CALL Scotland
Communication, Access, Literacy and Learning

ANNUAL REPORT

1 August 2019 – 31 July 2020

CALL Scotland

Moray House School of Education and Sport
The University of Edinburgh

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

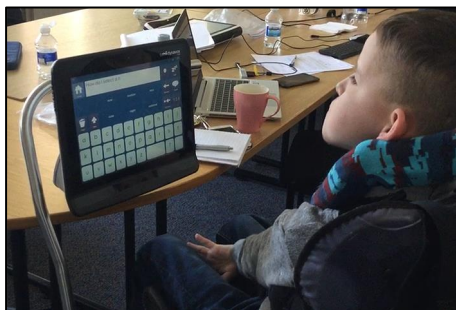THE UNIVERSITY *of* EDINBURGH

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 – to participate effectively and fulfil their potential through learning and achievement.
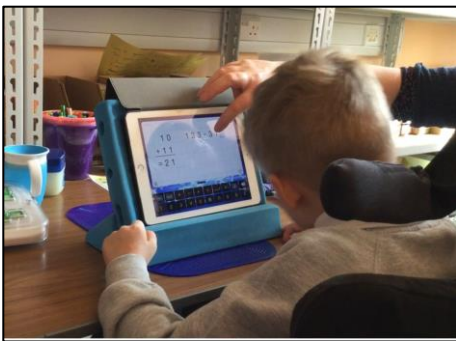
CALL Scotland's Mission

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
- Free Assistive Technology resources
- Specialist Pupil Assessment and Support
- CPD and Training
- Information and advice
- Equipment Loans and Technical Services
- Knowledge Transfer, research and development

CONTENTS

Summary

2019-20 was and still is dominated by the Covid-19 pandemic and subsequent response which has changed Scottish education entirely: children and young people learned at home for the entire summer term; teachers and school leaders rapidly developed pedagogies and teaching practices to address the new situation; SQA examinations were cancelled; education services for children with additional support needs were completely altered.

The impact on children with additional support needs and their families has yet to be fully researched, but there is no doubt many were at an increased risk of social isolation, damage to well-being and reduced attainment[1] [2] [3] [4].

In school, children and young people with additional support needs are supported by teaching staff and learning assistants, by specialist peripatetic teachers, educational psychologists and Allied Health Professionals, through technology, learning resources in accessible formats, and other reasonable adjustments and auxiliary aids or services.

It seems unlikely that parents/carers were able to provide the same level of support for their children learning at home. Were parents working at home able to find time to read or scribe for a learner who has learned (been taught?) to rely on a reader or scribe to access the curriculum in class? And for learners with significant physical support needs that required full time assistance at school for personal care, physio exercises, eating and drinking as well as to access the curriculum – could parents/carers take on this role at home whilst also home working? While provision of specialised teaching and materials for learners who access learning resources via a medium such as Braille, for example, would have been challenging.

More positively, the CALL team also had contact with some learners who seemed to experience reduced anxiety through not having to be in school or found it easier to manage their learning outside the regimented school day.

The lockdown saw a sharp increase in the use of digital technology to support learners at home, and Inclusive Digital Technologies – such as computer readers and digital learning resources – have even greater potential to enable learners to learn at home more independently without having to rely so much on parents, carers or siblings.

However, for this to happen:

- children and young people with additional support needs who had been using inclusive digital technologies at school needed access to the same or equivalent tools at home;
- children and young people with additional support needs, and their parents/carers needed the digital skills to access learning using these tools;
- children and young people with additional support needs had to be provided with accessible learning resources[5] [6].

The CALL team, working at home, had to rapidly assess the situation and decide how best to support practitioners, learners and parents/carers. We analysed the questions posed and

[1] Scottish Government (2020) Coronavirus (COVID-19): supporting vulnerable children and young people – data intelligence report

[2] Scottish Parliament Education and Skills Committee (2020) Agenda Papers 10th Meeting 2020 Wednesday 6 May

[3] Scottish Government (21/5/20) Schools to re-open in August

[4] Connect (8/5/20) Parents & carers make their voices heard! Connect's survey report

[5] Education Scotland (2020) Delivering Teaching and Learning Online: Advice for Practitioners May 2020.

[6] CALL Scotland (2020) Learning at Home - are Your Learning Resources Accessible?

increased our blog, Twitter and Facebook output in response and created a new online mechanism for parents to get in contact.

Face to face visits in schools were not possible and so we tried to support parents and learners at home using other means.

Our inset and in-CALL training, and the annual two day ASL Technology conference were converted successfully to online delivery.

Guidance on supporting pupils, parents and teachers from Scottish Government[7] (p. 5) advised that:

"All partners in the education system will work together to signpost parents and carers to:

- *CALL Scotland which has information on tools that parents can use to support home learning, such as overlays and text to speech."*

We worked with Scottish Government, Education Scotland, SQA, local authorities, Dyslexia Scotland and NPFS to provide online advice and guidance on these and many other topics.

As schools returned, there are still restrictions on visitors to schools and so assessment and support can only be provided where essential, and in-person training is not possible. It seems likely that this situation will persist for some time.

As we move forward, Inclusive Digital Technology is more important than ever for children and young people with additional support needs.

I am extremely grateful to my colleagues in the tight-knit CALL Scotland team who have worked so hard to not only keep the show on the road but have also devised fresh vehicles and tools to navigate this new terrain.

Period covered by the Annual Report

The 2019-20 report covers the period from 1 August 2019 to 31 July 2020 to report on activities over the academic session.

Development Priorities 2020-21

Our priorities for development for 2020-21 are to:

- continue to support local authorities, practitioners, parents and learners;
- work with colleagues and Scottish Government to progress National Strategic Commissioning; implementation of the AAC legislation, and take forward the actions from the ASL Review;
- explore additional sources of recurrent income;
- research options for delivery of the Scottish computer voices on Chromebooks and iOS;
- continue to support colleagues in ATLAS (Assistive Technology for Learning Across Scotland), and raise awareness of the need for Assistive Technology services in areas of Scotland where we believe provision is unsatisfactory;
- develop a research strategy for CALL, to gather and disseminate evidence-based practice in Inclusive Digital Technology.

Paul Nisbet, Director.

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[7] Scottish Government (2020) Coronavirus (COVID-19): supporting pupils, parents and teachers - learning during term 4

CALL Staff Team 2019-20

Paul Nisbet (1.0 FTE)	Director; Engineer and Educational Technologist
Joanna Courtney (0.8 FTE)	Specialist Speech and Language Therapist
Claire Harrison (1.0 FTE)	Development Officer, Assistive Technology & Complex Needs
Shirley Lawson (0.8 FTE)	Development Officer & Professional Learning Coordinator
Gillian McNeill (0.8 FTE)	Specialist Speech and Language Therapist
Craig Mill (1.0 FTE)	Assistive Technology Specialist
Robert Stewart (1.0 FTE)	Technology Resources, Web Designer/Manager
Allan Wilson (1.0 FTE)	Information Coordinator (General Enquiries)
Sarah Marjoribanks (0.8 FTE)	Office Manager
Esther Beeston (0.7 FTE)	Resource Developer/Assistant Administrator

We were delighted to welcome Esther Beeston to the post of Resource Developer / Assistant Administrator in August 2019. Esther has worked as a teacher in a special school in the past and brings a range of skills and experience that have proven a value to the CALL team.

Figure 1. The CALL team caught with awards in November 2019

CALL Steering Group 2019-20

Dr. Mike Gibson	Chair of Steering Group
Deborah Walker	Support and Wellbeing Unit, The Scottish Government (until 10/19)
Kate McKechnie	Support and Wellbeing Unit, The Scottish Government (from 12/19 until 4/20)
Melanie Lowe	Support and Wellbeing Unit, The Scottish Government (from 6/19)
Jean Alexander	AAC Operational Improvement Lead, The Scottish Government
Donna Baillie	Quality Improvement Officer, Glasgow City Council (ASLO representative)
Mary Berrill	Senior Education Officer, Inclusion, Education Scotland (until 05/19)
Fran Foreman	Senior Education Officer, Inclusion, Education Scotland (from 02/20)
Cheryl Burnett	National Parent Forum of Scotland
Fiona Buttle	Head Teacher, Langlee Special Nursery, Scottish Borders Council (from 09/18)
Professor Sheila Riddell	Moray House School of Education, University of Edinburgh
Jackie Swan	ASN Service Manager, East Dunbartonshire Council

Funding

CALL is funded through grants and contracts with around 65% of the annual income provided as a core grant (£367,177) from the Scottish Government Learning Directorate.

In June 2019 we secured £13,381 towards research and development of an AAC Implementation Toolkit from the Scottish Government Section 10 fund.

SQA funded our partnership and development work around digital examinations and assessments.

Assessment and support of individual pupils in schools is undertaken via partnership agreements with local authorities. We also generate income through delivery of professional learning in Edinburgh, on site in schools and now online.

The core grant has remained static since 2011, while inflation has run to 22.8% from 2011 to 2019. The Core Grant is still provided on an annual basis, which brings challenges for planning. We have succeeded in generating additional income through our partnerships, but our financial position is becoming increasingly difficult. We did request an increase in core funding for 2020-21 but this was not successful. We submitted a proposal to Scottish Government Learning Directorate in May 2020 for funding to undertake a range of additional activities in response to Covid-19, which was also unsuccessful.

1
Strategic Leadership & Collaboration

Funded by: Scottish Government Learning Directorate Core Grant

OBJECTIVES

Strategic leadership around the development and delivery of effective policy and good practice in the use of AT and AAC for pupils with additional support needs through:

- Partnership working with colleagues in The Scottish Government, Doran Project Board and National Commissioning Group, Education Scotland, Scotland, SQA, local authorities, Regional Improvement Collaboratives and voluntary organisations.
- Partnership working with Scottish Government Assisted Communication Team, AAC teams in NHS Health boards and their partners; ACiP:S 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: Doran Review

The Doran Review[8] was published in 2012 and the final *Strategy for the learning provision for children and young people with complex additional support needs 2017-2026* was published in September 2019[9]. Paul Nisbet from CALL represents CALL, SSC and Enquire, the three currently funded National Services for Complex Additional Support Needs, on the National Commissioning Group formed to "*oversee the implementation of a 3 year cyclical commissioning plan that supports this Strategy*".

The Strategy notes that the "*current grant aid of approximately £11m/annum that is currently allocated to seven Grant-Aided Special Schools (GASS) and three National Centres*" (CALL, SSC and Enquire) "*is being reviewed to ensure that it is targeted on supporting the key areas identified by the Doran Project Board*".

The scope of services to be commissioned includes:

- **Direct education, care and health services** for children and young people with complex additional support needs;
- **Research** related to children and young people with complex additional support needs that provides a sound evidence base, alongside other sources of evidence to support national policy development and service provision to improve educational outcomes for children and young people with complex additional support needs;
- **Sustainable, child and young person focused learning and development for those supporting children and young people with complex additional support needs** aligned to a mechanism for sharing practice; and,
- **Broader services which support the education of children and young people with complex additional support needs** including services provided across a number of authority areas, provided by local authorities or voluntary organisations which taken across Scotland may constitute a national need.

The strategy proposes a "phased release of funding" to "*support the move from the traditional recurrent grant funding model to the strategic commissioning model*". In order for CALL to obtain funding under the new commissioning process, the National Commissioning Group must first identify assistive and communication technology as an area in which services, training and research should be commissioned. This is therefore both a threat and an opportunity for CALL Scotland and we prefer to view it as the latter, given the increasing demand and use for CALL's products and service evidenced by this report, and the fact that our core grant from Scottish Government has remained level (reduced by 22.8% in real terms) since 2011. Scottish public expenditure rose by 13.3% over the same period[10].

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[8] Scottish Government (2012) The Right Help at the Right Time in the Right Place. Strategic Review of Learning Provision for Children and Young People with Complex Additional Support Needs.
[9] Scottish Government (2019) The right help at the right time in the right place: strategy for the learning provision for children and young people with complex additional support needs 2017-2026
[10] Statistica (2029) Total public sector expenditure in Scotland from 2010/11 to 2018/19

Scottish Government ASL Review

Scottish Government announced a review of the implementation of additional support for learning in January 2019 and the final report was published on 19/6/20[11]. CALL staff made contributions to the Review and Paul met with Angela Morgan, who led the review, on 19/11/19. The review *"affirms that Additional Support for Learning is not visible or equally valued within Scotland's Education system"* and *"Consequently, the implementation of Additional Support for Learning legislation is over-dependent on committed individuals, is fragmented, inconsistent and is not ensuring that all children and young people who need additional support are being supported to flourish and fulfil their potential."*

With regard to assistive technology, we generally agree with this analysis: as we note elsewhere in this report, approaches to service delivery are variable across Scotland and many local authorities do not have assistive technology specialists or teams.

The overarching recommendation of the review is that:

"Children and Young People Participation Children and young people must be listened to and involved in all decision making relating to additional support for learning. Co-creation and collaboration with children, young people and their families will support more coherent, inclusive and all-encompassing policy making, which improves implementation, impact and experience."

Clearly, communication support and technologies are essential for children and young people to be included and participate in this process.

The review contains 16 recommendations across the themes of vision and visibility; mainstreaming and inclusion; maintaining focus, but overcoming fragmentation; resources; workforce development and support; relationships between schools and parents, relationships and behaviour; understanding rights; and assurance mechanisms.

'Technology' is mentioned twice in the review: once in the section on 'What did children and young people tell the Review':

"Children and young people told the Review that these things are important:

- *A willingness to adapt teaching methods to children and young people's learning styles, needs, and varying pace and challenge, helps them to learn. Using technology can be really helpful here;"*

and once as a source of information on Selective Mutism.

We are disappointed that the immense potential of communication and assistive technology does not feature more prominently.

'Communication support needs' is only mentioned twice in the review: *"In percentage terms there have been significant increases in pupils receiving additional support as a result of; communication support needs (293% increase)"* and in the corresponding table (with incomplete header – we have added the year) that provides the data from which this comment was made:

Table 1: Additional Support Needs Over time

	2018 Total	2017 Total	2016 Total	2015 Total	2014 Total	2013 Total	2012 Total
Communication support needs	7,464	6,701	5,959	4,894	4,184	3,380	1,896

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[11] Scottish Government (2020) Review of additional support for learning implementation: report

Communication Support Needs is not even listed in Annex C: Additional support needs and associated issues, which act as barriers to learning.

We have significant concerns about this Annex because the text suggests that an Additional Support Need is a condition or circumstance, which is entirely wrong. 'Autistic spectrum', 'dyslexia', 'English as an Additional Language', 'Language disorder' or 'Visual Impairment' are not additional support needs – but they may give rise to an additional support need. Other sections of the review also confuse conditions or situations with additional support needs: for example the statement that *"The supporting guidance[12] unhelpfully complicates people's understanding of what an additional support need may be by listing a selection of conditions, which may require additional support"* is inaccurate – it is not conditions that may require additional support, it is the children who have additional needs arising from those conditions. The Scottish Government guidance referenced states that "*Children or young people may require additional support for a variety of reasons and may include those who have: motor or sensory impairments, low birth weight, are being bullied…. etc*" which has a different meaning to the wording in the Review.

CALL Scotland is noted in Annex C as a source of information and mentioned once in the discussion around the Grant Aided Special Schools (GASS) in the section on Resources:

"Recommendation 4.2 Role of Grant Aided Special Schools

The Grant Aided Special Schools and three national centres must use the opportunities that arise from the commissioning strand of the Doran Review[40] to consider how their specialist expertise (including in prevention and de-escalation) can be developed to be complementary to statutory mainstream and specialist provision, in order to support improvement in the experiences and outcome of children and young people with additional support needs."

We do not think this is helpful. CALL, Enquire and SSC (the three national centres) already deliver national services "to complement statutory mainstream and specialist provision", and in CALL's case we have received core grant funding since 1991 for that very purpose. The GASS are quite different in that they mainly provide specialist placements for a small number of individual learners, and the thrust of the Doran process is to develop this expertise and make it available nationally.

It is not clear why CALL, Enquire and SSC are bracketed with the GASS as we have more in common with other organisations that provide national services such as Dyslexia Scotland, Scottish Autism, Salveson Mindroom, the National Autism Implementation Team or Capability Scotland.

The review does contain recommendations that can be addressed using assistive and communication technology and we aim to work collaboratively with Scottish Government and stakeholders to take forward the actions specified in the Scottish Government response[13].

Education Scotland

- Paul is a member of the Addressing Dyslexia Toolkit working group funded by Scottish Government and chaired by Fran Foreman, Educational Scotland.

- Shirley presented to the Education Digital Skills team on 11th March 2020.

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[12] Scottish Government (2017) Additional support for learning: statutory guidance 2017
[13] Scottish Government (2020) Additional support for learning: action plan.

- CALL staff were in contact with Education Scotland colleagues throughout the lockdown, discussing how best to respond and to support learners, families and educators. A number of Education Scotland publications[14] signposted to CALL resources.
- Shirley hosted an Education Scotland 'Wee Blether' on 12th August 2020.

Scottish National Standardised Assessments

At a meeting of the Scottish Association of Visual Impairment Educators in November 2019, Qualified Teachers of Visually Impaired (QTVI) reported that some learners with visual impairments were having difficulty accessing the online assessments. Scottish Government agreed to conduct visits to schools to research the issues. We do not know if these visits were undertaken, or the outcome. Covid-19 is likely to have impacted on this work.

CALL provided advice on improving accessibility for the online Scottish National Standardised Assessments to Scottish Government and suggested that similar visits should be undertaken to research access for learners with significant physical disabilities. We did not receive a response.

Scottish Qualifications Authority

In 2019-20 CALL continued to provide advice and support to colleagues in SQA and to practitioners regarding the use of technology as Assessment Arrangements in examinations; further details are in the section on *Scottish National Standardised Assessments*

CALL's free accessibility tools can enable access to the assessments for learners with additional support needs. In particular:

- SNSA does not provide an option to change colours and so the *ssOverlay* screen tint that is part of our MyStudyBar 4 tool is particularly helpful for students who have visual stress.
- Our free text readers, with the Scottish voices, provide a means for learners to access the assessments independently and avoid reliance on a member of staff to read to them.

