department of staff. Alternatively someone who signed up but did not attend on the day could access the webinar via the archived webinar. An archive version of a webinar is generally made available via the CALL web site one day after the live broadcast. This is publicised via Twitter and Facebook and can be viewed by any interested person, not just those who signed up for the original webinar. We are not able to access figures for downloads of webinars recorded prior to 11th November, but the information we do have shows that far more people view the archived version of the webinar, than the original, 'live' broadcast. On average, 157 people viewed each archived webinar, compared with 20 signing up for the live broadcast.

Table 14: CALL Webinars 2015-16

Webinar title	Date	Number signing up	Archive Views
2Build A Profile	22.4.15	6	n/a
Animate IT	6.5.15	5	n/a
OneNote	20.5.15	19	n/a
Basic Maths Apps	27.5.15	12	n/a
Oxford Reading Tree Books	3.6.15	6	n/a
Google Chrome Apps	2.9.15	10	n/a
Bookbug Resources	9.9.15	10	n/a
What's new in iOS9	28.10.15	23	n/a
Addressing Dyslexia Toolkit	3.11.15	50	n/a
Clicker Communicator	11.11.15	21	214
Matrix Maker	18.11.15	12	193
Using Read & Write Gold Edition to Support Literacy	2.12.15	29	162
Personal Communication Passports	9.12.15	32	166
10 Top Tips to Support Literacy	13.1.16	39	219
Digital Exams Part 1	20.1.16	13	189
Making Maths Accessible on the iPad	27.1.16	25	164
Top 5 Apps for Early Level Communication & the Curriculum	10.2.16	13	171
Books for All – How to Find, Use & Access Accessible Books	24.2.16	21	122
Exploring the Eye Gaze Software Curve	2.3.16	10	131
Penfriend and the Gaelic Voice	9.3.16	5	95
Using Read&Write to Support Literacy	16.3.16	41	131
Digital Exams Part 2	23.3.16	14	81

Presentations and Talks

Members of staff from CALL are invited to give informal presentations and talks at various events during the course of the year. These include talks for schools, special interest groups, parents' groups, etc.

Table 15: CALL presentations and talks

Title	Date	Event	Numbers
Talking in Exams	3.6.15	Dunblane High School	6
Talking in Exams	15.6.15	Mearns Castle	16
Talking in Exams	17.6.15	Edinburgh	16
ICT to Support Dyslexia	8.9.15	Invited presentation, Dyslexia Scotland	50

Title	Date	Event	Numbers
		Angus	
ICT to Support Dyslexia	9.9.15	Invited presentation, Dyslexia Scotland Roadshow, Stirling	60
ICT to Support Dyslexia	10.9.15	Invited presentation, Dyslexia Scotland Roadshow, Kilmarnock	25
Using iPads to Support Learners with Additional Support Needs	20.1.16	Access Centre, Edinburgh College	30
Using Technology to Support Pupils with ASN	22.1.16	PGDE ASN Day, Moray House	120
ICT to Support Dyslexia	10.2.16	Dyslexia Scotland South East, Edinburgh	45
Using Technology to Support Pupils with ASN	5.3.16	Scottish Guidance Association, Dunfermline	40
ICT to Support Dyslexia	31.3.16	Dyslexia Scotland, Glasgow	25

Exhibitions

CALL regularly takes an exhibition stand at conferences, study days and other events, giving people an opportunity to find out more about the work of the centre.

Table 16: Events where CALL has exhibited

Event	Date	Venue	Numbers
ICT & Inclusion	10.6.15	Edinburgh	111
ICT & Inclusion	11.6.15	Clydebank	104
Dyslexia Scotland roadshow	9.9.15	Stirling	120
Dyslexia Scotland roadshow	10.9.15	Kilmarnock	80
Leadership in Special Schools Conference, Education Scotland	10.9.15	Glasgow	120
Communication Matters conference	13.9.15 - 15.9.15	Leeds	400
Bobath Scotland conference	7.10.15	Glasgow	120
Dyslexia Scotland South East open evening	9.3.16	Edinburgh	20
Dyslexia Scotland Education Conference	24.10.15	Dundee	200
Scottish Council of Independent Schools Support for Learning Conference	10.11.15	Edinburgh	75
Augmentative Communication in Practice: Scotland conference	11.11.15	Glasgow	120
National Parent Forum Scotland conference	14.11.15	Glasgow	170
Dyslexia Scotland South East open evening	9.3.16	Penicuik	30
Scottish Book Trust Bookbug Conference	17.3.16	Glasgow	200

Post-graduate teaching

Paul and Shirley delivered teaching sessions to Moray House Postgraduate Primary students on 22.1.16. The workshops were based around Technology to create accessible, inclusive curriculum resources; Using Technology to support children with communication / physical impairments and Technology to support learners with Additional Support Needs. Each workshop was run 3 times so a total of 120 students took part.