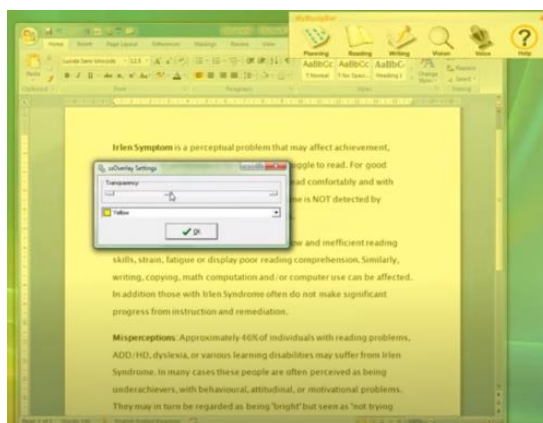**Figure 9: ssOverlay screen tint from CALL's free MyStudyBar**

Assistive Technology in SQA Examinations. Research into the application of Chromebooks for Assessment Arrangements was completed and a final report submitted to SQA in 2019 and published in 2020: see *Chromebooks and Assessment Arrangements.*

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[14] Education Scotland (2020) Delivering Teaching and Learning Online: Advice for Practitioners May 2020.

Paul is a member of the SQA Equality and Inclusion Key Partners Group and contributed to the Equality Impact Assessment for the 2020 examinations Alternative Certification Model[15].

Implementation of 2016 AAC Legislation

The Health (Tobacco, Nicotine Etc. And Care) (Scotland) Act: Provision of Communication Equipment was commenced on 19th March 2018. The Act 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.[16]"

Scottish Government published *Guidance on the Provision of Communication Equipment and Support in using that Equipment*[17] to support delivery of the legislative duty in May 2018 followed by *The National Augmentative and Alternative Communication (AAC) Core Pathway*[18] on 30th August 2018.

Gillian and Joanna attended meetings of the National AAC Advisory Group and provided feedback and comment to the Scottish Government ACT team.

A Scottish Government progress report on the implementation of the legislation was published in February 2020 and found limited evidence of impacts on service provision at this stage[19]. One Health Board reported that the legislation had led to revision of internal processes resulting in quicker access to services. Two boards commented that was too early to see any real impact.

A survey to gather the views of AAC users on the impact of the legislation was undertaken by the AAC Collaborative while the Royal College of Speech and Language Therapy Scotland Office and the SLT AAC Leads gathered views of AAC practitioners. Findings from the AAC User Survey were published in video format while the feedback from practitioners was published in in video and written format[20].

AAC users felt that there have been improvements in response to their needs and in waiting times for assessment, but that services were possibly overstretched. A half of respondents reported changes following the legislation, a third of respondents reported no change.

The RCSLT report found that "*68% (13/19) report actual provision of equipment has stayed the same. For 32% (6/19) it has increased*" while "*84% (16/19) of respondents report no change in actual SLT support available. 16% (3/19) see an improving picture in availability of SLT support.*"

Other developments in 2019-20:

- Work on a minimum data set for gathering information about people who use AAC is being progressed and will be taken back to the National Advisory Group.

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[15] SQA (2020) 2020 Alternative Certification Model: Equality Impact Assessment.

[16] Scottish Parliament (2016) Health (Tobacco, Nicotine Etc. And Care) (Scotland) Act: Provision of Communication Equipment

[17] Scottish Government (2018) Guidance on the Provision of Communication Equipment and Support in using that Equipment

[18] Scottish Government (2018) The National Augmentative and Alternative Communication (AAC) Core Pathway

[19] Scottish Government (2020) Provision of Communication Equipment and Support: Part 4 of the Health (Tobacco, Nicotine etc. and Care) (Scotland) Act 2016: progress report 2019

[20] RCSLT (2020) Scotland's AAC services: 2020 report

- An addition to the NHS PECOS ordering system to enable NHS boards to capture spend on AAC is being trialled by three NHS boards. CALL provided information to inform AAC equipment purchasing.
- The Speak Unique voice banking service was launched as a commercial service in March 2020.
- The AAC learning modules commissioned by NHS Education Scotland and created by CALL were uploaded to NHS TURAS.
- CALL and KeyComm submitted a proposal under Scottish Government Section 10 to run a series of online sessions for parents of learners who use AAC in 2021. This was unsuccessful.

Augmentative Communication in Practice: Scotland (ACiP:S)

ACiP:S is a national network linking specialist AAC services and professionals; children and adults who use AAC (and their families); statutory services and voluntary agencies; and that provides resources, information and support.

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

During 2019 -20 the work of ACiP:S focused on:

- Facilitating AAC SLT Leads from across Scotland to meet regularly with the ACiP:S committee to discuss the implementation of the 2016 AAC legislation and share good practice and service procedures for supporting people in AAC.
- Partnership working with the Royal College of Speech and Language Therapists Scotland Office to construct a survey to gather views on the impact of the AAC legislation, report on and publish the findings. Gillian and Joanna contributed to the findings at a focus group held in CALL.
- A Regional Study Morning in partnership with NHS Borders and Council for staff across sectors, on 14 February 2020 in Langlee Primary School, Galashiels. The title chosen was "Exploring Practical AAC Solutions: working with children and young adults across environments". Presentations delivered by ACIP:S members (1 workshop lead by Joanna) and 2 guests. Positive evaluation comments included: "*Lots of practical ideas of how to use communication with very knowledgeable presenters*" and "*Good to learn about different equipment used for different purposes.*"
- Preparing for the Family Fun Technology Day which was scheduled to be held at Moray House School of Education on 28th March 2020. A large number of families were signed up to attend and the facilitators and resources were in place but it was cancelled due to the Covid-19 lockdown. Plans are underway for an event in October 2021, possibly with an online format.

Communication Matters

Joanna, Allan and Gillian attended the annual Communication Matters conference in Leeds in September 2019. Joanna presented a paper entitled *Developing Dialogic Reading Strategies for*

Children with Speech, Language and Communication Needs[21] and the CALL team created a poster presentation on the work of CALL.

Scottish Book Trust

In 2019-20 we:

- created accessible digital versions of the P1 Bookbug books in PowerPoint, Keynote (iPad) and Grid 3 (iPad and Windows) formats;
- created digital versions (PDF) of the 3 books shortlisted for the Scottish Teenage Book Prize;
- developed symbolised resources to accompany the P1 Bookbug and Explorer books, to help learners with physical and communication support needs access the books and participate in reading.

Further details are in the sections on *Scottish Book Awards* and *Symbols for All*.

Local authorities

CALL continues to provide assessment and support for individual learners, professional learning and technical expertise tailored to individual local authority contexts through partnership agreements with 19 local authorities and schools in 2019-20; see *Pupil Assessment and Support* and *Career-Long Professional Learning.*

Assistive Technology for Learning Across Scotland (ATLAS)

ATLAS is the national group of practitioners working in the field of technology to support children and young people with Additional Support Needs and / or disabilities. We have currently 30 members (including CALL staff) representing 20 Local Authorities and have some concern that other local authorities do not have a named contact with specific responsibility for assistive technology for learners with additional support needs.

The group mainly communicates online via a Google Group forum and provides support for each other: answering questions, sharing resources and suggesting solutions to problems posted. The ATLAS group met physically on 13th November 2019 and by video conference on 27th May 2020. The meetings provide a valuable opportunity to share best practice, hear about new developments and discuss a wide range of current issues.

CALL Assistive Technology Community

Craig manages the CALL AT Community in Scotland - an online forum for teachers, parents and other professionals with an interest in the use of assistive technology in education, including further and higher education. It allows members to share ideas and resources, to ask questions and post answers. Many people in assistive technology work in relative isolation and value opportunities to interact with colleagues with a shared interest.

CALL AT Teams Community

Craig established the CALL AT Teams Community at the beginning of lockdown to provide a secure and supported online space for people to communicate and share resources. There are now over

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[21] Courtney J. (2019) Developing Dialogic Reading Strategies for Children with Speech, Language and Communication Needs. Communication Matters 2019 Abstracts Session 3.5 p. 80

260 members, from all over the world, consisting of teachers, FE and HE staff, professionals, parents and AT suppliers. The Team has dedicated 'Channels' e.g. Technology to support Communication, Technology to support literacy etc, allowing people to share ideas, communicate and discuss issues relevant to their own specialised areas.

Other collaborations

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

- Exhibition and presentations at Dyslexia Scotland roadshows and events (Allan, Craig, Shirley).

2020-21 Advisory and working group memberships

- AAC Advisory Group (Gillian and Joanna)

- Augmentative Communication in Practice: Scotland (Gillian and Allan)

- Addressing Dyslexia Toolkit Working Group (Paul)

- Doorway Online Accessible Software Trust (Allan, Craig and Shirley)

- Doran National Strategic Commissioning Group (Paul)

- National Digital Learning Forum (Paul)

- Scottish Qualifications Authority Equality and Inclusion Key Partners' Group (Paul).

National Provision of Inclusive Digital Learning Resources

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 **free text reader software** (Funded by Scottish Government Core Grant):
  - WordTalk
  - NaturalReader
  - MyStudyBar 4.1.

Books for All

Funded by: Scottish Government Learning Directorate Core Grant

Books for All website

The Books for All website which incorporates our new database of downloadable accessible textbooks received 115,331 visits in 2019-20.

Books for All Scotland Database

17,447 files were downloaded from the old Database by 1,058 teachers or practitioners in 2019-20. This is around half the number downloaded the previous year, reflecting the fact that the period covered is seven months, from August 2019 to February 2020.

Table 2: Number of downloaders and books downloaded from the old Database

Books for All Database Downloads	2011-12	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20 (7 months)
Number of individual downloaders	523	862	1,230	1,033	1,360	1,373	1,326	**1,330**	**1,058**
Number of books downloaded	3,923	7,257	11,067	31,315	52,569	51,449	42,725	**34,855**	**17,447**

New Books for All website

Robert Stewart created the new Books for All website which has many improvements in terms of usability and security.

- **Design.** The new site is easier to use and works well on all browsers and devices.
- **User accounts.** Teachers and practitioners must register for an account and each request is moderated before approval. Accounts are only provided to practitioners who supply a valid email address of a school or other authorised body.
- **Searching**. The search tool is more flexible and should enable users to find the book they want more easily.
- **Thumbnails**. Images of the front cover of the books are displayed which helps when looking for titles.
- **Watermarking.** PDF files are watermarked when they are downloaded with the account holder, the date of download and the IP address of the device to which the file was downloaded. This should discourage the type of illegal printing that led to the removal of the Hodder titles. It should also help to identify the source of any files that are uploaded to school websites.
- **Access and download procedures** - The terms and conditions for download and use are prominent and remind practitioners of their legal obligations.
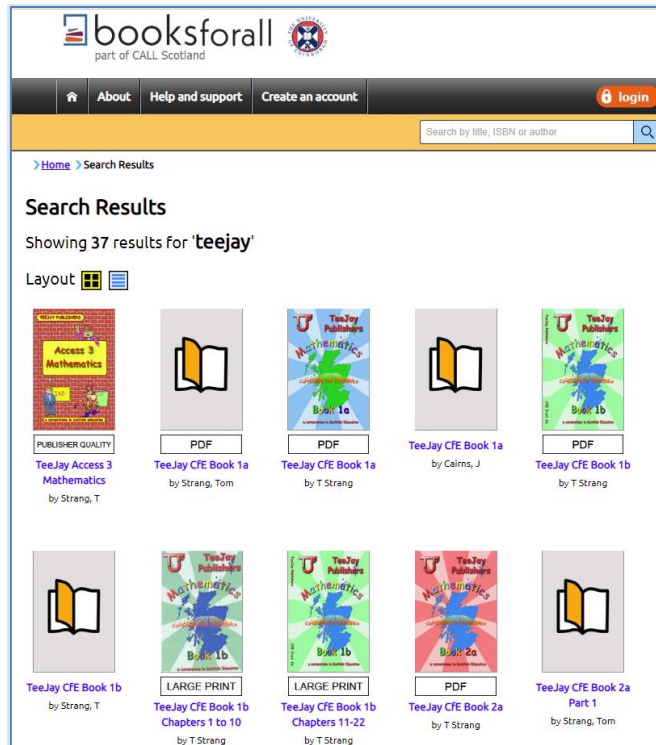
Figure 2: The new Books for All website and database

By 31/7/20, 3,535 user accounts had been created on the new website and 11,144 files had been downloaded. Following the lockdown in March 2020 there was a significant increase in both the number of teachers and practitioners registering for accounts, and in the number of titles that were downloaded.

Number of downloads each month 2019-20

Month	Downloads
Oct 2019	~75
Nov 2019	~150
Dec 2019	~100
Jan 2020	~500
Feb 2020	~780
Mar 2020	~3950
Apr 2020	~2750
May 2020	~1950
Jun 2020	~820
Jul 2020	~120
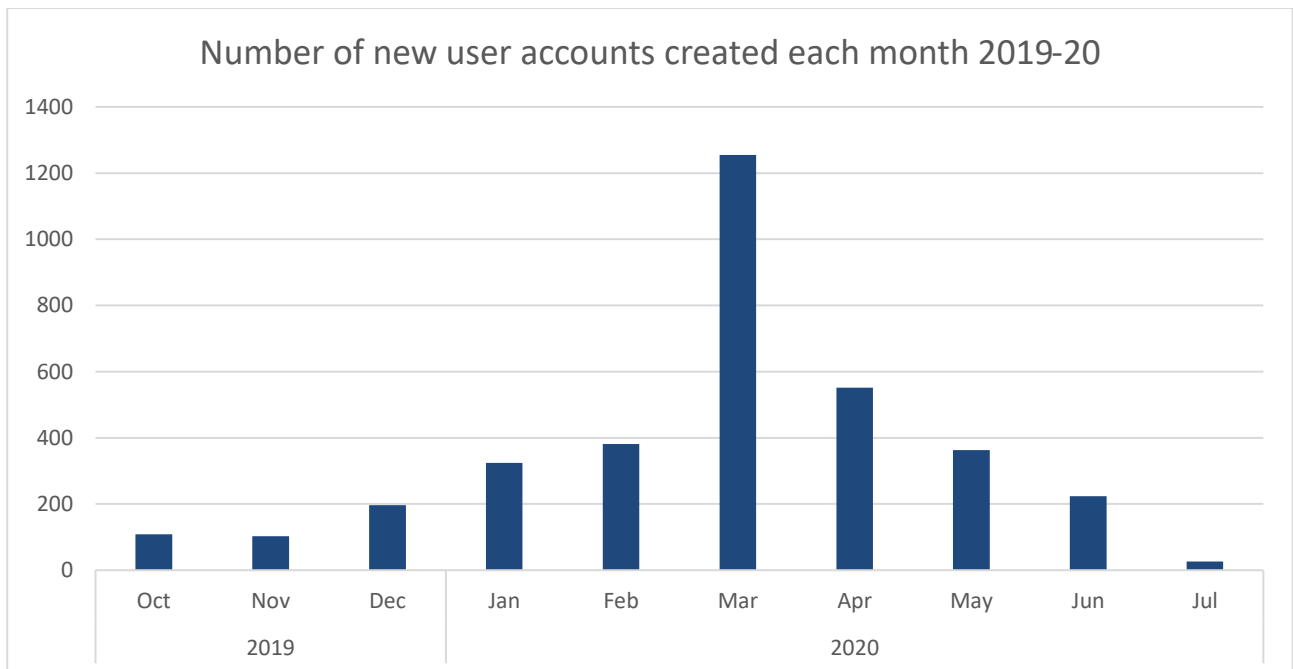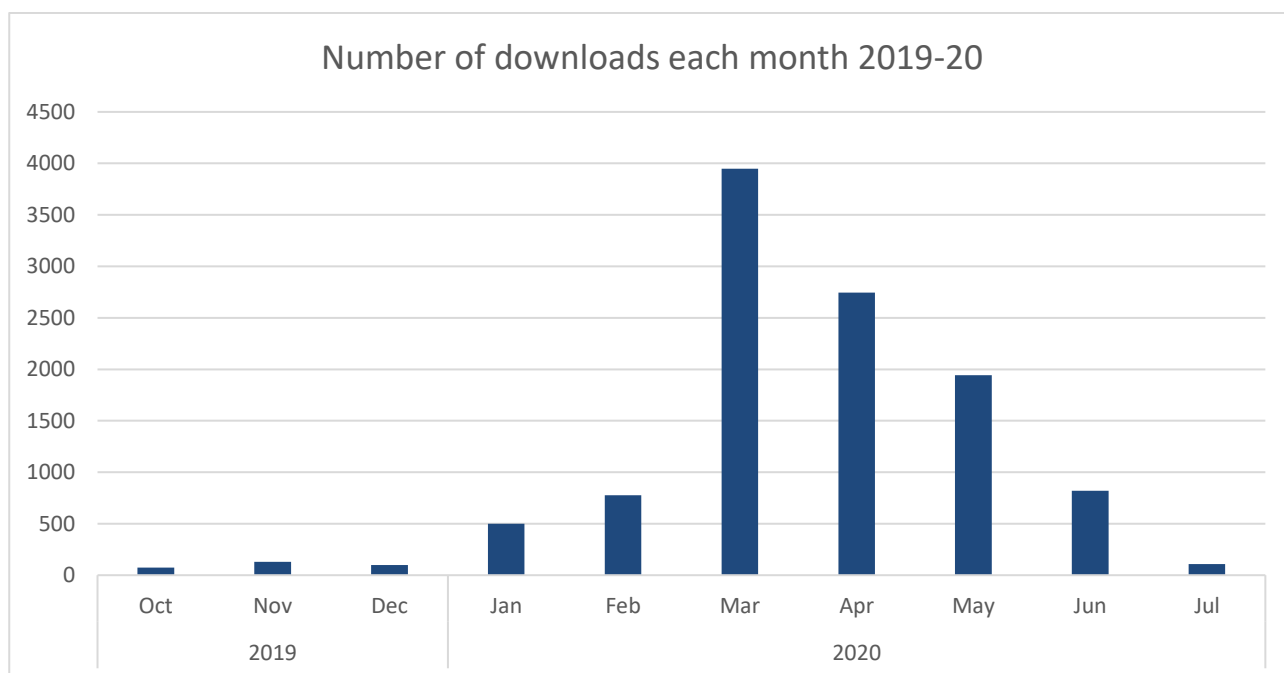
Covid-19

The advent of lockdown meant that children and young people were learning at home, and this presented challenges for teachers who wanted to download and provide accessible books to learners. Many of the files on the database are too large to send by email, and while cloud storage such as Glow, OneDrive and Google Drive could be used, some practitioners, learners and parents were unfamiliar with these tools. We also received requests from parents at home who asked for access to the database.