Online AAC modules

Sally led the creation of five short online learning modules for people who would like to learn more about augmentative and alternative communication. 1,475 people accessed Module 1 of these resources via the AAC Scotland website in 2015-16. Further modules will be appearing in the coming year and will be another asset for CALL's Professional Learning portfolio.

Table 17: Summary of CLPL events 2011-16

Summary of CLPL Events	2011-12	2012-13	2013-14	2014-15	2015-16
PL delivered in CALL					
Number of courses	14	16	15	14	**13**
Number of participants	240	219	157	209	**146**
Number of supplier information days	4	2	4	1	-
PL delivered in schools/authorities					
Number of courses	43	38	36	28	**30**
Number of participants	550	635	593	647	**507**
Presentations at conferences	13	13	11	15	**18**
Numbers attending presentations	Not recorded				**865**
Exhibitions	13	13	16	10	**14**
Talks for parent/voluntary groups	5	7	7	5	**7**
ICT and Inclusion participants	235	205	202	313	**215**
ACiP:S participants	20	75	20	-	**120**

Figure 6: Participants on CALL CPD and CLPL events 2010-2016
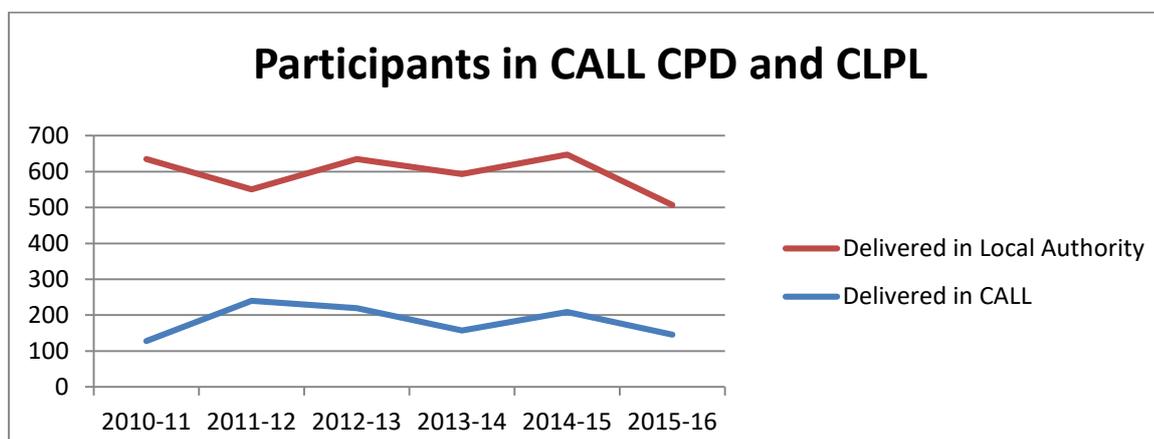
Evaluation and Feedback

Courses at CALL or in schools are routinely evaluated through a CALL or local authority evaluation form or via online Survey Monkey. 96% of the people attending a course at CALL were 'very satisfied' and 4% were 'satisfied'.

Table 18: Satisfaction with CALL CPD and CLPL

CALL CPD and CLPL Satisfaction (%)	2011-12	2012-13	2013-14	2014-15	2015-16
Very satisfied	79	85	91	85	96
Satisfied	21	15	8	14	4
Not Satisfied	-	-	1	1	-

Sample comments:

'The course on Thursday was very good and the speakers excellent. I think the main thing I got from the course is an awareness of the incredible potential of iDevices for pupils with a VI'

(Teacher on the iPad course - Accessibility Features & Use in Class)

'I thought this session was brilliant! Very useful and a great example of how the software works. I was really impressed by it. It gave me lots of ideas to take forward, that pupils in our school would benefit from given the chance.'

(Teacher on Speech recognition software training**)**

'....a note to let the team know how much I enjoyed today's CPD-some great resources and have taken away the fear of dipping in and using the ICT out there.'

(Classroom assistant on Using ICT to Create Shared Resources for Pupils with Complex ASN course)

Next steps

We continue to reflect on our approach to Professional Learning and our strategic role in ensuring all local authorities are meeting their legal duties in terms of supporting children and young people with additional support needs with appropriate assistive technology and AAC.

There is an identified need and a current lack of appropriate provision in Scotland for comprehensive assistive technology professional learning for teachers supporting children and young people with additional support needs, physical disabilities, sensory and communication impairment.

As the National Service for Assistive Technology, CALL Scotland are developing a programme of professional learning which aims to be GTCS accredited and endorsed by SCEL (Scottish College for Educational Leadership). We envisage running this programme as a prototype enabling the first cohort of participants to assist in shaping a programme of study which will equip teachers with the knowledge, skills and expertise to use assistive technology and AAC for improved attainment, engagement and participation of pupils with ASN, including those with complex ASN.

Assistive Technology Loans & Support

Funded by: (a) Scottish Government Core Grants (Assistive Technology Loans and Support service)
(b) other income (estimate £20,000) for purchase of new equipment for Loan Bank, in 2011-2012

OBJECTIVES

1. Provision of a Scottish National Loan Bank of Assistive Technology.

OUTCOMES

- 129 pieces of equipment and software products, with a value of £11,650, were added to the Loan Bank last year. This compares with £19,837 spent on equipment in 2014-2015. Items purchased included two new iPad Air devices (right) for loan to clients.

- 101 of these items, costing £8,570, were purchased through funding from the Scottish Government. The remaining items were provided free by suppliers for evaluation purposes or purchased through other funding sources.

- The Loan Bank provides borrowers with an opportunity to try equipment before purchase. 213 new equipment loans, with a total value of £41,000, were issued to clients in 24 local authorities.

- The number of items loaned increased by 43% compared with 2014-2015, though the value of loans only increased by 25%. This may seem a spectacular increase, but it merely returns to a level comparable with previous years. It is most likely that 2014-2015 was the anomalous year. There was a significant increase in the number of communication aids loaned, but these were mostly of relatively low tech devices such as the Go Talk and Step by Step Communicator. There was only one loan of an expensive high-tech communication aid and one involving an eye-gaze system, compared with two of each in 2014-2015. The trend towards loans of iPads and other tablets has continued. These often require complicated mounting solutions for attaching to wheelchairs, desks, etc., which accounts for more loans in the Interface / Mount / Switch category.

Table 19: Categories of Equipment Loaned

Type of Equipment	2000-01	2005-06	2010-11	2014-15	2015-16
Communication Aid	3	48	25	8	21
Computer	6	13	7	14	7
Computer Accessory	5	8	2	7	10
Keyboard / Alternative	10	13	7	15	10
Mouse / Alternative	9	15	15	32	29
Interface / Mount / Switch	42	51	45	25	69
Tablet	-	-	5	10	19
Tablet Accessory	-	-	1	18	35
Other	5	38	19	12	13

- The number of loans provided to assessment clients increased from 61 in 2014-2015 (41% of all loans) to 136 in 2015-2016 (64%). This may reflect the increasing complexity of needs of the clients we are working with, requiring more equipment to support their access to the curriculum.

- Loans and technical support of equipment continue to provide a significant 'best value' service, representing a substantial saving to schools and local authorities by ensuring that they buy only suitable and successfully trialled equipment and reducing the likelihood of them from making inappropriate purchases.

- 84 instances of technical support were recorded (e.g. configuring communication software, sorting iPad problems, developing symbol resources, etc.). This compares with 125

instances last year, possibly suggesting that people are finding the help they need from our web site, or other sources.

Table 20: Loans of equipment

Summary of Loans	2011-12	2012-13	2013-14	2014-15	2015-16
No. of loans	222	231	225	150	**213**
Value of loans	£97,000	£87,500	£71,000	£32,800	**£41,000**
No. of Loans to Assessment Clients	115	130	114	61	**136**
No. of items added to loan bank	375	207	163	139	**129**
Value of items added to loan bank	£100,149	£44,447	£13,396	£19,837	**£11.650**
No. of instances of technical support	174	170	160	115	**84**

EVALUATION AND FEEDBACK

Borrowers are asked to complete a feedback form when returning equipment. There was feedback on the outcome of a loan for 50 of the 140 loans returned in 2015-16 (36%). Of these, 66% indicated that the 'Equipment met the client's need'; 14% 'did not meet the client's need' and 20% were 'inconclusive'.

35 feedback forms gave an indication of intended future action. Of these, 43% stated that they would try to buy the system that had been borrowed, while 23% planned to borrow something else and 20% wanted to seek further advice.