To meet these needs, Robert created a mechanism whereby teachers could create a shareable link that can be given to learners or parents for them to download specific titles. This seems to be working well.

Robert also provides a mechanism for teachers to view a record of the books they have downloaded and the learners to whom they have been given.

Copyright

In August 2018 Hodder Gibson directed us to remove PDFs of their textbooks from the database following reports of files being used illegally by teachers. The publisher had evidence that books were being downloaded and printed out for distribution to classes, and that files were being uploaded to the school shared folders on the internet for any learner to access. TeeJay Maths became part of Hodder Gibson in 2019 and on 28th July 2020, Hodder asked us to remove the TeeJay books from the new website because they had found TeeJay books uploaded to school websites. This is particularly disconcerting because the adapted TeeJay books with answer boxes are the most popular titles available.

We are working with Hodder and Education Scotland to raise awareness of the law as it applies to accessible copies, and to put in place safeguards to discourage illegal use by teachers.

We know that learners with print disabilities are being disadvantaged through lack of access to textbooks, particularly during lockdown.

Scottish Book Awards

We again worked with the Scottish Book Trust, publishers and authors to create accessible digital versions of the Explorer and P1 Bookbug picture books, and the Scottish Teenage Prize shortlist, for pupils who find it hard to read the standard print books, so that they can take part in the awards along with their peers in the classroom. Bookbug books are provided free to every P1 learner in Scotland each year by Scottish Book Trust.

Last year the accessible digital Bookbug books were made available in:

- PowerPoint recorded narration and switch prompt versions;
- Keynote format for the iPad;
- and as Grid 3 files, designed specifically for learners who use eye-gaze technology.

Joanna and Claire again created symbolised resources for each of the Bookbug books. These consist of:

- overlays that can be used with the *GoTalk 9+* communication aid, or as low-tech symbol boards;
- switch tops for *Big Mack* and *Step by Step* communication aids;
- digital app boards for the free *SoundingBoard* communication app for iPad;
- accessible digital versions of the books, together with learning activities, in Grid 3 format for use on Windows and iPad devices.

399 books were downloaded this year compared with 374 last year. 3,313 symbolised resources and files were downloaded. New SoundingBoard files for the Explorer Bag were also produced this year, due to the growing popularity of the digital communication boards. SoundingBoard files for iPad were again the most popular symbol resources.

The symbolised Bookbug resources can be found on the Symbols for All website at www.symbolsforall.org.uk/bookbug.

We also developed new learning activities for learners to communicate and write about the books in Clicker and Grid format. The Clicker and Grid resources can be used on Windows and iPad and consist of sets to re-tell the story and review the book content.

Figure 3: Reading *Sophie Johnson Unicorn Expert* on an iPad

Figure 4: Reading *The Prince and the Witch and the Thief and the Bears* using eye gaze

"*Having these books available on the eye gaze device has enabled us to enjoy stories together on a whole new level - instead of being a 'passive listener', L can now play an active role in telling the story including being able to make comments about the pictures and deciding when he is ready to turn the page. He also enjoys the independence of being able to select a book and read it himself when otherwise his physical difficulties would have prohibited him from being able to do so*."

We were delighted to receive the 'Outstanding Community Inclusion' Award for the Bookbug books and symbolised resources at the inaugural AAC Awards Ceremony held at the University of Leeds on Friday 11th October 2019. These National awards were organised by Communication Matters, the UK wide organisation for Augmentative and Alternative Communication (AAC).

Joanna and Gillian from CALL Scotland and Andra from Scottish Book Trust attended the ceremony, along with Bookbug of course, to receive the award.

Symbols for All

The Symbols for All website provides free symbolised curricular resources organised around the eight Curriculum for Excellence areas and also includes materials for use in symbolising the environment and for engineering communication activities across the curriculum.

There are resources for primary learners with PCS Boardmaker symbols and new secondary resources with Widgit symbols.
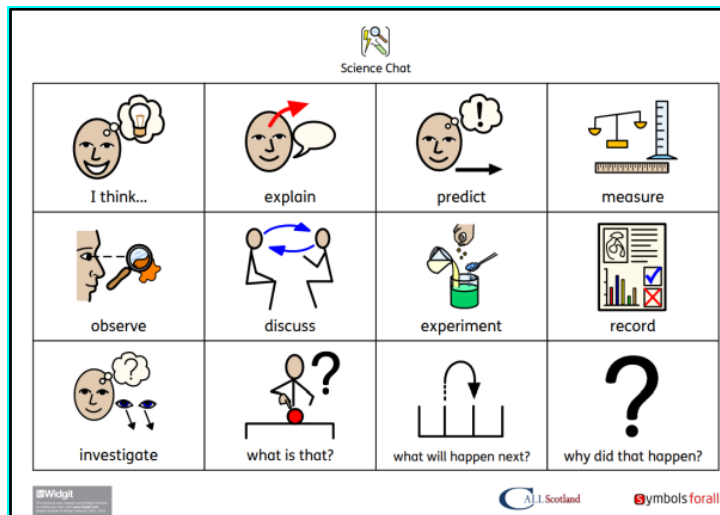
Figure 5: Science Chat communication board with Widgit Symbols

Access to symbol software is one of the barriers that prevents schools making symbol resources and Symbols for All provides a core starter set of materials, plus ideas for how they can be used, that will enable schools everywhere to get going. The site also provides the original Boardmaker and Widgit files so that practitioners who do have access to symbol software can edit and adapt them to personalise for their own schools and learners.
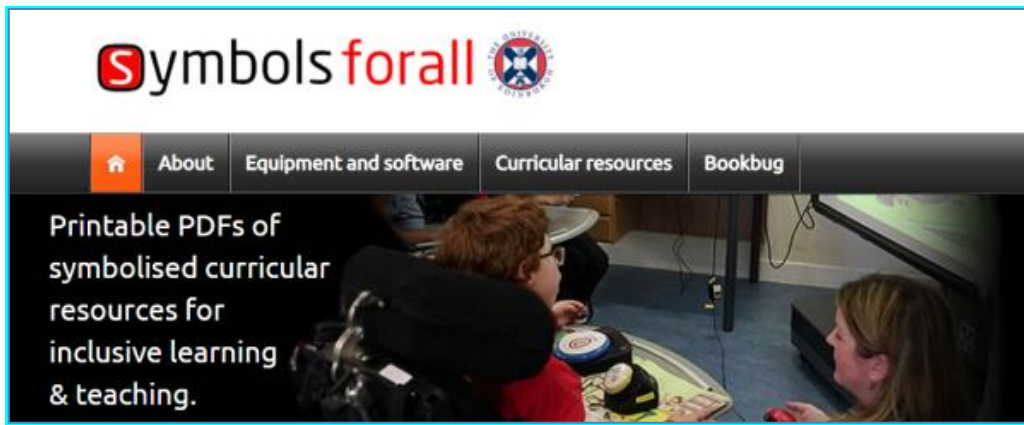
The number of visits to the site and the number of resources downloaded increased considerably compared to the previous year.

Table 3: Symbols for All visits and downloads

Symbols for all Website	2018-19	2019-20
Symbols for All visits since Sept. 2018	16,547	**38,297**
Symbols for All downloads	9,001	**16,802**

Symbols for All & Covid-19

Many of the symbol resources are useful when communicating about topics that are relevant to Covid-19 and the most downloaded symbol resource was one of the symbol boards to support handwashing.
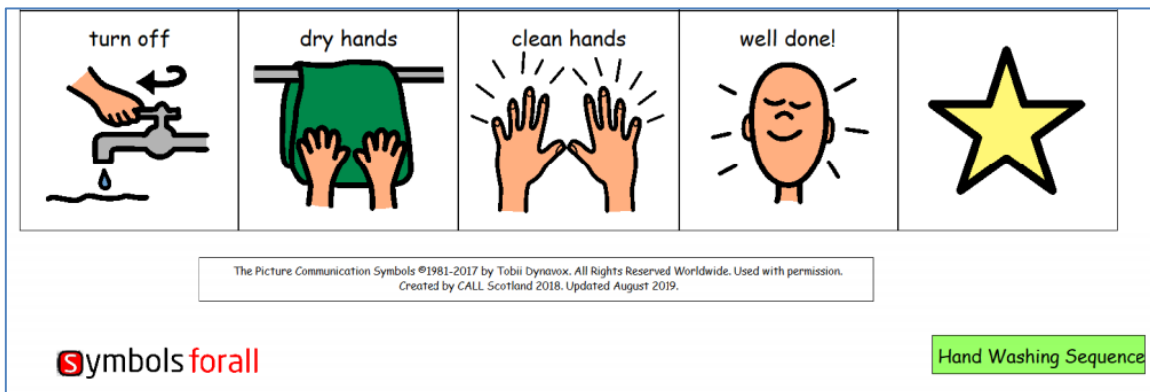
Figure 6: Symbol board for hand-washing

The resources were linked to directly from many agencies including a newsletter from Carol Zangari of https://praacticalaac.org/.

New developments over 2019-20 have included the Widgit symbol resources for learners in secondary school; communication grid sets for learners who use Grid software on Windows or iPad devices; and the development and evaluation of a Symbols for All AAC Implementation Toolkit, which was funded through Scottish Government Section 10. These are discussed further in *Symbols for All* in the Knowledge Transfer, Research and Development Section.

Scottish Computer Voices for Scottish schools and public sector

The number of visits and downloads of the Scottish computer voices is given in Table 4: Scottish Voice visits and downloads. In schools, the voices are usually downloaded once by the local authority technical team and then packaged and made available on all the computers across the entire authority, so the number of actual users is far higher than the number of downloads.

We are surprised that Andrew and Mairi, the child voices have been downloaded least, but we are aware that some local authority technical teams have chosen to make the child voices available along with Heather and Stuart, and so perhaps there is less requirement for individual downloads.

There is a need to carry out an audit to determine the extent to which the voices have been made available for learners in schools and at home.

Table 4: Scottish Voice visits and downloads

The Scottish Voice	2012-13	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Scottish Voice web visits	13,317	19,973	23,890	26,468	34,432	40,867	**38,238**	**42,683**
Heather downloads	949	855	786	912	954	908	**775**	**534**
Stuart downloads	851	742	679	644	722	741	**603**	**479**
Ceitidh downloads				288	267	259	**249**	**124**
Callum downloads								**165**
Isla downloads								**161**
Andrew downloads								**128**
Mairi downloads								**129**

Andrew and *Mairi*, the Scottish Child Voices, and *Isla* and *Callum*, teenage voices, were launched on 5th August 2019 on our new Scottish Voice website. The voices have received a positive response and were featured in the press and media:

- BBC News, 16/11/19. Synthesised Text-to-Speech gives Scottish children a voice again!
- Radio Scotland 20/8/19;
- The National 7/8/19;
- Scotsman 6/8/19.

Figure 7: Lachlan featured on BBC News on 16/11/19 and Radio Scotland on 20/8/19. He accesses his communication aid with an eye-gaze camera and is one of the first boys in Scotland to communicate with the *Andrew* voice.

Design for Diversity Award

We were very pleased to be nominated, with CereProc, and then to win the 2019 *Design for Diversity* award for the development and distribution of the voices. Paul and Shirley received the award at the event on 9th October.

Figure 8: CALL and CereProc were awarded the Design for Diversity prize at the 2019 Scottish Diversity Awards.

Scottish Voices on iPads and Chromebooks

Some local authorities are replacing Windows computers with Chromebooks while the Scottish Government Covid-19 laptop scheme is provisioning 25,000 Chromebooks (although only 18 out of 32 authorities have taken the devices, with other authorities taking the funding offered to invest in other technologies).

Glasgow and Scottish Borders are provisioning iPads to every learner in P6 and above.

At the present time, the Scottish Voices cannot be installed on Chromebooks or iPads. The built-in system voices available on iPads are good quality but are adult voices with UK or US accents, while there are only two decent UK adult voices offered on Chromebooks.

We believe that Scottish learners would benefit from the high quality Scottish accent voices on iPads and Chromebooks.

In addition, CereProc is the only provider of a Scottish Gaelic voice and so learners attending Fàilte gu Sgoil Ghàidhlig Ghlaschu have been provided with iPads without a computer voice in their language. Likewise, Gaelic medium learners in Highland who are given a Chromebook do not have a Gaelic voice either.

It is now technically possible to add voices as extensions to Chromebooks and so we will explore this with CereProc.

A limitation of iPads is that Apple prevents additional voices from being installed: they have to be integrated **into each app** by the app developer. We have worked with some developers of communication apps to make the voices available, but they cannot be used by most apps or by the built-in accessibility tools on the iPad OS. However, we have recently identified a possible solution to this challenge and we will research it further in 2020-21.

Scottish National Standardised Assessments

CALL's free accessibility tools can enable access to the assessments for learners with additional support needs. In particular:

- SNSA does not provide an option to change colours and so the *ssOverlay* screen tint that is part of our MyStudyBar 4 tool is particularly helpful for students who have visual stress.
- Our free text readers, with the Scottish voices, provide a means for learners to access the assessments independently and avoid reliance on a member of staff to read to them.

Figure 9: ssOverlay screen tint from CALL's free MyStudyBar

Assistive Technology in SQA Examinations

Funded by: SQA

We continued to work with SQA to refine Digital Question Papers and to provide advice, support and professional learning on use of technology as Assessment Arrangements to SQA, schools and learners. Details of research and development work are given in *Knowledge Transfer, Research and Development* .

SQA examinations 2019

The number of requests for assessment arrangements and the number of candidates for whom arrangements are requested increased between 2018 and 2019 by 10% and 9% respectively[22].

Table 5: Number of candidates and requests for Assessment Arrangements

	2017/18	2018/19
Number of candidates for whom AA were requested	18,273	20,159
Number of requests	57,198	62,506

In previous Annual Reports we published data provided by SQA on the number of requests for Digital Question Papers and other Assessment Arrangements over previous years, in order to monitor and comment on trends, but the 2019 figures have been collated differently and so it is not possible to do that this year.

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[22] Nisbet (2019) SQA Publish Information on Assessment Arrangements for the 2019 Diet.

The number of requests for candidates to use Digital Question Papers (DQP) in the 2019 examinations increased by 5% to 6,014 (Table 6). The use of technology-based Assessment Arrangements continues to increase both in absolute terms and also in relation to the other types of support that are requested by presenting centres and there were 15,581 requests for ICT in 2019. (Note that requests for Digital Question Papers are a subset of requests for ICT.)

This suggests that the use of technology in examinations is now 2.7 times that of human scribes, which we regard as a positive in terms of learner independence and consistency.

However, human readers still appear to be more commonly used in examinations than computer readers. There were almost 10,000 requests to use a reader in an examination, and only 6,014 requests for Digital Question Papers – and of these, only a proportion (unknown) will include use of a computer reader. (We do know however that some practitioners tick 'reader' in the SQA request system for a human reader or a computer reader.)

Some candidates have difficulty with technology and some candidates are more comfortable with a human reader in the assessment context, but there is a need to research and understand why human readers remain so prevalent and whether computer reader technology can be improved to provide candidates with greater independence both in examinations and in class, and at home.

For example, is the lack of Scottish computer voices on Chromebooks and iPads discouraging candidates from adopting the technology?

Table 6: Number and type of Assessment Arrangements requested 2018-19

Assessment arrangements requested:	2017/18	2018/19	% Difference
Extra time	44,111	46,920	6%
Separate accommodation	35,098	39,045	11%
ICT with word processor with spellchecker	10,118	10,852	7%
Reader	9,342	9,884	6%
Digital question paper	5,715	6,014	5%
ICT with word processor without spellchecker	5,179	5,874	13%
Scribe	5,715	5,818	2%
Coloured Paper	2,964	4,071	37%
Rest period(s)	2,716	3,078	13%
Prompter	2,173	2,302	6%
Supervised break(s)	1,616	1,918	19%
Enlarged print	1,059	1,309	24%
Transcription with correction	662	566	-15%
Non standard paper size	445	525	18%
Modified content	389	451	16%
Non standard paper font	246	388	58%
Transcription without correction	334	375	12%
ICT with handheld spellchecker	284	306	8%
Calculator	248	298	20%

Enlarged certificate	53	42	-21%
Non standard paper orientation	42	36	-14%
Signed to candidate	48	36	-25%
Braille	27	34	26%
Referral to Principal Assessor	52	34	-35%
Braille certificate	25	30	20%
Candidate signs	32	21	-34%
Live presentation	38	21	-45%
Total	**128,731**	**140,248**	**9%**
Any other arrangement(s)	1,557	1,872	20%

SQA examinations 2020

The SQA examinations were cancelled in 2020 due to Covid-19. Paul as a member of the Equality and Key Partners group commented on the draft of the Equality Impact Assessment of the Alternative Certification Model (ACM)[15].

One concern we raised was that we felt that the guidance for teachers on producing estimates[23] did not contain sufficient advice on how to estimate grades for candidates with disabilities or ASN. In general we felt that while the EIA did identify risks with the ACM for learners with ASN, it did not in our view detail actions to mitigate the risks.

One element of the published EIA was an analysis of the 2019 diet centre estimates, which was undertaken to provide a baseline of the accuracy of estimates for cohorts of learners with protected characteristics. The 2019 analysis looked at entries from learners across gender, ethnicity, urban/rural, SIMD and ASN. However, the analysis of the 2020 estimates and post-moderation results is confined to gender, age and SIMD – **there is no analysis of the variation of estimates and results for learners identified as having an additional support need**.

SQA examinations 2021

For 2021, Highers and Advanced Highers are expected to go ahead, and National 5 examinations will be replaced by a system where grades are awarded based on coursework and teacher judgement [24]. National 5 awards will:

> "*generally be based on two to four pieces of work per subject that will be formally graded by teachers. The SQA will publish guidance for teachers on evidence gathering and estimation, and subject-specific guidance on the key pieces of work that young people will need to complete. The SQA will also work with schools and colleges throughout the year to quality assure the assessment of learners' work*."

It is essential that learners with additional support needs have access to the same type of supports when undertaking these pieces of work that they would have had in the external examination. For example, learners may require assessments to be provided in accessible formats such as Large Print, on coloured paper, or digitally; may require human support to read, scribe, prompt or provide practical help; or may require appropriate assistive technology.

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[23] SQA (2020) Information for Centres Producing Estimates Session 2019–20. BA 7316.
[24] Scottish Government (2020) SQA Awards 2021. 7/10/20

One of the four key principles which underpins SQA assessment arrangements is that:

> "*Assessment arrangements should reflect, as far as possible, the candidate's normal way of learning and producing work.*"[25]

Therefore supports used in class assessments should be similar to those used in external examinations. However, this new assessment system is replacing a very well developed process that has been in place for many years, and it is essential that teachers have clear explicit guidance to ensure that learners with additional support needs can demonstrate their attainment in a way that does not compromise the integrity of the qualification.

Free Text Reader Technology

CALL provides free text reader technology for learners to use to access digital textbooks and learning resources and also assessments such as the SNSA and SQA Digital Question Papers. The text readers in conjunction with the Scottish computer voices provides a free base level of accessibility software across the country, enabling equality of access and saving schools, parents and carers the cost of purchasing commercial software.

WordTalk

WordTalk is a free text reader for Microsoft Word, created by Rod Macauley in 2005. The current version has been downloaded 232,483 times from the WordTalk mini-site since January 2009. Rod originally programmed it for Windows XP and Word 2003 and it is still functioning on most versions of Windows and Word fourteen years later.

There has been a significant drop in the number of downloads over the past few years, probably because Learning Tools is now available built-in to Word and provides good literacy supports.
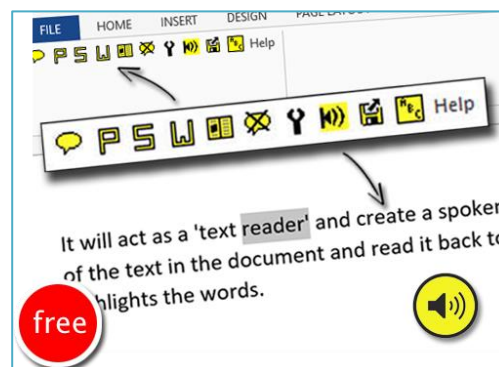
Table 7: WordTalk visits and downloads

WordTalk	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
WordTalk (visits to site)	130,518	208,088	166,240	233,810	324,804	**269,579**
WordTalk (downloads)	19,555	21,472	26,395	32,731	19,588	**7,471**

Universal text readers

Learners require a general-purpose text reader for accessing the internet, emails and PDF files – for example textbooks or SQA Digital Question Papers. The CALL website provides information and links to a number of free tools for Windows devices including for example Ivona MiniReader and NaturalReader.

NaturalReader

NaturalReader is a free, useful and simple text-to-speech program for Windows. The CALL website links to the supplier's own site for people to download the latest version 16, and we also have

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[25] SQA (2019) Assessment Arrangements Explained: Information for centres.

permission to provide version 13 of the software from the CALL website that may work more effectively on older technology direct.

Table 8: NaturalReader 13 downloads

NaturalReader 13	2017-18	2018-19	2019-20
NaturalReader 13 downloads	309	465	**405**

MyStudyBar 4

Craig Mill's MyStudyBar 4 was launched on 30 August 2017 and was downloaded 5,483 times in 2019-20. It provides a collection of free tools that can support learners with literacy difficulties, particularly in a secondary school, or FE / HE setting, in a package that can be used on individual computers, or from a USB memory stick.

Table 9: MyStudyBar downloads

MyStudyBar 4.1	1.9.17 – 31.3.18	2018-2019	2019-2020
MyStudyBar 4.1 downloads	3,346	5,216	**5,483**

Doorway Online

Doorway Online[26] is a collection of free and highly accessible educational activities that learners find easy to use independently. Each activity has a range of accessibility and difficulty options. Originally developed in the early 1990s by Philip Whittaker with funding from Scottish Borders Council, it is now managed by the Doorway Accessible Software Trust, a Scottish charity. Allan, Craig and Shirley are all trustees.

CALL Scotland provided advice on accessibility issues when the activities were first created and made available on the web and have continued to work closely with Philip and the Trust to maintain the website and ensure the continuing availability of the resources. The most popular resources have now been converted to HTML5 as their original Flash format will not be supported by browsers after the end of 2020. Remaining resources will be converted in due course.

CALL has contributed to the funding costs of hosting the website in recent years, but this is not required now as a result of increasing revenue from a small number of discreet advertisements on the website. The Welsh Government recently approached Doorway with regard to the production of a Welsh language version of the Text Type 3 online typing tutor. A contract for this work is under negotiation.

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[26] Doorway Online https://www.doorwayonline.org.uk/

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

- 36 pupils were referred for assessment and support (49 in 2018-19).
- 45 pupils received a comprehensive assessment for communication and/or assistive technology (54 in 2018-19).
- 90 pupils were supported directly in school through assessment or follow up visits (104 in 2018-19).
- 10 pupils were supported in 16 online sessions with teachers, therapists and / or parents.
- 202 pupils in 26 local authorities were supported directly in school or indirectly through telephone or email advice (185 pupils / 21 local authorities in 2018-19).
- 129 assessment and/or support sessions were delivered in schools (174 in 2018-19).
- 19 Partnership Agreements or Service Level Agreements (SLAs) were made with local authorities and schools for 213 days of work for 2019-20 (19 Agreements / 203.3 days in 2018-19). The following local authorities had arrangements with CALL: Argyll & Bute, Clackmannanshire, Dumfries & Galloway, East Dunbartonshire, East Lothian, East Renfrewshire, Falkirk, Highland, Inverclyde, North Ayrshire, Perth & Kinross, Renfrewshire, Shetland, South Ayrshire, South Lanarkshire, Stirling and West Dunbartonshire. Agreements were also negotiated with two schools to provide training for staff and limited support for pupils.
- 34.5% of Assessment and Support staff time was spent in schools (44% in 2018-19); 40.4% was taken up with support from CALL by telephone, email and video conference (32% in 2018-19) and 25.1% was taken up with travel (24% in 2018-19).

Table 10: Assessment and Support 2014-20

Number of …	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
New referrals	37	39	42	48	49	**36**
Pupils assessed/supported on site	71	72	99	90	104	**90**
Pupils supported online	-	-	1	1	4	**16**
Assessment/support sessions	107	135	188	163	174	**129**
SLA/Partnership agreements with local authorities and schools	16	17	17	17	19	**19**
(Number of days work)	196.5	182.75	196	183.7	203.3	**213.0**

Impact of Covid-19

- **Number of referrals to CALL**. We received only four referrals between the lockdown on March 18th and the end of our reporting year on 31st July, compared with nineteen for the same period in 2018-19. With most schools closed and vulnerable children either staying at home, or attending hub schools, input from CALL was restricted for some learners with additional support needs.

- **Assessment / Support Visits.** Following lockdown in March, planned visits to schools to work with staff and learners were cancelled for the summer term. Schools opened in August but Scottish Government regulations only allow for essential visits and so where possible, support has been provided for learners, teachers and parents by phone, email, or videoconference. We researched and devised a set of working documents to govern our risk assessments and procedures for making visits to schools. These will be updated in line with Government guidance.
  - CALL Scotland Covid-19 Working in Schools Policy.
  - CALL Scotland Covid-19 Visit Risk Assessment.
  - CALL Scotland Visit Planning Assessment.
  - CALL Scotland PPE Policy.

Learners referred to CALL in 2019-20

A key part of CALL's work is to support individual children and young people in Scotland who may benefit from assistive technology or augmentative communication, due to complex communication, physical, or other additional support needs.

Table 11 gives an indication of the underlying factors giving rise to learners' additional support needs, and the areas in which assistance is requested from CALL.

Speech, language or communication needs are the most common factors and most pupils have complex support needs arising from more than one condition. On average, three factors giving rise to additional support needs are reported in the referral forms sent to CALL.

Where assistance is required for Augmentative and Alternative Communication, the main focus is on the provision of a high-tech communication aid. Referrals for Assistive Technology focus more on devices for writing / recording, or to support reading.

There was also significant demand for support with teaching & learning software / apps, personalised resources and teaching & learning strategies

Table 11: Pupils Referred to CALL in 2019-20

Factors giving rise to ASN	Number		Areas where assistance is requested	Number	
	18-19	19-20		18-19	19-20
Speech, Language / communication needs	22	19	**Augmentative and Alternative Communication**		
Visual impairment	13	18	- social communication skills	14	9
Mild / moderate learning difficulty	11	15	- low tech, e.g. printed symbols	6	4
Autism Spectrum Conditions	12	14	- high tech, i.e. communication aid	26	12
Severe / complex learning difficulty	16	13	**Assistive Technology for:**		
Severe / complex physical disability	9	7	- reading	12	18
Social, Emotional & Behavioural Difficulties	10	5	- writing or recording	32	25
Hearing Impairment	6	4	- numeracy	12	12
Dyslexia / specific learning difficulty	7	4	- participation and control	0	5
Mild / moderate physical disability	13	3	**Alternative access**	19	13

Family circumstances	2	**2**	**Personalised resources**	19	17
Learning environment	4	**1**	**Teaching & learning strategies**	20	17
English as an Additional Language	1	**0**	**Teaching & learning software / apps**	27	24
Other	20	**3**			

Assessment and Support via Video Link and digital collaboration

Generally we consider it essential to visit a learner in school to adequately carry out a full assessment of needs and to evaluate possible technologies and strategies. This is because the assessment must take into account the physical and digital environment, the learning tasks and activities and the needs of practitioners in the school. It is also important to meet with parents and carers where possible. Going to the school is the simplest and most efficient way to address needs.

The advent of Covid-19 and increasing awareness of and access to video conference facilities among parents, teachers and therapists has resulted in greater use of the technology. There were sixteen instances of support by video link in 2019-20, all but one taking place after lockdown in March. The majority of the online support sessions were with parents, but teachers, speech and language therapists and OTs have also taken part. We have used a variety of platforms, including Skype, Zoom, Collaborate, Near Me and Microsoft Teams, depending on what the participants had access to, and were most comfortable with using.

Video assessment and support has several potential advantages, in addition to reducing the risks of spreading Covid-19, such as:

- a reduction in travel time, freeing up more time for development and direct support for the learner and practitioners;
- a reduction in travel cost and of environmental pollution;
- better contact and support for learners in areas of Scotland that are further away from Edinburgh;
- the possibility of shorter, more frequent supports than is possible with face-to-face visits;
- improving collaboration with parents/carers and practitioners – often it is difficult to arrange face to face meetings;
- more efficient mechanisms to document and share practice – for example by using video.

Prior to Covid our communication, reporting and support mechanisms used telephone, email, file sharing and also paperwork. The latter has quickly become inefficient or impractical and so we have developed a Digital Pathway for assessment and support. We hope that this will deliver a more efficient and effective service for learners, parents and practitioners.

We will continue to research and develop our practice using the technology and work with colleagues in ATLAS to improve services across Scotland, particularly in rural areas.

Specialist Information & Expert Advice 4

Funded by: Scottish Government Learning Directorate 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.
- Maintenance and development of CALL Scotland websites.
- Provision of a specialist library and web search facility for enquirers.
- Provision of online Professional Learning resources on AAC (funded primarily by NHS Education Scotland).

OUTCOMES

Information and Advice

- 735 significant enquiries were received and given a response between 1/8/19 and 31/7/20, compared with 748 for the same period in 2018-19.

- 52% of enquiries were from education (58% in 2018-19); 23% from people with disabilities, parents and relatives (23%); 11% from health/social work (9%), and 14% were from other sources (10%).

- The nine websites maintained by CALL received a total of 1,226,281 visitors in 2019-20, compared with 1,116,755 in 2018-19; a 9.8% increase on last year.

- 66 blogs received 27,830 views in 2019-20, compared with 33 blogs receiving 6,879 views last year, representing a 405% increase in views.

- 75,632 information posters were downloaded from the CALL Scotland website, compared with 62,880 in 2018-19, making a 20% increase.

Impact of Covid – 19

- **Need for Information**. In the early days of the Covid-19 lockdown, although some learners with additional support needs attended local authority Hubs, most learners were at home. There was an urgent need to provide information about suitable resources, which CALL (and other organisations) tried to address through blogs and directing people towards existing resources via social media.

- **Assistive Technology Support Survey.** Many parents contacted CALL seeking advice and it quickly became apparent that many needed more comprehensive advice and support than would normally be provided by the Information Service. At the beginning of May, we launched a Survey Form, allowing parents to outline the needs of their child, the support they were looking for and the technology they could access.

- **Learning at Home Blogs.** The number of blogs published on the CALL website increased as we tried to provide parents with the information and resources they needed. We produced 28 blogs in the period from the middle of March to the end of May, compared with 8 for the same period in 2019. Many of these were 'branded' with 'Learning at Home' in the title to help parents quickly find the most relevant resources.

- **Closer monitoring of Social Media.** In March and April, social media was flooded with advice on coping with lockdown, lists of resources to help parents and special offers from suppliers, many of whom were offering free access to very useful programs for the duration of lockdown. We used Twitter and Facebook to promote information from the Scottish Government, Education Scotland and other trusted sources, and informed ourselves about the best resources to recommend for meeting the needs of learners with Additional Support Needs, and disseminating information about the most suitable resources.

Websites

CALL Scotland now hosts nine separate websites. They all require regular updating to ensure that content is up to date and relevant. In addition to this daily maintenance, there has been progress with various developments for the websites:

- The main CALL Scotland website was given a major revamp, with a new layout to make it more mobile friendly. New training and webinar booking systems were introduced, while a new resource download system allows better monitoring of statistics. A new ecommerce system has been linked into training and shop items.

- The Symbols for All site was enhanced with a new page providing information about simple communication aids that can be used with symbols and a comprehensive listing of the various symbol systems and software currently available as commercial products, or as 'freeware'.

- The new Books for All website was piloted with accessible books transferred from the old Books for All Database from December until its launch in February 2020. The new site automatically adds a security watermark to downloads and provides automatic feedback emails and reminders. Teachers can send a shared link to a pupil with a print disability to allow them to download a resource for use at home.

- There was considerable redevelopment of the ASL and Technology conference website to repurpose it to host an online conference.
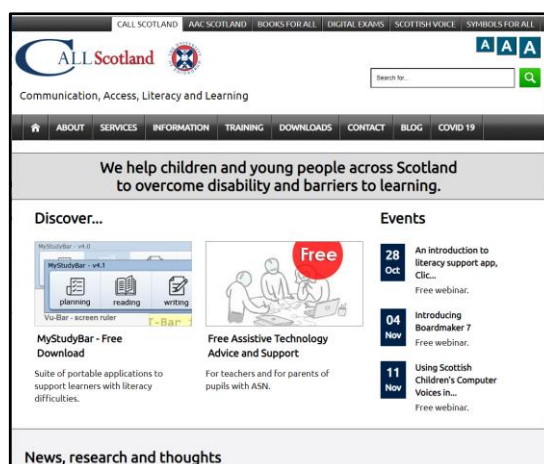
The total number of visitors to the nine CALL websites increased by 9.8% to 1,226,281. The main CALL site more than accounted for the increase, but five sites received more visitors, while four showed a decrease. Other than the main site, **Symbols for All** showed the biggest gain, though the figure for 2018-19 represented only six months of activity following its launch in 2018. The WordTalk site showed the biggest decrease, reflecting the declining significance of WordTalk as an assistive tool for Word, when the built-in Immersive Reader is increasingly available in Microsoft products.

A summary of figures for visitors to the CALL websites and downloads between 2014 and 2020 is provided in Table 12.