Overall, 86% of borrowers who provided feedback were 'very satisfied' with the CALL Loan Service and 11% were 'satisfied'.

"Many thanks, CALL, for the use of this iPad. It has been a tremendous tool for teaching & learning."

(Teacher on loan of iPad.)

"This has been a great success; J has more control over positioning the cursor onscreen. A replacement has been purchased and is now being used."

(Teacher on loan of n-Abler joystick.)

"Very useful to be able to try out a number of different devices to find out which one worked best. This allowed B to try out what worked best at home/school and for ease of transportation. She liked being able to select what worked best for her, and to try equipment over a sensible period of time. Appreciated not having to make a decision too quickly."

(Teacher on loan of different laptop stands.)

"Pen was easy to use, quite discrete. Arrived promptly. Good length of time to get used to. Overall, service and use great."

(Teacher on loan of Text Reader pen.)

Knowledge Transfer, Research & Development

7

Funded by: Scottish Government Core Grants and other funders (see individual projects below)

OBJECTIVES

1. Identification of needs and development of research project proposals.

2. Dissemination and knowledge transfer of products and outcomes of project with stakeholders in Scottish education.

OUTCOMES

Projects

- Books for All and Books for All Scotland Database http://www.booksforallscotland.org.uk/
- SQA Digital Question Papers and Assessments http://www.adapteddigitalexams.org.uk/
- Development and distribution of Scottish Gaelic Computer voice (delivered November 2015, http://www.thescottishvoice.org.uk/)
- AAC Scotland web site and online AAC in Education learning modules, http://www.aacscotland.org.uk/Home/

Conference and Study Day Presentations

Aitken, S. (2015) **Where to Find and how to use Free Digital Textbooks**. ICT & Inclusion Edinburgh10 June 2015.

Courtney, J. & Mill, C. (2015) **Accessible Digital Books for Pre- and Early Readers.** ICT & Inclusion Edinburgh & Clydebank, 10 & 11 June 2015.

Courtney, J. & McNeill, G. (2015) **Introducing AAC in the Early Years Setting**. Augmentative Communication in Practice: Scotland, Glasgow, 11th November 2015.

McNeill, G. (2015) **Using the 'AAC in Education' Online Learning Course**. ICT & Inclusion Edinburgh & Clydebank, 10 & 11 June 2015.

Mill, C. (2015) **Google Chrome to Support Reading and Writing**. ICT & Inclusion Edinburgh & Clydebank, 10 & 11 June 2015.

Mill, C & Nisbet P. (2015) **Navigating through Addressing Literacy Difficulties**. ICT & Inclusion Edinburgh & Clydebank, 10 & 11 June 2015.

Craig, M. (2016) **Using Technology to Support Pupils with ASN**. Scottish Guidance Teachers conference, Dunfermline, 5 March 2016.

Lawson, Shirley (2016) **Maths apps and software for children with Specific Language Impairment.** Specific Language Impairment in Scotland Special Interest Group, 13 May 2016, Edinburgh

Millar, S. (2015) **AAC in Education - a new Online Module**. Communication Matters UK Conference, Leeds, 15 September 2015.

Millar, S (2015) **Implementing AAC in the School Environment**. Augmentative Communication in Practice: Scotland, Glasgow, 11th November 2015.

O'Neill, S. (2015) **iPads & Accessibility.** South Lanarkshire ASN Conference. 7 May 2015.

O'Neill, S. (2015**) iPads and Maths.** ICT & Inclusion Edinburgh & Clydebank, 10 & 11 June 2015.

Nisbet, P. (2015) **Tablets for helping pupils with ASN**. Learning Through Technology 2015 Conference, Glasgow, 12 May 2015.

Nisbet P. (2015) **Talking to your Computer: Speech Recognition in Practice**. ICT & Inclusion Edinburgh & Clydebank, 10 & 11 June 2015.

Nisbet, P. (2015) Reliant on Readers, Stuck with Scribes or Independent with ICT? Can technology replace human support in examinations? 9th European e-Accessibility Forum, Cité des sciences et de l'industrie - Universcience – Paris. 8 June 2015.

Nisbet, P. (2015) **Innovative technologies to support learning and teaching for complex learners**. Curriculum for Excellence Leadership in Special Schools Conference. Glasgow. 10 September 2015.

Nisbet, P. (2015) **Attainment for All: raising attainment for learners with Additional Support**

Needs by using technology. National Parent Forum Scotland Conference, Glasgow, 14 November 2015.

Nisbet, P. (2015) **ICT and Support for Learning in the context of changes in curriculum.** Education Scotland Support for Learning Conversation, Edinburgh, 4th December 2015.

Lawson, Shirley (2016) **CALL Scotland: Using Technology to Support Pupils with ASN**. Association of Support for Learning Officers in Scotland Conference, 4 March 2016. Stirling.

Nisbet, P. (2016) **Reliant on Readers, Stuck with Scribes or Independent with IT? Technology use in exams.** BDA International Conference, Oxford, 11 March 2016.

Books for All: provision of learning materials in accessible formats for pupils with additional support needs

Funded by: Scottish Government Core Grant

OBJECTIVES

- Collaboration with publishers, local authorities and other agencies to source and provide books in accessible formats.
- Enhanced mechanisms for sourcing, adapting and delivering accessible materials.

OUTCOMES

The section on Books for All on page 18 provides information and data on the delivery of the Books for All programme and on use of the Books for All Scotland Database. Here we summarise the development that has taken place in 2015-16.

Books for All Scotland Database

A Books for All User Group was formed in order to provide advice and feedback on the operation of the database. The first meeting of the user group was held on February 4, 2016.

RNIB, who run the Load2Learn database (similar to Books for All Scotland Database but with mainly English Curriculum resources) have suggested combining the Books for All Scotland Database with RNIB Bookshare. There are advantages and disadvantages with this proposal and following discussion at the books for all user group, it was felt it was important to maintain the Books for All Database with its distinctive Scottish curriculum materials and identity for the time being.

Books for All Scotland Database Content

- New Hodder Gibson textbooks for National Units have been added and there are now 293 Hodder Gibson textbooks on the database.
- The new TeeJay Maths Curriculum for Excellence books were made available on the Database. The TeeJay 1a and 1b books have been adapted with 'answer boxes' which are particularly helpful for learners with more complex physical or visual difficulties.
- BrightRED, a popular Scottish secondary school textbook publisher, agreed to provide files to distribute via the database.
- 652 books, mainly in Large Print, were created from about 15,000 individual files provided by VTSS in Edinburgh and Lothians.
- We again created accessible versions of the nine shortlisted titles for the Scottish Children's Book Awards, together with symbolised resources for each of the three Bookbug books to enable children to participate in the stories and to vote for their favourite entries. These have been very popular with teachers.
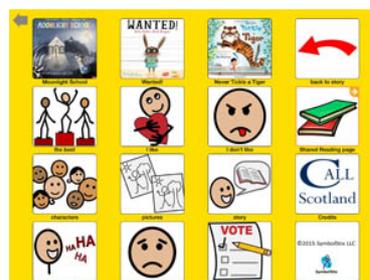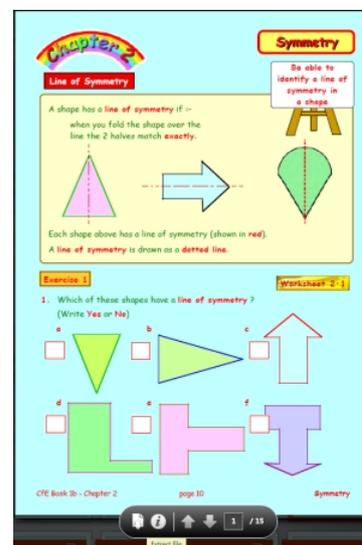
SQA Digital Question Papers and Assessments

Funded by: Scottish Qualifications Authority

OBJECTIVES
- Partnership working with SQA to continue to develop digital papers and assessments.
- Research into speech recognition in examinations and assessments.

OUTCOMES

Uptake and use of SQA Digital Question Papers and Assessments is discussed in *Digital Exams and Assessments* on p23; new research and development in 2015-16 is given here.
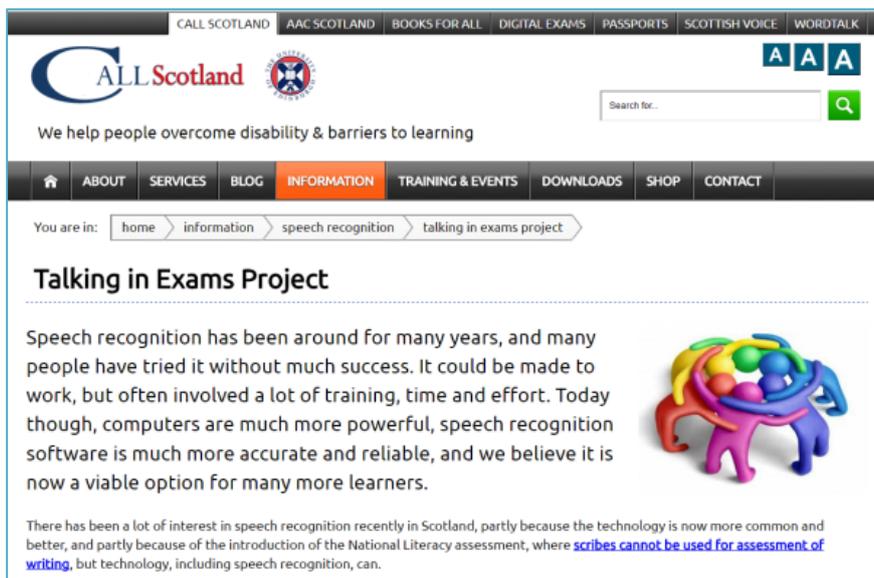
Talking in Exams Project