Table 12: CALL website visits and downloads

CALL Scotland Websites	2015-16	2016-17	2017-18	2018-19	2019-20
CALL Scotland main site (visits)	428,899	392,536	540,301	494,161	**619,079**
CALL Scotland (resources downloaded)	286,192	269,357	245,644	252,862	**293,313**
WordTalk (visits)	208,088	166,420	233,810	324,804	**269,579**
WordTalk (copies downloaded)	21,472	26,395	32,731	19,588	**7,471**
The Scottish Voice (visits)	26,468	34,432	40,867	38,238	**42,683**
Heather downloads	905	954	908	775	**534**

CALL Scotland Websites	2015-16	2016-17	2017-18	2018-19	2019-20
Stuart downloads	646	722	741	603	479
Callum	-	-	-	-	165
Isla	-	-	-	-	161
Andrew	-	-	-	-	128
Mairi	-	-	-	-	129
Ceitidh (Gaelic voice) downloads	288	267	259	249	124
Books for All (visits)	90,530	103,155	132,505	124,555	115,331
Books for All Database - old (downloads)	52,569	51,449	42,725	34,855	17,447
Books for All Database – new (downloads)	n/a	n/a	n/a	n/a	5,528
Communication Passports (visits)	54,603	57,703	64,435	70,444	46,978
Digital Exams and Assessment (visits)	27,279	54,515	32,117	33,231	33,680
ASL and Technology Conference (visits)	11,407	12,019	13,446	15,252	17,064
AAC Scotland (visits)	25,412	34,214	43,729	45,523	43,590
Symbols for All (visits)	n/a	n/a	n/a	16,547	38,297
Symbols for All (downloads)	n/a	n/a	n/a	9,001	16,802
Total visits	872,686	854,994	1,101,210	1,116,755	1,226,281

Figure 10: Visits to CALL websites 2012 - 2020
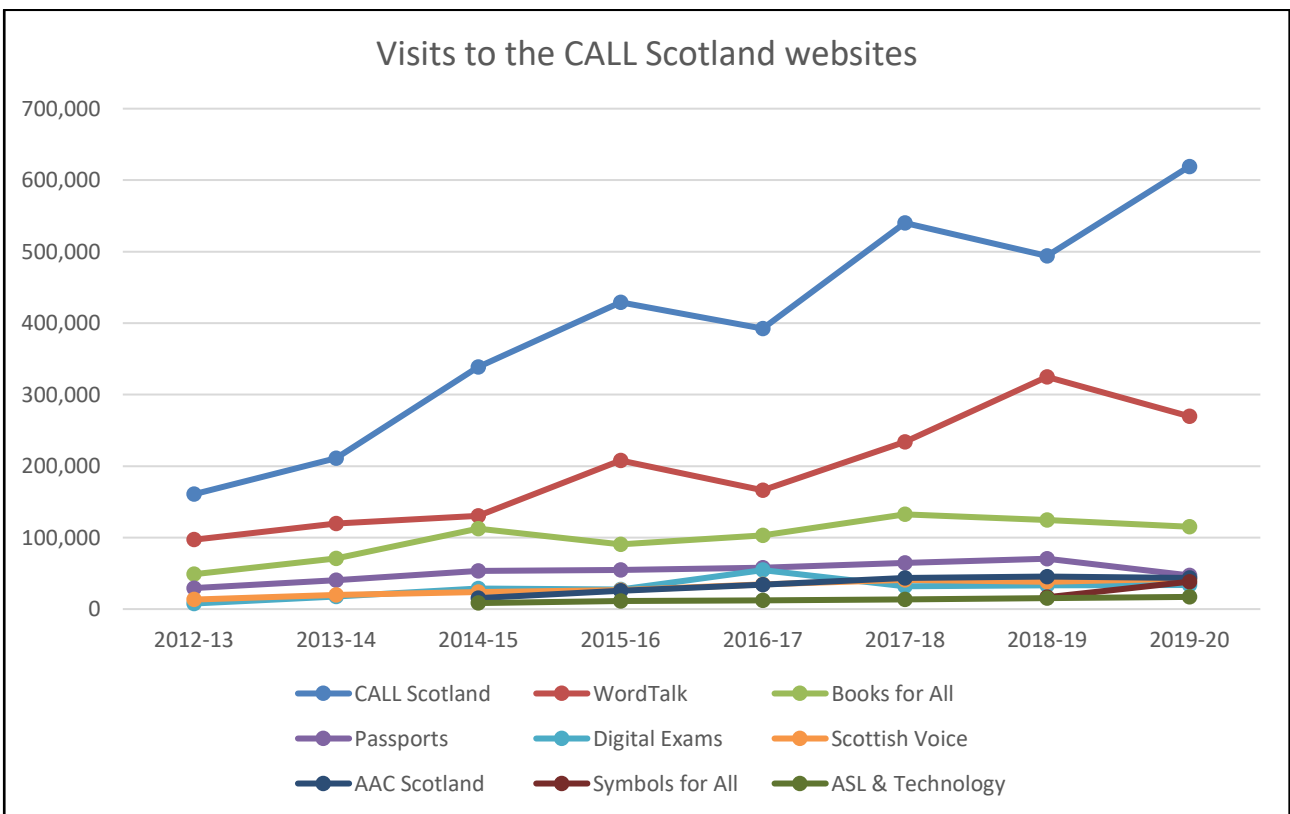
Posters

The free, downloadable CALL posters, which provide key information about assistive technology and augmentative and alternative communication continue to be popular (Table 13), with a total of 75,632 downloads in 2019-20.

The posters have helped to significantly raise the profile of CALL Scotland, both nationally and internationally in recent years. Three new posters were produced in 2019-20:

- A Complete Beginners Guide to the iPad (April 2019)
- Setting up Guided Access on an iPad (iOS 12) (April 2019)
- Using Windows 10 Accessibility Tools to Support Learners with Visual Difficulties (November 2019)

In addition to the new posters, seven existing posters were given a significant revision:

- Android Apps for Learners with Dyslexia / Reading and Writing Difficulties
- ChromeBook Apps and Extensions for Learners with Dyslexia
- iPad Apps for Complex Communication Support Needs
- iPad Apps for Learners with Complex Additional Support Needs
- iPad Apps for Learners with Dyslexia
- Powerpoint Books for Young Readers
- Using Book Creator
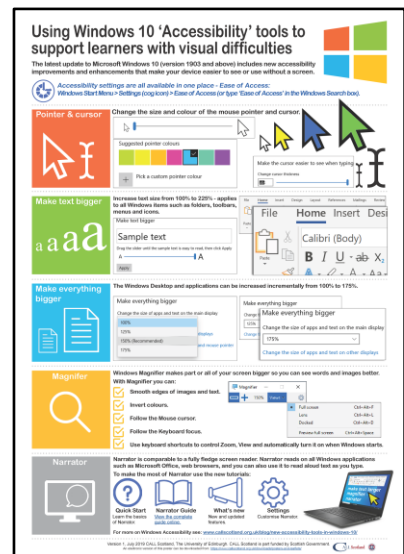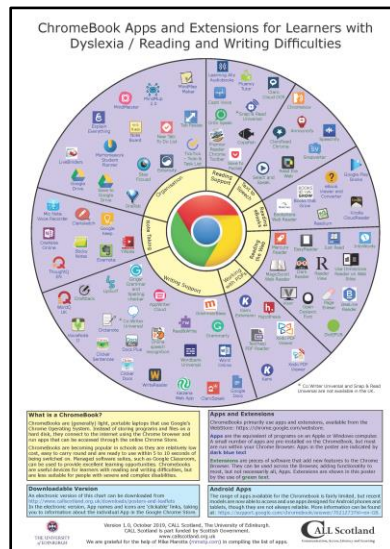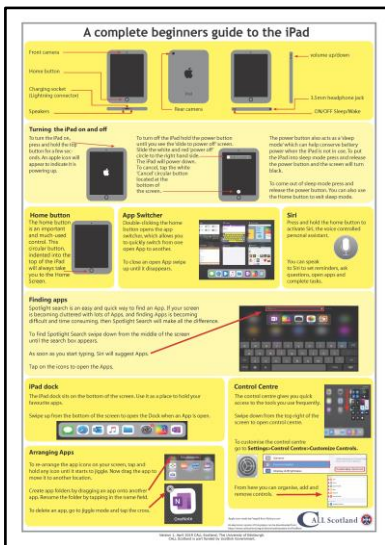
Table 13: Downloads of CALL Scotland Posters

Downloads of CALL Scotland Posters	2019 - 20	Total
20 Ways to be Excellent (leaflet) (Published 2017)	695	1,972
20 Ways to be Excellent (poster) (Published 2017)	728	2,142
A Complete Beginners Guide to the iPad (Published April 2019)	425	425
A Guide to Single & Multi-Message Devices (Published 2017)	854	2,513
Addressing Reading Difficulties (Published 2015)	1,751	10,429
Android Apps for Complex Communication Support Needs (Published 2016)	3,572	7,724
Android Apps for Learners with Dyslexia (Published 2015)	5,069	15,098

Downloads of CALL Scotland Posters	2019 - 20	Total
Are you Meeting your Legal Requirements for Computer Accessibility? (2016)	506	1,901
Chromebook Accessibility and Learning Tools (Published January 2019)	803	1,114
Chromebook Apps and Extensions for Learners with Dyslexia (Published 2016)	9,792	18,210
Eye Gaze Setup Guide (Published 2018)	689	1,635
Eye Gaze Software Curve (Published 2015)	2,040	9,583
ICT to Support Learners with Dyslexia (Published 2017)	908	3,408
Inclusive Learning Resources (Published 2016)	924	2,840
iPad Apps for Complex Communication Support Needs (Published 2014)	11,175	73,092
iPad Apps for Learners with Complex Additional Support Needs (Published 2019)	3,357	4,583
iPad Apps for Learners with Dyscalculia/Numeracy Difficulties (Published 2017)	4,784	12,022
iPad Apps for Learners with Dyslexia (Published 2013)	12,555	149,521
iPad Apps to Support Creativity (Published 2015)	1,230	2,051
Keep Talking! (Published 2014)	705	10,362
Making the Most of Notes (Published 2017)	606	1,495
Making the Most of PDFs and Adobe Acrobat Reader for Learners with ASN (Published 2017)	623	1,230
MyStudyBar (Published 2019)	446	518
PowerPoint Books for Young Readers (Published 2016)	3,074	8,168
Raising Attainment with Microsoft Learning Tools (Published April 2018)	537	1,340
Reading and Writing Support on a Mac (Published 2017)	528	1,431
Setting up Guided Access on an iPad (iOS 12) (Published April 2019)	296	296
Supporting Writing Difficulties (Published 2014)	2,004	13,176
Using Book Creator (Published 2017)	1,305	12,766
Using the iPad to Support Dyslexia (Published 2015)	1,563	10,599
Using the iPad to Support Learners with Physical Difficulties (Published 2016)	473	3,283
Using the iPad to Support Learners with Visual Difficulties (Published 2016)	626	3,067
Using Windows 10 'Accessibility' Tools to Support Learners with Visual Difficulties (Published November 2019)	683	683
What's New in iOS 10 (Published 2016)	315	1,415
	75,632	**396,182**

Information Resources

Table 14: Other Resources downloaded from the CALL website in 2018-19.

Other Downloadable Resources	2018-19	2019-20
Electronic Books and Reports		
A Guide to Word Prediction (Published November 2019)	-	**662**

Other Downloadable Resources	2018-19	2019-20
Making the Most of Microsoft Word 2016 to Support Learners with Reading Difficulties (Revised 2018)	1,354	**1,688**
What's new in iOS 11 (Revised 2017)	368	**179**
Talking in Exams Project Report (Published 2016)	469	**620**
iPads for Communication Access Literacy and Learning (Revised 2014)	2,502	**12,293**
Keep Talking! (Published 2012)	2,006	**10,860**
Accessible Text: Guidelines for Good Practice (Published 2010)	1,177	**5,000**
Selected Quick Guides and Info Cards		
Mathematical and Scientific Symbols (Published 2014)	4,747	**7,160**
Chromebook Accessibility Features (Published 2016)	2,079	**3,075**
Using Calibre to Read E Books and Convert E Pub Files for the Kindle (Published 2014)	2,790	**2,762**
Guided Access for the iPad (Published 2017)	417	**600**
Speak Selection and Speak Screen Info Card (Published 2016)	643	**657**
Using Siri Speech Recognition Info Card (Published 2016)	**646**	**824**

Quick Guides have been temporarily withdrawn from the CALL Scotland website to allow time for some much-needed updating of resources and a general reorganisation of categories. They should be available again by the end of 2020.

Blogs

The CALL Scotland website has for many years included a Blog section, where information about forthcoming events, new equipment, Government initiatives and other developments can be provided. CALL staff also use the blog for short articles about the use of assistive technology and AAC in education that don't necessarily fit within the main structure of the website.

The number of blogs published doubled between 2018-19 and 2019-20, rising from 33 last year to 66 this year. 28 of these blogs were written between the middle of March and the end of May as Lockdown meant that staff had more time than usual for producing this work. There was high demand for information over this

Free Software for Use at Home

Tuesday, 31 March 2020. Posted by Paul Nisbet

Students with additional support needs can get popular assistive software for use at home during the Covid-19 situation. Read more to find out about some really great software and apps that are available to you. Clicker and DocsPlus Clicker and DocsPlus are well known writing tools with versions for…

Read more

period as teachers moved teaching online and parents looked for resources they could use to support Learning at Home, a title we used to 'brand' many of the blogs we produced at this time. Our three most popular blogs from this period reflect the information that teachers and parents were looking for: Complex Needs Home Learning Resources (2,960 views) Symbol Resources for COVID19 (2,672); Free Software for Use at Home (2,437). The average number of views for individual blogs was 422.

Table 15: Blog views 20019-20

Views of CALL Scotland Blogs, 2019-20		
Scottish Child Digital Voices are Now Available!	5/8/19	**428**
Technology Can Help Raise Attainment for Learners with Dyslexia	21/8/19	**488**
Do We Need More Voice Choice for AAC?	26/8/18	**184**
Technology to Support Learners with Communication Impairment	29/8/19	**77**
New Symbols for All Widgit Resources	2/9/19	**427**
I-ASC Project Workshop, Manchester	20/9/19	**20**
Can You Help with an Academic Survey?	20/9/19	**42**
CALL Scotland and CereProc Win Design for Diversity Award	11/10/19	**123**
CALL Scotland & Scottish Book Trust Partnership Win AAC Award	13/10/19	**255**
Inclusive Digital Learning - an Online Professional Learning Course	23/10/19	**416**
Leaving School with Dyslexia	6/11/19	**578**
Tobii C-Series Devices - Looking for New Home	7/11/19	**131**
A Guide to Word Prediction	18/11/19	**162**
Book Week Scotland - Bookbug Resources	19/11/19	**430**
Have Your Say on ASL in Scotland	25/11/19	**166**
Sign up for the New Books for All Database	28/11/19	**374**
Christmas Themed Accessible Learning Activities	4/12/19	**345**
How Do I Share Files between an iPad and Windows without Wi-Fi?	10/12/19	**422**
Anyone up for a Game?	16/12/19	**131**
Supporting Learners with a Visual Impairment Using Windows 10? New Video Guides Available!	7/1/20	**481**
Technology Should Help My Learners with ASN but I Don't Know How	8/1/20	**280**
2019 Digital Papers Focus Group and past Papers	20/1/20	**103**
Scottish Child Voices Now in Widgit Online	24/1/20	**56**
Looking for an Assistive Technology Professional Learning Course?	5/2/20	**277**
Scottish Voices are in Snap Core First for Windows	10/2/20	**83**
A Great Example of the Power of Immersion Reading Technology	24/2/20	**167**
Carers Act National Marketing Campaign	27/2/20	**21**
SQA Publish Information on Assessment Arrangements for the 2019 Diet	2/3/20	**48**
Need to Share a Computer Screen or Whiteboard to an IPad?	5/3/20	**913**
DyslexiFest, Stirling	9/3/20	**84**
Switch Accessible Choice Boards in PowerPoint	12/3/20	**168**
CALL Scotland Team Working from Home	18/3/20	**43**
Want to Find Out About Remote Learning?	18/3/20	**241**

Views of CALL Scotland Blogs, 2019-20		
Symbol Resources for COVID19	23/3/20	**2,672**
Complex Needs Home Learning Resources	26/3/20	**2,960**
Interested in Joining the CALL A.T. Online Community?	31/3/20	**244**
Free Software for Use at Home	31/3/20	**2,437**
CALL Scotland Loan Bank Suspended	31/3/20	**65**
Google Classroom and Dyslexia	6/4/20	**555**
Free Games-based Inclusive Software for Use at Home	7/4/20	**107**
Easter Fun Activities for Home Learning	8/4/20	**275**
Key iPad Resources on the CALL Website - 1. Dyslexia	9/4/20	**185**
Key iPad Resources – 2. Autism, Complex Needs, Communication Support	10/4/20	**222**
Survey Shows How Families are Coping with the Impact of Covid-19	17/4/20	**130**
Learning at Home - Coloured Overlays and Text to Speech	21/4/20	**242**
Learning at Home - COVID-19 Symbol Communication Resources	22/4/20	**664**
Learning at Home - Text to Speech	22/4/20	**391**
Professional Learning Delivered to You at Home	23/4/20	**165**
Learning at Home - Looking for Programs to Support Your Child's Literacy?	24/4/20	**287**
Learning at Home - Looking for Programs to Help with Numeracy?	28/4/20	**131**
Learning at Home - Some Insights from Teachers	28/4/20	**148**
Updated Wheel of Apps for Learners with Complex Needs	29/4/20	**1,346**
Learning at Home - Help for Parents	1/5/20	**626**
COVID-19 Support for All	6/5/20	**275**
ASL and Technology Conference Moves Online!	6/5/20	**990**
Using Text-based Communication Apps on IPad	7/5/20	**218**
Bookbug Story Resources for Parents	25/5/20	**169**
Learning at Home - are Your Learning Resources Accessible?	25/5/20	**371**
Which Symbol-based iPad AAC Apps for Communication Do You Use?	27/5/20	**244**
Learning at Home - Digital Textbooks	12/6/20	**121**
ASL and Technology Conference Success!	18/6/20	**196**
Simpler Access to YouTube	19/6/20	**101**
Special Apps for Very Special Learners	19/6/20	**653**
Updated AAC iPad App Wheel Available Now!	24/6/20	**2,528**
Working at Home - Accessing Powerpoint	26/6/20	**137**
Using T2S for Text to Speech on an Android	28/7/20	**22**
	Total	**27,830**

Social Media

Social media is an increasingly important means for receiving and disseminating information about new resources, training courses, webinars and developments in assistive technology and AAC. Under Covid-19 it became particularly useful for circulating Government guidance and information on Covid-related resources, and for monitoring and responding to issues as they developed, through feeds from e.g. Enquire and the National Parent Forum for Scotland.

CALL makes use of Twitter (683 tweets, 3,584 followers, 952 thousand tweet impressions in 2019-20, compared with 501 tweets, 2,629 followers, 488 thousand impressions in 2018-19) and Facebook (226 posts, 2,571 followers). The number of Facebook followers has nearly doubled over the past year, with some posts now reaching over 30,000 people.

CALL AT Teams Community

The CALL AT Teams Community was started at the beginning of lockdown to provide a secure and supported online space for people to communicate and share resources. There are now over 260 members, from all over the world, consisting of teachers (including FE and HE staff) professionals, parents and AT suppliers. The CALL AT Teams Community has dedicated 'Channels' e.g. Technology to support Communication, Technology to support literacy etc, allowing people to share ideas, communicate and discuss issues relevant to their own specialised areas.

Other Information Services

- 14 CALL publications from the past were sold, with Personal Communication Passports (9 copies) and Keep Talking! (3 copies) making up most of the sales.

- Eight issues of CALL's email newsletter were distributed during 2019-20. The email newsletter had 3,066 subscribers by the end of July 2020, compared with 2,926 in 2019. There were 606 new subscribers, but 466 people either unsubscribed, or were removed as addresses became defunct to comply with GDPR.