Speech recognition software has been available for many years, and many schools and learners have tried the use it without much success. It could be made to work, but often involved a lot of training, time and effort. Today though, computers are much more powerful, speech recognition software is much more accurate and reliable, and we believe it is now a viable option for many more learners. CALL ran a very successful seminar on Speech Recognition in January 2015 where participants heard from staff in three schools who had experienced considerable success with the technology.

It was clear that the new speech recognition systems had potential, and the introduction of National Literacy Units, where scribes cannot be used for assessment of writing, but technology, including speech recognition, can, gave additional impetus.

SQA provided funding to CALL to research and stimulate the application of speech recognition, and the Talking in Exams project was conceived, which aimed to:

- Create guidance materials for getting started with speech recognition.
- Build a community of practice where we can share what works and what doesn't.
- Provide Dragon licences to schools.
- Support schools to trial speech recognition software
- Gather and publish case studies / reports.

CALL staff researched speech recognition software and apps and created a dedicated Speech Recognition section on the main CALL web site.

In June 2015, staff from 28 schools or centres participated in three professional workshops across Scotland, and were provided with Dragon NaturallySpeaking software and a high quality headset.

CALL supported staff throughout the 2015-16 academic session and the results of the project were highlighted at a seminar on 2nd June 2016 where staff and students demonstrated and talked about their experiences. This is available to view in CALL's Archived Webinars. Several students gave very impressive contributions and insights, and confirmed that the new Dragon NaturallySpeaking software can provide a very effective means of writing and recording for students with literacy difficulties.

A report on the project will be published in the summer of 2016.

Scottish Gaelic Computer voice

Funded by: Scottish Government, Scottish Funding Council, SQA, Bòrd na Gàidhlig.

OBJECTIVES
- Development of a Scottish Gaelic computer voice free to Scottish public sector.
- Distribution via CALL's Scottish Voice web site.

OUTCOMES

In February 2015, The Scottish Government Gaelic and Scots Unit; Scottish Funding Council; Scottish Qualifications Authority and Bòrd na Gàidhlig, and committed funds to CALL Scotland for the development of a Scottish Gàidhlig voice. CereProc, the Edinburgh-based world-class text-to-speech company that created Stuart and Heather, developed the Gàidhlig language model and voice with Michael Bauer of Akerbeltz, and the voice was made available from CALL's Scottish Voice web site on 30/11/16 and formally launched by Dr Alasdair Allan, Minister for Learning, Science and Scotland's Languages, on 19th January.

Online Professional Learning resources on AAC

Funded by: NHS Education Scotland (primarily)

OBJECTIVES

- Development of free online professional learning resource for teachers and practitioners.

OUTCOMES

Following the successful launch of the suite of AAC online learning modules and the Introduction to AAC course in 2014 on CALL's AAC Scotland website (www.aacscotland.org.uk), further funding was secured from NES to develop additional materials, using the same format, on the topic of *AAC in Education*. The preparation and write up for the new course began early in 2015 and is being written by Sally, with contributions from AAC colleagues from KeyComm, FAACT and David Fletcher (Stirling Local Authority). It will contain a comprehensive resource for staff to extend their knowledge and skills in supporting pupils in using AAC within schools. The expected completion date is autumn 2016.