- 2 items were added to the CALL library in 2019-20. 6 journals are currently received.

Consultation sessions

We offer a limited number of consultation sessions, usually about an hour long, providing people with an opportunity to come to CALL and explore software and technology options with the guidance of a member of CALL staff. These sessions allow people to see and try different solutions, but with no formal recommendations or report.

16 consultation sessions were provided in 2018-19, compared with 23 last year. Two further sessions were indefinitely postponed due to Covid-19. It may be possible to offer consultations by video, but this will not always be a practical alternative to a session in CALL. Consultation sessions provided in 2019-20 included:

- An adult with a physical disability that made it hard to target individual keys on a standard keyboard tried various alternative keyboards and borrowed an Intellikeys keyboard.
- An S5 pupil with an autism spectrum condition, who has reading and writing difficulties, but is an excellent verbal communicator. He was supported by a reader and scribe, but realised he needed to become more independent. He likes using his iPad, so we looked at Siri and other built-in features to support reading and writing, and a range of apps to support notetaking and the use of digital books.
- A P5 pupil with dyslexia who was struggling with reading and writing. He can read most words in age-appropriate text, but struggles to decode longer words so forgets the rest of

the sentence. We looked at using a Reader Pen, scanning apps and text-to-speech options to support reading and speech recognition to support writing.

Feedback

"Allan was very helpful. Lovely to have someone who really tried to understand our problems and think of ways to solve them. Thank you!."

(Parent of dyslexic learner, following a consultation session.)

" CALL Scotland have it just right, there is nothing like you in England. Your resources and everything are just fantastic. Everyone is so amazing and helpful."

(Teacher from school for learners with physical or sensory disabilities.)

'CALL Scotland posters are so useful. Can't praise them enough. Huge range in their website. First stop for assist technology information.

(Retired headteacher / education consultant.)

Career-Long Professional Learning (CLPL)

5

Funded by: (a) Scottish Government Learning Directorate Core Grant (PL development)

(b) Charges for course participants (PL delivery)

OBJECTIVES

1. Identification of PL requirements in complex additional support needs, AT & AAC for staff in both special and mainstream settings.
2. Development and delivery of PL.

OUTCOMES

Career-Long Professional Learning at CALL Scotland

Information on CALL's Programme of Career-Long Professional Learning (CLPL) for 2019-20 was distributed to around 2,700 schools via local authority intranet systems. Further copies of the programme were printed for distribution at conferences and other local and national events. These are often handed to teachers during the course of a school visit, with relevant courses highlighted. Throughout the year there was further promotion of courses via direct emails to schools, Twitter, CALL blog posts and e-newsletters.
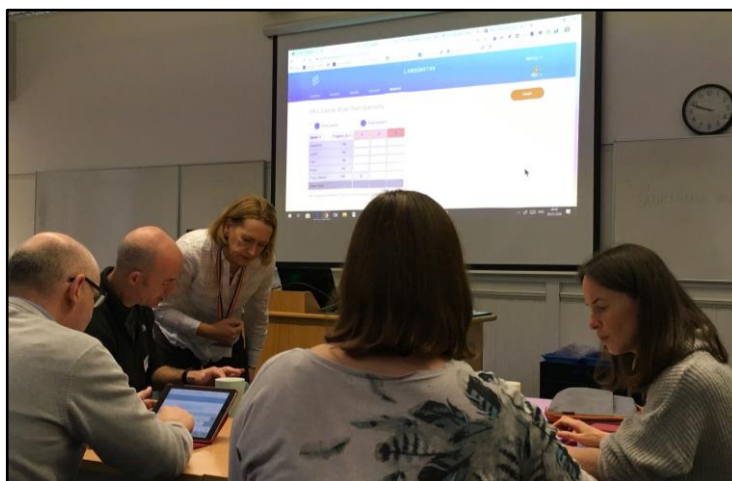
Impact of Covid-19

- With schools being closed from March, 9 scheduled INSET sessions were postponed. Some of these have been rearranged as online professional learning sessions during 2020-21.
- The Family Fun Technology Day, due to be held on March 28th in partnership with Augmentative Communication in Practice: Scotland, was cancelled. We hope to organise an online event for parents in 2021.
- A course due to be held on 26th March was cancelled as there was insufficient time to move it online, but four others originally planned to be run at CALL were run online, and attracted a healthy number of participants.
- The ASL and Technology Conference, due to be held over two days in June in Glasgow and Edinburgh became a half-day online conference.
- There was a very positive impact on webinar attendance, with an average of 260 people registering for the last five of the session after lockdown.
- There was a significant increase in the number of people completing the AAC Online Learning Modules.

Professional Learning Delivered at CALL

This year we ran slightly fewer courses than in recent years, but there was a significant increase in the number of participants. All but three of the courses were run online, intentionally in some cases, but due to Covid restrictions in the case of others.

Online courses are run from 16.00 – 17.30, which overcomes the need for supply cover. Running courses online makes it far easier for teachers in local authorities outwith the central belt to attend and avoids the restrictions placed by some authorities on attending courses outwith the authority. There are disadvantages to online training for teachers as they miss the collegiality and support provided in face-to-face training. Online participants do not always have access to the same versions of software being demonstrated and there can be other technical issues.

We are keen to continue to offer the courses at CALL because we know that participants who do attend benefit hugely from the opportunity to have interactive, hands on Professional Learning

and with new knowledge can return to school equipped to better support their pupils with Additional Support Needs. We want to remain a provider of high quality Professional Learning specialising in assistive technology and although we will continue to diversify and offer other types of Professional Learning (webinar, online workshops, online learning) we want to keep offering a core set of courses.

Table 16: CLPL Courses delivered at CALL, August 2019 – July 2020.

Course Title	Date	Number of participants
Inclusive Digital Technology Masters level course at CALL: Is it for you? (Online)	31.10.19	30
Technology to support learners with visual impairment - a guide to using built-in tools and features in Windows and Microsoft Word (Online)	28.11.19	7
Technology to support dyslexia and dyscalculia (Primary)	23.1.20	14
Technology to support dyslexia and dyscalculia (Secondary)	30.1.20	15
Access to technology for learners with physical support needs	27.2.20	Cancelled
Supporting learners with complex needs using technology	12.3.20	8
Creating a Communication Friendly environment	26.3.20	Cancelled
Choosing and using symbol-based AAC communication apps on iPad (Online)	23.4.20	18
Supporting adults with dyslexia in the workplace using technology (Online)	7.5.20	8
Choosing and using text-based AAC communication apps on iPad (Online)	14.5.20	8
How technology can help your dyslexic child (Online)	4.6.20	30

Table 17: Number of courses and participants on CALL based courses

PL courses delivered in CALL	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of courses	14	13	13	13	12	**9**
Number of participants	209	146	212	147	80	**138**

INSET Professional Learning

In addition to the courses in the CALL-based programme of Professional Learning, we provide a wide range of in-service courses that can be delivered in schools and local authorities, or online.

Courses are designed to meet the specific needs of the school or local authority and CALL can provide laptops or iPads so that participants can have hands on practice with the assistive hardware and software under the expert tutelage of CALL staff.

During 2019-20 CALL provided 30 INSET sessions of Professional Learning for 661 people (teachers, Support for Learning staff, classroom assistants, education psychologists, Speech and Language Therapists, parents/carers, etc.) across Scotland.

Table 18: INSET Courses provided in schools and local authorities

| INSET topic / title	Date	Venue / Authority	Number Attending
Assistive Technology for Communication	13.8.19	Drummore Primary, Glasgow	21
Inclusive Digital Technology	14.8.19	St Columbkille, Renfrewshire	20
Creating Communication Opportunities with Assistive Technology	19.8.19	Castleview School, Stirling	25
Communication Friendly Schools	20.8.19	Larbert Day Nursery, Falkirk	10
Inclusive Digital Technology	20.8.19	Kelvinside Academy, Glasgow	50
Accessibility	29.8.19	Inverness College, Highland	12
Boardmaker Online	3.9.19	Aberlour Respite / Social Care, Fife	14
Creating Interactive Stories with PowerPoint	17.9.19	St Duthus, Tain, Highland	25
Creating Interactive Stories with PowerPoint	18.9.19	St Duthus, Tain, Highland	25
Creating a Communication Friendly and Inclusive School	25.9.19	Bells Brae, Shetland	40
PGDE Technology presentation	4.10.19	Napier University, Edinburgh	40
Creating an inclusive learning environment	21.10.19	Aspire, North Ayrshire	10
Technology and Assessment Arrangements	21.10.19	Woodfarm HS, East Renfrewshire	8
Chromebooks for pupils with ASN	24.10.19	Windygoul PS, East Lothian	25
Using technology to support dyslexia and communication	28.10.19	Oban High, Argyll & Bute	24
Assistive Technology to Support Children	29.10.19	University of Edinburgh	50
Early Communication Resources	11.11.19	Kelso Rugby Club, Scottish Borders	9
Assistive Technology & Complex Needs	14.11.19	Loch Leven Campus, Perth & Kinross	36
Using Technology to Support Dyslexia	16.11.19	University of Edinburgh	16
Communication and Curricular Access using Assistive Technology	26.11.19	Carronshore Primary, Falkirk	12
Clicker 7	17.12.19	Capability Scotland, Edinburgh	10
Introduction to Boardmaker Online	6.1.20	Lasswade High School, Midlothian	14
Inclusive Digital Technology & Dyslexia	14.1.20	St Mary's Primary, South Lanarkshire	20
Communication Friendly Schools	12.2.20	Sanderson High, South Lanarkshire	40
Communication Friendly Schools	12.2.20	Bertha Park, Perth & Kinross	20

INSET topic / title	Date	Venue / Authority	Number Attending
Communication Friendly Schools	14.2.20	Oban High, Argyll & Bute	36
Technology for Visual Impairment	18.2.20	Windsor Park, Falkirk	5
Creating a Communication Friendly Environment	20.2.20	Calside Primary, Dumfries & Galloway	12
Creating Accessible Resources	21.2.20	Braehead Primary, South Ayrshire	12
Chromebooks	26.2.20	Dunbar Primary, East Lothian	20
iPad Training	26.2.20	Glasgow	12

Table 19: Number of INSET courses and participants

PL delivered in schools/authorities	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of courses	28	30	24	28	28	**30**
Number of participants	647	507	475	628	401	**661**

There was a slight increase in the number of INSET courses delivered last year even though there were no courses between March and June. The numbers attending have increased significantly, compared with last year. We speculated last year that the decrease in numbers was due to schools restricting numbers to 12 so that only one trainer from CALL would be required, but this was clearly not the case for this year.

Figure 11: Participants on CALL Professional Learning events 2013-2020
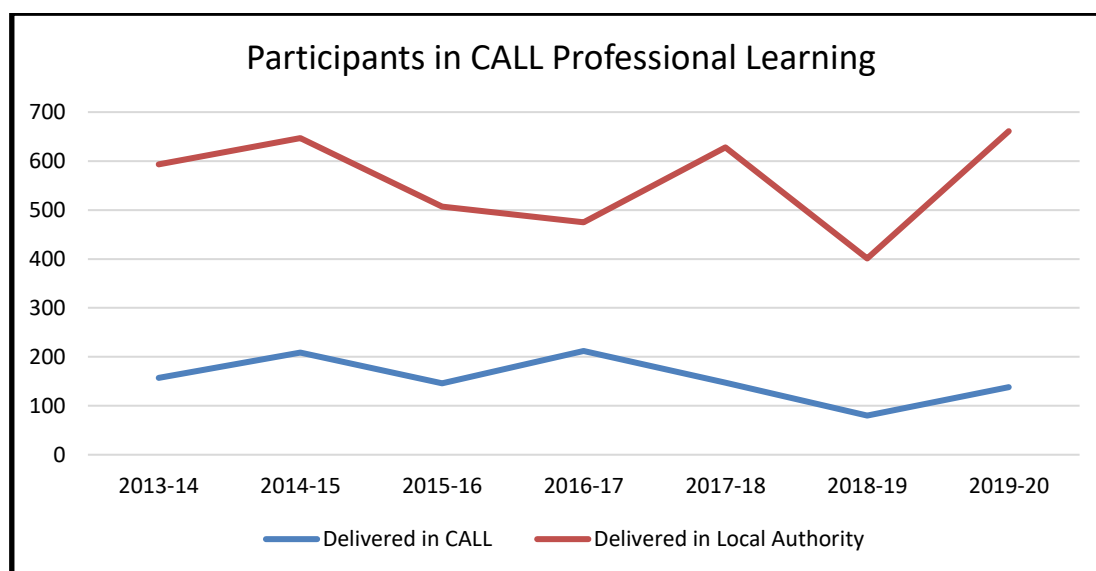
Evaluation and Feedback

Courses at CALL are evaluated on the day of delivery, with participants asked to complete an online form at the end of the course. Participants are asked, "On a scale of 1 to 10 how would you rate this training course?". Courses held at CALL in 2019-20 were given an average rating of 9.1, with 73% of participants giving a rating of 9 or 10.

'Face-to-face' courses in schools or local authorities are also evaluated using either a CALL or a local authority evaluation tool but we do not always have access to the results when a course is evaluated by the local authority. Where possible, we invite participants to complete an online

evaluation, otherwise paper forms are used, with data being transferred from the paper forms to our online system after the course. Participants in online courses are generally sent links to an evaluation form and to any additional resources to accompany the course within a couple of days of the course being delivered. Courses held in schools or local authorities were given an average rating of 9.3, with 75% of participants giving a rating of 9 or 10.

Table 20: Average rating for Professional Learning delivered by CALL.

On a scale of 1 to 10 how would you rate this training course?	Average Rating 2018-19	Average Rating 2019-20
Courses delivered at CALL Scotland	9.4 / 10	9.1 / 10
Courses delivered in schools and local authorities	9.3 / 10	9.3 / 10

Sample comments from evaluations:

'Brilliant to get such hands on training with someone there to direct you step by step how to access options. Good variety of applications and software shown to us.'

(Teacher on Technology to Support Dyslexia and Dyscalculia – Primary course)

'Having the opportunity to explore the resources in our time after being given demonstrations was really useful as too many times I have attended a course to be shown something I could adapt and use in my own classroom setting but don't get the chance to try it out properly! There were so many fantastic resources which I had never heard of before, it has opened up a new wealth of resources both free and those to purchase which I can now use in my classroom..'

(Teacher on Supporting Learners with Complex Needs Using Technology course)

'Excellent course, well presented. Great to get new ideas to help the children I work with..'

(Teacher on Inclusive Digital Technology INSET)

'Fantastic event. I found this a very useful event to attend. Wish I had attended years ago.'

(Parent attending Early Communication Resources session.)

CALL Webinars

Webinars are generally live, 20 – 30 minute presentations delivered to participants' computer, or tablet over the web. This year, two were pre-recorded and made available later, without people having to sign up to view them. Participants can listen to the presenter via audio, view materials on screen and engage in discussion via an online chat facility.

- CALL hosted 23 webinars during the year (20 in 2018-19); 8 presented by CALL staff, 9 by suppliers and 6 by other guest presenters. Guest presenters included Pete Wells, Carol Allen and Dyslexia Scotland Young Ambassador Hamish Holmes.
- 1875 people signed up for the webinars, compared with 1243 in 2018-19.
- An archive version of a webinar is generally made available via the CALL website the day after the live broadcast. Due to technical issues, a couple of webinars are not available. Links are automatically sent to everybody who signed up for the webinar, but the recordings can be viewed by any interested person. Past webinars are now stored on the CALL Scotland YouTube Channel as a Webinars Playlist. The archived webinars for 2019-20 were viewed 4,409 times, an average of 220 for each recording, compared with an average of 191 people viewing last year's files.

Table 21: CALL Webinars 2019-20

Webinar title	Date	Number signing up	Archive Views
Creating an inclusive learning environment: technology for students with ASN	4.9.19	41	330
Sensory Stories for learners with complex needs	11.9.19	61	743
TextHelp literacy support software	2.10.19	21	149
Providing a virtual classroom for learners to support Anytime, Anywhere learning	9.10.19	28	-
The benefits of Word Prediction for Learners with Literacy Difficulties	30.10.19	45	199
Creating personalised activities quickly and easily using the Bitsboard app	6.11.19	29	165
Supporting ASN Learners: Fife's innovative use of OneNote notebooks as a 'one stop shop' for information and resources	20.11.19	66	172
Selecting an Access Method - switches, keyboard or eye gaze?	27.11.19	52	279
Using Technology to support dyslexia in the classroom - a personal journey	5.12.19	-	425
Mounts and stand options for assistive technology devices	11.12.19	52	161
FindMyFlow: Building effective study habits using Assistive Technology and Study Skills.	15.1.20	35	107
WordQ5 literacy support software	29.1.20	15	171
Mindview: Mind mapping for productivity and study skills	5.2.20	38	247
Humanware BrailleNote Touch Plus for Visually impaired students	26.2.20	18	105
How can robotic avatars help children who are long-term ill take part in school from home?	4.3.20	19	103
NEW Bookbug resources for Clicker and Grid 3 software on PC and iPad	11.3.20	30	243
Using Widgit Online to support learners with additional needs in the classroom	18.3.20	24	-
Using Windows 10 to support learners with a visual impairment	22.4.20	98	224
Using Choice Board Creator app for learners with complex needs to make choices	29.4.20	107	108
Learning using educational comics	13.5.20	152	159
Using technology to support Storytelling for all learners	27.5.20	376	-
iPad apps to support learning and communication for those with autism	24.6.20	568	154

The webinars definitely represent a 'success story' for CALL, with a steady increase in the number of people signing up and in the number of views of recordings in the Webinar Archive. Some people are regular attendees, but for every webinar there are new faces in attendance. The core audience is from Scotland and the rest of the United Kingdom, but the live webinars often have

participants from North and South America, Europe and Asia. The Archive allows people to watch a recording of a webinar at a time that suits them and also provides an expanding resource for information and professional learning. It is very helpful for CALL staff to be able to direct people to a particular webinar when they are looking for a brief overview of a topic, or a more detailed guide to using a particular piece of software.