The course will be in 7 sections:
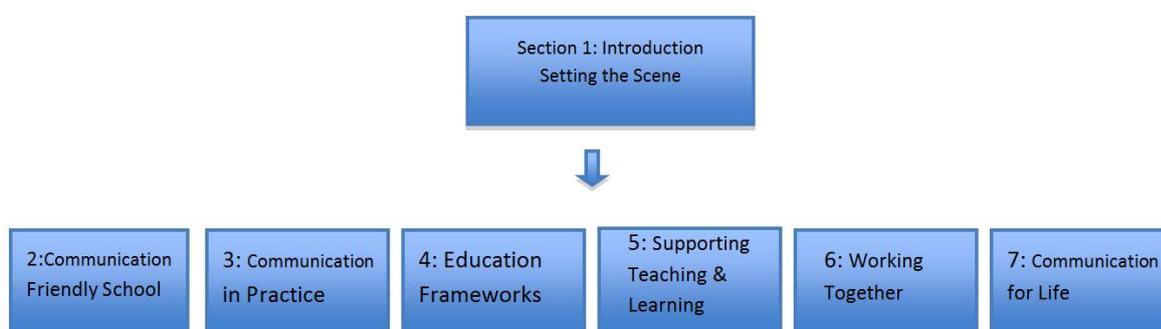
The sections will be viewable one by one as 'stand-alones', or in sequence, although all those following the course will start with the introductory section 1. The course will focus on the AAC learner and how to meet their needs, while highlighting good practice within an educational setting. It will draw together a large number of resources (many downloadable) and signpost to other resources available elsewhere, while referencing Scottish frameworks applicable to Education.

The content of the sections will include:

1. Communication skills and Complex Communication Support Needs, an introduction to AAC and getting yourself and your school ready for AAC.
2. Establishing a communication friendly school with an inclusive environment and practices benefitting learners beyond those using AAC directly.
3. Fundamentals of AAC, creating communication opportunities and communication partners and integrating its use into the everyday classroom.
4. Supporting AAC through Education Frameworks, staged intervention and planning, target setting, recording and monitoring.
5. Curriculum differentiation, including literacy and language teaching, and supporting learners with profound/severe and complex ASN.
6. Collaboration and team working, including school roles and responsibilities, partnership working with parents and pupil voice.
7. Making for good transitions and beyond school, preparing for communication as a lifelong skill

The course will be relevant to a broad range of education staff including Teachers, Support for

Learning Assistants, SLTs/Therapists and other visiting specialists, senior school management team, agencies tasked with monitoring/improving services (QIOs; HMIE, etc.) and students in related disciplines.

Each section will take about 10-15 minutes to read – or longer if you want to explore the many links and resources – and will finish with a 'Test your Knowledge' quiz, and a printable personalised certificate.

Each section will be linked to the IPAACKS framework (between skill level 1 – 2) and will explore the specific 'Core Values and Commitments' and 'AAC specific knowledge and skills' that are particularly relevant to that topic. The module will therefore be a helpful tool for services, teams or individuals that wish to 'self-audit' and to develop best practice to ensure positive outcomes for people who use AAC.

iPads (and other tablet devices) & ASL

Funded by: Scottish Government Core Grant

OBJECTIVES

- Development and sharing of client resources, based on new AAC Apps.
- Development of online resources to support practitioners, parents and families in making best use of new mobile technologies.
- Development of CPL opportunities regarding new mobile technologies.

OUTCOMES

The introduction of new mobile devices, particularly the iPad, has opened new possibilities for all learners, but particularly learners with additional support needs. However, set up and management of the devices can be problematic and the overwhelming choice of apps available is presenting challenges for local authorities, schools, practitioners, parents and learners. We identified a need to research and disseminate accurate information to help stakeholders develop good practice in device management and using tablets to their full potential.

- In May, we held an iPad Management seminar which was attended by 42 people from schools, local authority education teams, IT departments and Health services. A variety of mobile device management systems were showcased and feedback from attendees was very positive. The seminar met their needs, answered their questions and shared good practice. 100% of survey respondents said they would be able to action plan based on what they had learned in the seminar.
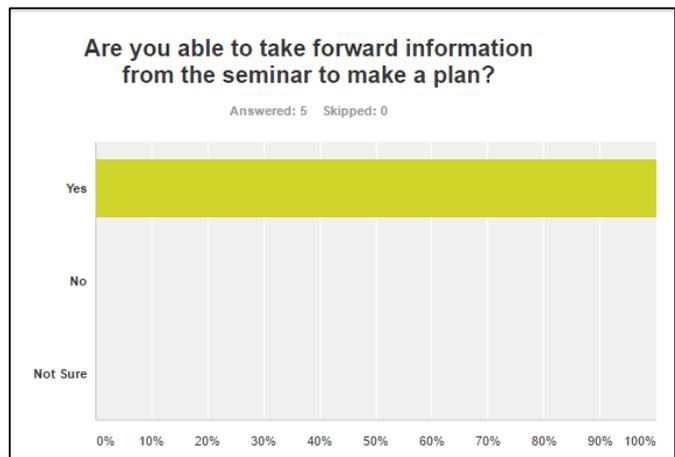
- The *Wheel of iPad Apps for Learners with Dyslexia/Reading and Writing Difficulties* continues to be the most popular of our iPad app information wheels and was downloaded 29,676 times in 2015-16.