Table 22: Numbers of webinars and participants 2014 - 2020

Webinars	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Number of Webinars delivered	19	22	23	18	20	**22**
Number of participants registering	n/a	426	738	869	1243	**1875**
Average Number of people viewing archived webinars	n/a	157	50	79	192	**215**

ASL & Technology Conference

CALL Scotland's annual Additional Support for Learning and Technology Conference and Exhibition was due to be held across two days in Glasgow and Edinburgh in June 2020, but the Covid-19 lockdown made it impossible to carry on with the original format. Instead, we moved the conference online, taking place on the morning of Tuesday 16th June, with 18 short presentations from suppliers and members of the CALL team, delivered across two parallel streams.

The online format proved to be very popular, with 572 people booking a place. Inevitably, the number of people attending on the day would have been lower. As many people would log in and out of the conference across the morning, watching a couple of sessions, then logging out to do other work, before catching another session it is not possible to get a definitive number for attendance, but the introductory session at the start of the day was viewed by 345 participants. This was a higher number than we usually have for a regular ASL and Technology conference across two days.

Evaluation forms were sent to participants after the event and 60 were returned. The responses suggested that people were just glad that the event had been able to go ahead. Participants were asked to rate the event on a scale from 1 to 10 and gave an overall rating of 8.2 out of 10.

Sample comments from evaluations:

'It was great to still be able to attend the conference.'

'Doing the conference online was much more convenient - would have helped if there was a chance to have a question and answer time at the end of each group'

'It was very easy to register and log in, but I missed meeting old colleagues and sharing coffee, and having lunch of course.'

'I found the online learning more effective as no time was wasted going between sessions, logging on or instructors not getting logged on because the instructors could not use the technology on the site. I also found it easy to go between the sessions.'

'Really pleased to be able to attend as would not have been able to in person. 15 minutes slots were great at keeping presenters concise. Was a shame to not have some feedback/question opportunities on the day as this is often key part of F2F conference.'

Conference Presentations and Talks

Members of staff from CALL are regularly invited to give formal presentations at conferences and requested talks for parent and special interest groups. The Fringe Central presentation with Dyslexia Scotland and writer / performer, Charlotte Josephine reflected the large number of people with dyslexia in the performing arts.

CALL staff delivered 9 conference presentations (listed in the Knowledge Transfer, Research and Development Section) and 8 talks in 2019-20.

Table 23: Invited talks provided by CALL staff

Requested Talks 2019-20	Date	Event	Number
Dyslexia, Creativity and Technology	9.8.19	Fringe Central, Edinburgh	16
Assistive Technology to Support Learners with Additional Support Needs	30.10.19	Parents, Giffnock Primary School, East Renfrewshire	20
Assistive Technology and Dyslexia	6.11.19	Dyslexia Scotland Angus Branch	70
Technology and Dyslexia	28.1.20	Dyslexia Scotland, East Renfrewshire Branch	100
Assistive Technology and Dyslexia 1.	6.2.20	Dyslexia Scotland Tutors, Edinburgh	3
Assistive Technology and Dyslexia 2.	18.2.20	Dyslexia Scotland Tutors, Edinburgh	7
Assistive Technology - What should People with Dyslexia know about it?	7.3.20	DyslexiFest, Stirling	45
CALL Scotland, ASL and Technology	29.4.20	Inclusion and Supporting Learners' Mental Health, Moray House	80

Exhibitions

CALL regularly exhibits at local and national conferences, study days and other events, giving people an opportunity to find out more about the work of the organisation and raising the profile of CALL. Attending these events provides us with valuable opportunities for networking and dissemination of information and can lead to requests for Professional Learning. We had a stand at 9 exhibitions in 2019-20 with an estimated potential audience of over 2,100 people.

Table 24: Events where CALL exhibited in 2019-20

Event	Date	Venue	Numbers
Communication Matters conference	8-10.9.19	Leeds	415
Early Years Scotland conference	14.9.19	Glasgow	350
Cerebral Palsy Scotland	4.10.19	Glasgow	350
DyslexiFest	5.10.19	Glasgow	440
Dyslexia Scotland Education Conference	26.10.19	Glasgow	200
'Loud in the Library', Dyslexia Scotland	7.11.19	Edinburgh	40
Parents' Evening, Kirkhill Primary School, East Renfrewshire	13.11.19	Newton Mearns	20
Enquire / National Parent Forum of Scotland Conference	29.2.20	Stirling	120
DyslexiFest	7.3.20	Stirling	180

Family Fun Technology Day

The Family Fun Technology Day run in partnership with Augmentative Communication in Practice: Scotland was planned to take place at CALL on Saturday 28th March but was cancelled due to the Covid-19 lockdown. It has been run every couple of years for over twenty years, providing opportunities for children and parents to take part in a range of fun activities and to try current technology to support communication and access to the curriculum. Parents have opportunities to find out about technology from expert professionals and to discuss common issues with other parents over a free lunch, or a cup of coffee.

We are hoping to run an online event for parents and children in the second half of 2021 with Augmentative Communication in Practice: Scotland, but it is unlikely that we will be able to bring families and professionals together for the traditional Family Day for the foreseeable future.

Post-graduate teaching

CALL contributed to several events relating to teaching within the Moray House School of Education in 2019-20.

- Craig and Allan gave a presentation on Assistive Technology to 50 postgraduate students on the Children and Technology module of the MSc Education course on 29th October 2019.
- Gillian, Joanna and Allan hosted a meeting with Katherine Lingard, a Fellow for the George Alexander Foundation, currently on a research scholarship from the Victorian Dept. of Education on 9th October, 2019.
- Paul hosted a visit by academic staff from Zagreb University's Faculty of Education and Rehabilitation who had a particular interest in the work of CALL and SSC on 4th November 2019.

- Shirley gave a presentation to MSc Inclusive Education students on Using Technology to Support Dyslexia on 16th November 2019.

Inclusive Digital Technology Professional Learning

In March 2020 the second cohort of students started the Inclusive Digital Technology (IDT) Professional Learning course, run within the Moray House School of Education and Sport's Professional Learning programme.

The Inclusive Digital Technology (IDT) is at SCQF level 11 (Masters) and is set within a context of underpinning academic literacies, legislation and policy at national and local levels. The course is also available as an optional module on the MSc Inclusive Education PgCert course.

11 students attended the course, including 8 teaching staff from a variety of teaching backgrounds (one student from Education Scotland), 2 students from the Mada Assistive Technology Centre in Qatar and one student studying the MSc Inclusive Education PgCert course.

5 students completed the 3000 word case study assignment and received a Certificate of Completion. The remaining 6 students decided to not to submit an assignment and opted for a Certificate of Attendance. The low take-up of assignment submissions can be attributed to the start of lockdown as teachers were overwhelmed with school priorities. However everyone commented that they had enjoyed the course and appreciated the level of support they had received.

Similar to the previous year, feedback was very positive.

> *"Many thanks, once again, for great feedback and additional links to further reading with my essay grade. I can honestly say I have never received feedback that makes me want to do further reading and research on a subject… this is definitely a course which I feel should be on the Inclusive education course - even a compulsory module! Going forward, we cannot avoid the use of technology and AT."*
>
> (MSc Inclusive Education Student)

Online AAC modules

The original *Introductory Modules* were made available on the AAC Scotland website in 2014 and were joined by the more comprehensive *AAC in Education* modules in 2018. The Modules are also available on the NHS TURAS learning platform.

The modules were commissioned by NHS Education for Scotland (NES) as part of the Scottish Right to Speak initiative and produced by CALL Scotland. The Modules are aimed at services, teams or individuals to help them review their current knowledge of Augmentative and Alternative Communication, develop best practice and to ensure positive outcomes for people who use AAC.
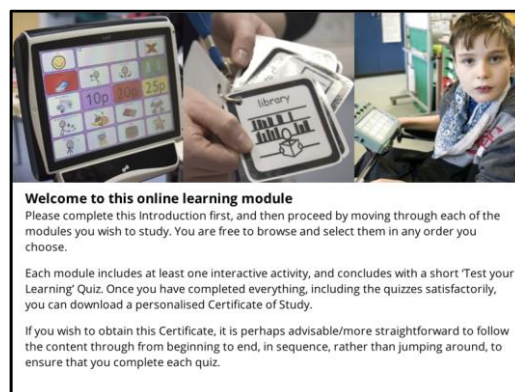
Many teachers, therapists and care workers took advantage of the lockdown period to update their knowledge and skills through online professional learning. The increase in people taking the AAC Online Modules reflects this, with the overall figure for visitors to the Introductory Modules increasing by over 300% and for the AAC and Education Modules by just under 400%. Most of the increase occurred during the period from March until June.

Table 25: Visits to AAC Online Modules

Visits to Introductory Modules			Visits to AAC & Education Modules		
Module	**2018-19**	**2019-20**	**Module**	**2018-19**	**2019-20**
Module 1	1,240	5,021	Module 1	630	2,162
Module 2	922	3,614	Module 2	446	1,867
Module 3	1,195	3,853	Module 3	401	1,554
Module 4	761	2,806	Module 4	281	1,514
Module 5	607	2,568	Module 5	346	1,353
			Module 6	350	1,309
			Module 7	352	1,258

Summary

Table 26: Summary of CLPL 2015-20

Summary of CLPL Events	2015-16	2016-17	2017-18	2018-19	2019-20
PL delivered in CALL					
Number of courses	13	13	13	12	**9**
Number of participants	146	212	147	80	**138**
PL delivered in schools/authorities					
Number of courses	30	24	28	28	**30**
Number of participants	507	475	628	401	**661**
Webinars delivered					
Number of Webinars delivered	22	23	18	20	**22**
Number of participants registering	426	738	869	1243	**1875**
Average Number of people viewing archived webinars	157	50	79	191	**215**
Presentations at conferences	20	20	26	26	**9**
Exhibitions	14	12	10	11	**9**
Requested talks for parent/voluntary groups, etc.	7	8	8	10	**8**
ASL and Technology participants	215	196	243	162	**345**

Assistive Technology Loans & Support

6

Funded by: (a) Scottish Government Learning Directorate Core Grant (Assistive Technology Loans and Support service)
(b) Section 10 grant from Scottish Government Assisted Communication Team
(b) other income generated through consultancy etc

OBJECTIVES

1. Provision of a National Assistive and Communication Technology Equipment Bank for Scotland.

OUTCOMES

- 68 pieces of equipment and software with a total value of £4,293 were added to the Loan Bank last year. This compares with £43,641 spent on 148 new items in 2018-19. The most expensive items purchased were an iPad (£530.41) and an HP Chromebook (£560.40). The other items purchased were mostly keyboards, mice, stands and interfaces, typically costing less than £100.

- 58 of these items, costing £3,970, were purchased through core funding from the Scottish Government. The remaining items were provided free by suppliers for evaluation purposes.

- In addition, we purchased equipment to make up two 'kits' of Symbols for All resources, funded through a Scottish Government Section 10 award. Equipment for Kit 1 cost £2,021.14, while equipment for Kit 2 cost £1,568.79.

- 215 new equipment loans, with a total value of £40,466, were issued to clients in 21 local authorities.

- 134 loans were provided for CALL Scotland assessment clients, representing 62 % of all loans.

Impact of Covid-19

- When lockdown was introduced in March and our premises closed, we announced the temporary closure of the Equipment Bank. We contacted borrowers, advising them to carry on using loan equipment for the moment.
- From April to June it was possible to access our premises by special arrangement so two urgent loans were dispatched during this period.
- Arrangements have been put in place for enhanced cleaning and sanitisation of equipment prior to a loan and when it is returned.

Table 27: Summary of Loans of equipment

Summary of Loans	2015-16	2016-17	2017-18	2018-19	2019-20
Number of loans	213	232	228	307	**215**
Value of loans	£41,000	£69,000	£53,450	£44,960	**£40,466**
Number of Loans to Assessment Clients	136	163	104	195	**134**
Number of instances of technical support	84	53	54	48	**17**
% "Very Satisfied" with CALL Loan Service	86	96	77	76	**93**

Table 28: Categories of Equipment Loaned

Type of Equipment	2015-16	2016-17	2017-18	2018-19	2019-20
Interface / Mount / Switch	67	41	59	69	60
Mouse / Alternative	29	24	24	35	24
Tablet	17	25	24	35	20
Tablet Accessory	37	44	24	42	25
Communication Aid	21	30	23	21	25

Type of Equipment	2015-16	2016-17	2017-18	2018-19	2019-20
Reading / Writing Aid	5	12	18	13	10
Computer	8	16	17	22	12
Computer Accessory	6	7	13	22	7
Keyboard / Alternative	10	13	11	12	14
Toy	3	11	9	20	12
Other	5	9	2	2	6

Investment in the Technology Loan Bank

Every year there is a need to invest money in the Loan Bank. Some equipment becomes obsolete, while other devices are damaged or lost by borrowers, and it is not always possible for them to pay for replacements. Some equipment simply wears out, though we still have some switches and other equipment purchased over 25 years ago that still work well. New devices become available every year and while we cannot expect to buy every device, people look to CALL as a source for new equipment that may support their pupils

We were pleased to receive a Section 10 grant from the Scottish Government Assisted Communication Team towards purchase of new communication aids and equipment to create Symbols for All Toolkits for loan to help schools implement and introduce symbolised resources. The following equipment was purchased for two kits:

- 2 x iPad & charger
- 2 x GoTalk 32+
- 2 x GoTalk9+
- 2 x BIG Step-by-Step GAMEPLAY
- 2 x BIG Step-by-Step with levels
- 1 x Little Step-by-Step with levels
- 2 x Click-On 2
- 2 x Big Beamer
- 3 x Jelly Bean Twist switch
- 1 x Wireless Switch
- 1 x SimplyWorks Receive
- 1 x Pal Pad switch

- 2 x itSwitch
- 1 x Smooth Talker with Levels
- 1 x LED Flashlight
- 3 x Gemstone Boxes
- 1 x Treasure Chest
- 3 x Hand Pointers
- Etran Frame & Etran Frame Stand
- 5 x Maxess Switch Tray
- 2 x Tri-fold Choice Boards
- All Turn It Spinner
- Low tech communication books.

Table 29: Investment in Technology Bank 2011-2019

Investment in Technology Loan Bank	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Scottish Government Learning Directorate	10,288	18,250	8,570	15,400	10,035	12,796	3,970
Other income	3,108	1,587	3,080	2,658	2,186	500	-

Investment in Technology Loan Bank	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Scottish Government Health and Social Care Integration Directorate						30,345	3,589
Number of devices added	163	139	129	157	107	148	68
TOTAL	**£13,396**	**£19,837**	**£11,650**	**£18,058**	**£12,221**	**£43,641**	**£7,559**

Technical Support

17 instances of technical support were recorded. This included troubleshooting problems with equipment on loan, designing and manufacturing a bespoke keyboard stand, devising and setting up communication grids for clients.

Evaluation and Feedback

Borrowers are asked to complete a feedback form when returning equipment. There was feedback on the outcome of a loan for 72 of the 146 loans returned in 2019-20 (49%). Of these, 65% indicated that the 'Equipment met the client's need'; 14% 'did not meet the client's need' and 21% of loans were 'inconclusive'.

47 feedback forms gave an indication of future action to be considered. Of these, 60% stated that they would try to buy the system they had borrowed, while 19% planned to borrow something else, 10% wanted to seek further advice and a further 10% did not know what they would do.

Overall, 93% of borrowers who provided feedback were 'very satisfied' with the CALL Loan Service, 5% were 'satisfied' and 2% 'Did not know'.

> *"Thank you very much for the loan of the Reading Pen. It is a very valuable tool which I can see would give some learners far greater independence in their learning. I have trialled it with some pupils and shown it to headteachers and the ASL team in my cluster. In fact the cluster has decided to buy 10 initially to share between the schools to see what impact they make.*
>
> (Teacher on loan of Reading Pen.)
>
> *"Very quickly it was evident that T knew he could communicate his wants with this (requesting chocolate at snack time). We are going to (hopefully) try the GoTalk 9 next.."*
>
> *"T seemed to love it. He got very excited every time we took it out.*
>
> (Teacher of non-verbal learner in P1 on loan of Go Talk 4+)
>
> *"Eye Gaze equipment worked well for Logan. Loved using it. Now has Scottish boy's voice Andrew. School has bought Grid Pad Eye 12 with Tobii camera (joint funded by Health and Education)"*
>
> (Speech and Language Therapist on loan of PCEye Min eye gaze system
>
> for pre-school learner with with cerebral palsy.)

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.

Conference and Study Day Presentations 2019-20

- Courtney, J. (2019) Developing Dialogic Reading Strategies for Children with Speech, Language and Communication Needs. Communication Matters, Leeds, 9th September 2019.
- Courtney, J. (2020) **Accessible early reading and writing resources for Clicker and Grid 3 software.** ASL and Technology, Edinburgh, 16th June 2020.
- Harrison, C. (2019) **Assistive Technology – information, ideas and resources for communication and access to learning.** Cerebral Palsy Scotland Annual Conference, Glasgow, 3rd October 2019.
- Harrison, C. (2019) **Curricular iPad Apps for learners with Complex Needs.** ASL and Technology, Edinburgh, 16th June 2020.
- Lawson, S. (2019) **Assistive Technology in the Classroom** Dyslexia Scotland Education Conference, Glasgow, 26th October 2019.
- Lawson, S. (2020) **Using Digital Technologies to Create an Inclusive Learning Environment.** BETT, London, 24th January 2020.
- Lawson, S. (2020) **Assistive technology to support dyslexic learners with reading, writing, spelling and organisation.** ASL and Technology, Edinburgh, 16th June 2020.
- McNeill, G., Courtney, J. and Wilson, A. (2020) **CALL Scotland - Supporting learners with communication difficulties since 1983.** Communication Matters, Leeds, 10th September 2019.
- McNeill, G. (2020) **An introduction to iPad apps for Augmentative and Alternative Communication (AAC).** ASL and Technology, Edinburgh, 16th June 2020.
- Nisbet, P. (2020) **Addressing equity for children with disabilities in school examinations and assessments.** Conférences internationales Handicap et inclusion : regards croisés Recherche-École, Paris, France, 9th January 2020. https://www.reseau-canope.fr/conseil-scientifique-de-leducation-nationale/conferences-publiques/conferences-internationales.html#bandeauPtf.
- Nisbet, P. (2020) **Introduction to Assistive Technology for Dyslexic Students in Secondary School.** BETT, London, 23rd January 2020.