- iPad Apps for Complex Communication Support Needs: Augmentative and Alternative Communication was officially launched in May 2014 and has been downloaded 9,960 times this year.
- Due to the increase in deployment of Android tablets we responded by producing Android Apps for Learners with Dyslexia in October 2015. This was downloaded 1,803 times in the remaining 5 months of 2015-16. A new wheel of Android Apps for Complex Communication Needs is in preparation.
- A new information resource has been produced on Using the iPad to Support Dyslexia, with a particular focus on the in-built accessibility functions of the iPad (downloaded 2,569 times). A similar resource on Using the iPad to Support Learners with Visual Difficulties should be available by June 2016. We also produced a poster on iPad Apps to Support Creativity, downloaded 1,876 times.

- The 2nd edition of *iPads for Communication, Access, Literacy and Learning* was published in May 2014 and has so far been downloaded 11,567. (The first edition, published in September 2012 was downloaded 11,778 times.
- The book and wheels are referenced on many national and international web sites, shared on social media and appear on classroom walls all over the world.
- Additional iPad-related CLPL courses were developed and delivered in CALL and/or in schools, and our full range of iPad-related courses now consists of:

  - o Introduction to iPads for pupils with ASN
  - o iPad accessibility features
  - o iPads for learners with dyslexia
  - o iPads for learners with visual impairment
  - o iPads for learners with ASD
  - o iPads for AAC: Picture apps to support early level communication
  - o iPads for AAC: Apps from Symbols to Text
  - o Creativity and beyond with an iPad
  - o Engaging the disengaged – using iPads creatively

CALL remains an Apple Regional Training Centre and thus certified to provide teachers with training, expertise and access to best practice to support their use of Apple technology in the classroom.

GLOSSARY

AAC	Augmentative and alternative communication
ACiP:S	Augmentative Communication in Practice: Scotland
ADES	Association of Directors of Education in Scotland
ASLO	Association of Support for Learning Officers
ASN	Additional Support Needs
ASPEP	Association of Scottish Principal Educational Psychologists
AT	Assistive Technology
B4A	Books for All
BETT	British Education and Training Technology Exhibition
CALL	Communication, Access, Literacy and Learning
CfE	Curriculum for Excellence
CFS	Communication Forum Scotland
CLA	Copyright Licensing Agency
CLPL	Career-long Professional Learning
CM	Communication Matters
CPD	Continuing Professional Development
ES	Education Scotland
FACCT	Fife Assessment Centre for Communication through Technology
FE	Further Education
GASS	Grant Aided Special Schools
HE	Higher Education
HMIe	HM Inspectorate of Education (now part of Education Scotland)
HI	Hearing Impairment
ICT	Information and Communication Technology
ICTSLS	ICT Support for Learning Scotland
JISC	Joint Information Systems Committee (in FE/HE)
KeyComm	Edinburgh & Lothians AAC service
LA	Local authority
LTS	Learning and Teaching Scotland (now part of Education Scotland)
MH/MHIE	Moray House/Moray House Institute of Education
NAACE	[not an acronym] ICT Association for Education Professionals (UK)
PL	Professional Learning (previously referred to as CPD)
QMUC	Queen Margaret University College
RCSLT	Royal College of Speech and Language Therapists
RNIB	Royal National Institute for the Blind
RSC	Regional Support Centre
SCRAN	Scottish Cultural Resource (charity and online resource base)
SCTCI	Scottish Centre for Technology for the Communication Impaired
SG	Scottish Government
SICTDG	Scottish ICT Development Group
SIG	Special Interest Group
SLA	Service Level Agreement
SLF	Scottish Learning Festival (Education Scotland run event every September)
SocITM	Society of IT Managers
SQA	Scottish Qualifications Authority
SSC	Scottish Sensory Centre

TASSCC (Aberdeen)	Technological Assessment and Support Service for Children and the Curriculum
UoE	University of Edinburgh
VI	Visual Impairment
VIP	Visually Impaired Persons
VQ	Victoria Quay

Communication, Access, Literacy and Learning

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