Claire was successful in submitting a paper on *Inclusive approaches to literacy* to the 2019 Closing the Gap conference in Minnesota, and also succeeded in gaining funding from the Moray House Conference Travel fund, but unfortunately was not able to travel to the event due to other circumstances.

Published articles

- Nisbet, P. (2020). Assistive technologies to access print resources for students with visual impairment: Implications for accommodations in high stakes assessments. British Journal of Visual Impairment, 38(2), 222–247. https://doi.org/10.1177/0264619619899678
- Nisbet (2020) Making the most of Inclusive Technology during Covid-19. The University of Edinburgh Covid-19 Expert Insights. https://www.ed.ac.uk/covid-19-response/expert-insights/making-the-most-of-inclusive-technology-during-cov

Media

- BBC News, 16/11/19 - Synthesised Text-to-Speech gives Scottish children a voice again!
- Radio Scotland 20/8/19 - Scottish Child Voices.

- The National 7/8/19 - Scottish children are given a voice on text-to-speech machines.
- Scotsman 6/8/19 - Scottish children get voices back thanks to artificial speech.
- Radio Scotland 12/2/20 – Paul contributed to a discussion on communication technology for people with Rett's Syndrome.

Project Funding bids

- Scottish Government Assisted Communication Team Section 10. **An Implementation Tool for building AAC capacity and competencies in the classroom**. £13,831. Submitted 12/4/19, awarded 28/6/19.
- Scottish Government Assisted Communication Team Section 10. **Development of workforce AAC competencies through online AAC learning modules.** £9,775. Submitted 12/4/19. Unsuccessful.
- Scottish Government Learning Directorate. **Addressing Covid-19: technology for Additional Support Needs**. £76,837. Submitted 28/5/20. Unsuccessful.

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 earlier in National Provision of Inclusive Digital Learning Resources. A summary of research and development in 2019-20 is given here.

Chromebooks and Assessment Arrangements

Technology in the form of a computer or word processor has been used by candidates with Additional Support Needs or disabilities as an Assessment Arrangement in SQA exams for many years, and Digital Question Papers have been available since 2008.

Chromebooks are being purchased by some local authorities and schools in Scotland: Highland[27], Aberdeen[28], Stirling and West Dunbartonshire[29] have all invested in the devices while the Scottish Government purchased 25,000 Chromebooks to help bridge the digital divide[30].

The picture across Scotland remains mixed with many local authorities maintaining Windows OS as the default system for devices, while Glasgow[31] and Scottish Borders[32] have both begun programmes to provide iPads to every learner in P6 and above. For the Scottish Government laptop scheme, 18 out of 32 local authorities in Scotland have opted for additional funding to purchase other devices rather than take Chromebooks[33].

Figure 12: Chromebook in laptop, tablet and 'tent' mode

SQA commissioned CALL to carry out research into the use of Chromebooks as part of Assessment Arrangements in examinations, and our draft report was to SQA in August 2019. Some amendments were requested; the revised document was submitted in March 2020 for editing and

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[27] Highland Council (2015) Final ICT in Learning Strategic Action Plan 2015.
[28] Stirling Council (2018) Chromebooks and G Suite.
[29] West Dunbartonshire Council (2016) 2016/17 Administration Strategic Budget and Capital Plan
[30] Scottish Government (21/5/20) Schools to re-open in August
[31] Glasgow City Council (2018) Digital Glasgow Strategy.
[32] Scottish Borders Council (2019) Inspire Learning FAQs.
[33] TES (18/8/20) Over 40% of councils opt out of national laptop scheme

finally cleared for publication in September 2020. It is available on CALL's Digital Assessment website.

The research found that while Chromebooks seem to offer a practical and reliable technology for general use in schools, the accessibility options and tools that are available are more limited than those available on Windows or iPad; the apps for accessing the Digital Question Papers lack important features; there are challenges to ensure security in an examination context; and the high quality Scottish computer voices do not currently work on Chromebooks.

Some of these challenges are related to security and perhaps the most significant is that Chromebooks are designed to function online, which conflicts with SQA policy that prohibits devices from accessing the internet.

The report recommends further work with SQA, schools, Google and software developers to create and test practical solutions for using Chromebooks as Assessment Arrangements.

iPads and Assessment Arrangements

Glasgow and Scottish Borders are provisioning iPads to every learner in Primary 6 and above and so this will undoubtedly result in these devices being used in examinations. We have updated the information on the Digital Assessment website and more work is planned, particularly on technical administration and the Siri dictation facility.

Computer Dictation as an Assessment Arrangement

In the past few years, free computer dictation tools have emerged (Siri Dictation for iPad; Voice Typing / Dictation for Google Chrome and Dictate for Microsoft) and they are now being used routinely by learners. Computer Dictation has great potential for learners with physical support needs and for learners who find spelling challenging and may provide a more independent alternative for candidates than scribes. However, since most of the dictation systems require a live internet connection, there are implications for security and so research into the practical application of the technology is needed. Some preliminary work on this has been undertaken.

Digital Question Papers for candidates who use Screen Readers or Electronic Braille Displays

Paul undertook research into the accessibility of Digital Question Papers for learners with significant visual impairment or blindness who use 'Screen Readers' or electronic Braille displays to access text. The research analysed a sample of papers from the six UK school awarding bodies and found that only one provider (Pearson Edexcel) offered examination papers that were satisfactorily accessible. A survey of Qualified Teachers of the Visually Impaired in Scotland found that 52 out of 325 learners were reported to use this type of technology and so these candidates may, therefore, be disadvantaged in examinations because the technology they use to access learning resources cannot be successfully utilised to access assessments. The research was published in the British Journal of Visual Impairment in May 2020[34].

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[34] Nisbet, P. (2020). Assistive technologies to access print resources for students with visual impairment: Implications for accommodations in high stakes assessments. British Journal of Visual Impairment, 38(2), 222–247. https://doi.org/10.1177/0264619619899678

Symbols for All

Funded by: Scottish Government Learning Directorate Core Grant

Scottish Government Assisted Communication Team Section 10 fund

OBJECTIVES

- Development of free online symbolised resources for teachers, practitioners and parents/carers.

OUTCOMES

Research[35] and practice demonstrates that symbols and symbolised resources can support learners through:

- improving engagement, motivation & behaviour;
- accessing the curriculum;
- understanding new vocabulary and concepts across the curriculum;
- communication and inclusion;
- sharing their understanding of a concept or idea.

The Symbols for All website was launched on 11th October 2018 and provides free, high quality symbolised resources in a variety of symbol sets. The initial set of resources consist of curricular and communication materials made with Picture Communication Symbols (PCS), organised into the eight curricular areas of Curriculum for Excellence. This was made possible via an agreement with Tobii Dynavox to freely distribute these resources as PDFs.
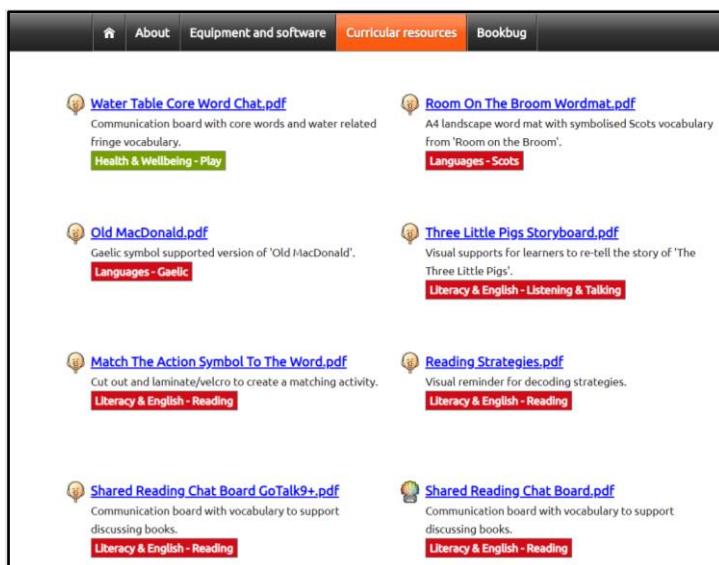
Symbol resources for learners in secondary schools

In September 2019 an equivalent set of resources created with Widgit symbols was added. Again this was made possible through an agreement with Widgit to distribute the resources as PDFs. The Widgit resources are aimed particularly at Secondary age learners and provide 'starter sets' to help schools get going and explore the potential for supporting access to the curriculum with symbols.

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[35] Symbols in Education - https://www.widgit.com/about-symbols/booklets/Symbols-in-Education.pdf

The symbols are provided as PDFs so they can be downloaded by anyone and we also provide the original Boardmaker and InPrint3 files for practitioners who have the software to edit and personalise them for their own learners.
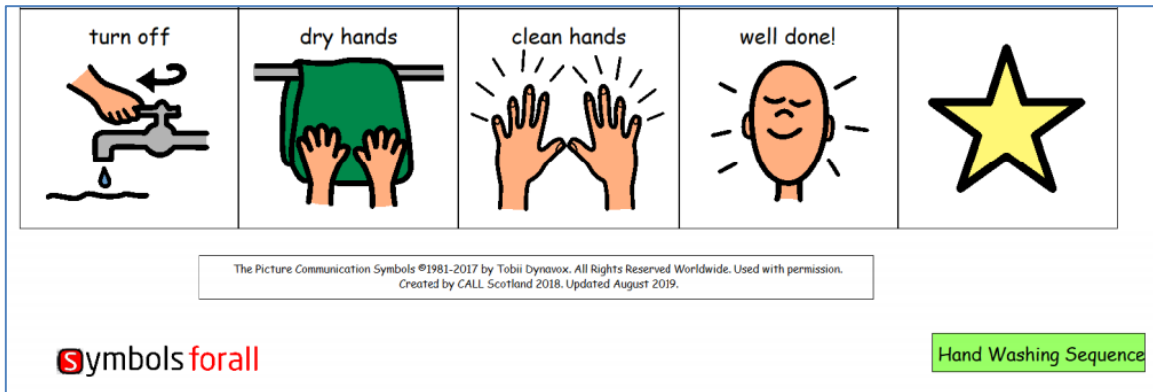

Figure 13: Symbol board for hand-washing

Symbol resources for learners who use eye gaze

The symbol resources are primarily designed as 'low tech' resources to be printed out. This year we created twelve sets of resources for the Grid 3 communication software for Windows and iPad devices, for learners to use interactively and to speak the messages aloud. The resources can be used to model sentence building, model 'core' communication words, communicate requests and create communication opportunities around a variety of curricular activities from baking to reading and more. PCS, SymbolStix and Widgit grid sets are available.

The grid sets are primarily designed for eye gaze access but can also be accessed by touch, using switches, or with a pointing device such as a joystick. They can be downloaded from the SmartBox Online Grids site. SmartBox are a UK firm that have integrated the Scottish computer voices into their products and we are pleased to extend our partnership through creating these resources.
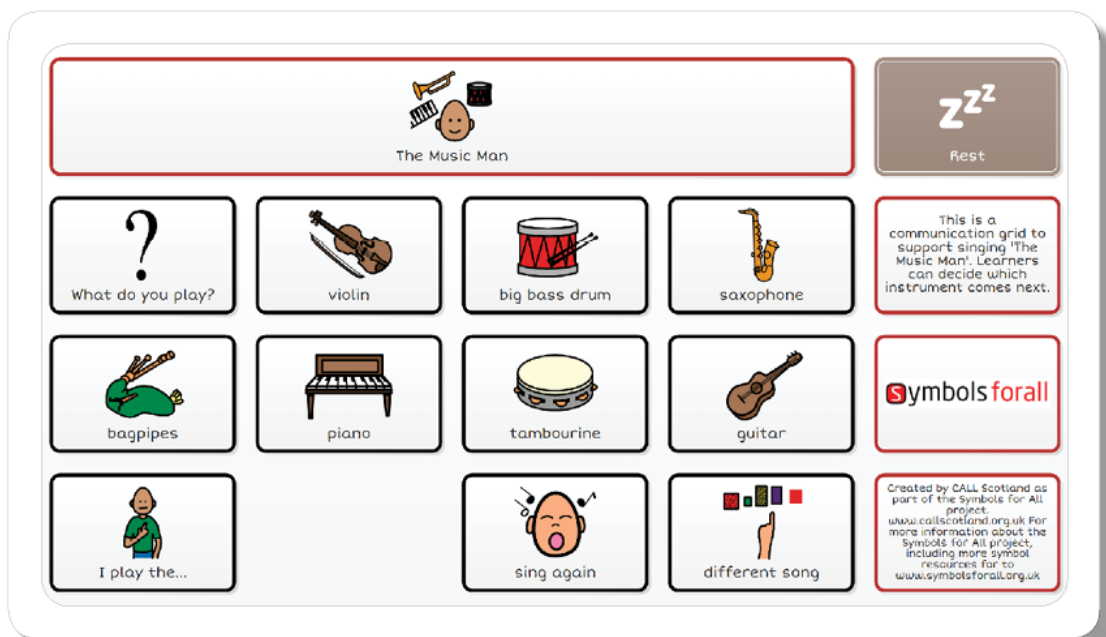

Figure 14: A communication grid for learners to choose the instrument for singing 'The Music Man'

Symbols for All AAC Implementation Toolkit

In June 2019 the Scottish Government Assisted Communication Team provided £13,381 towards research and development of an AAC Implementation Toolkit from the Scottish Government Section 10 fund.

The project has built on our Symbols for All and Communication Friendly Schools work by extending the resources and activities to incorporate current research and practice on core vocabulary[36] and then by creating a 'Toolkit' of resources for practitioners to borrow to implement symbol-based activities within a school.

Implementing Symbols for All in school requires the school to have facilities to print and laminate the resources and to have functioning communication devices. The toolkits contain all of the resources in one box, together with materials to help practitioners get going with the resources.

Claire has led on this project and the Toolkits have been trialled and evaluated by staff in a special school. Unfortunately, Covid-19 interrupted the evaluation and so we hope that this will be completed in 2020 and that the Toolkits will be available for schools to borrow thereafter.

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[36] Emily Laubscher & Janice Light (2020) Core vocabulary lists for young children and considerations for early language development: a narrative review, Augmentative and Alternative Communication, 36:1, 43-53, DOI: 10.1080/07434618.2020.1737964

Supporting Access to the Scottish Book Trust Bookbug Books

We continued our successful partnership work with Scottish Book Trust to create accessible digital copies of the Explorer and Primary 1 Bookbug bags, and and symbol packs for learners to use when reading and participating in the stories and the voting.

All the symbolised resources are freely available on the Symbols for All website at https://www.symbolsforall.org.uk/bookbug/.

Development work

We created Clicker Writing Sets for Clicker software on PC and Clicker apps for iPad to accompany this year's Bookbug symbolised resources. These enable learners to write about the stories using appropriate vocabulary linked to the communication resources. Learners can use a variety of access methods, including switch access and eye gaze access, to utilise the resources both in the classroom and at home.
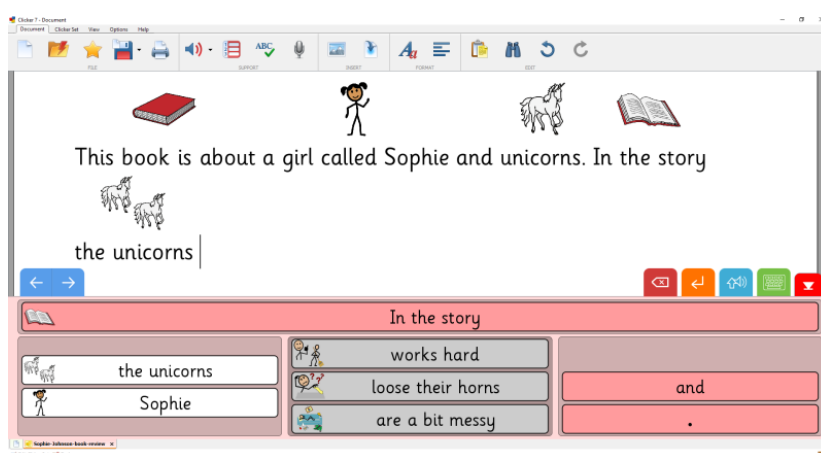

Figure 15: Writing a book review with Clicker

We also created eye-gaze and switch accessible versions of the Bookbug P1 books using Grid 3 software. Learners can independently read the picture books and interact and comment on the story using pre-stored symbol messages spoken with *Andrew* or *Mairi*, the new Scottish Children's voices

Figure 16: Reading *Sophie Johnson Unicorn Expert* on iPad and *The Prince and the Witch and the Thief and the Bears* with eye-gaze
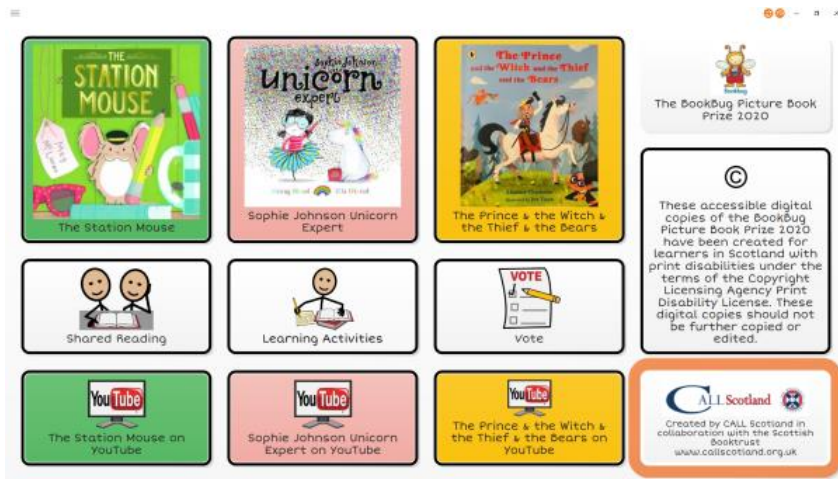
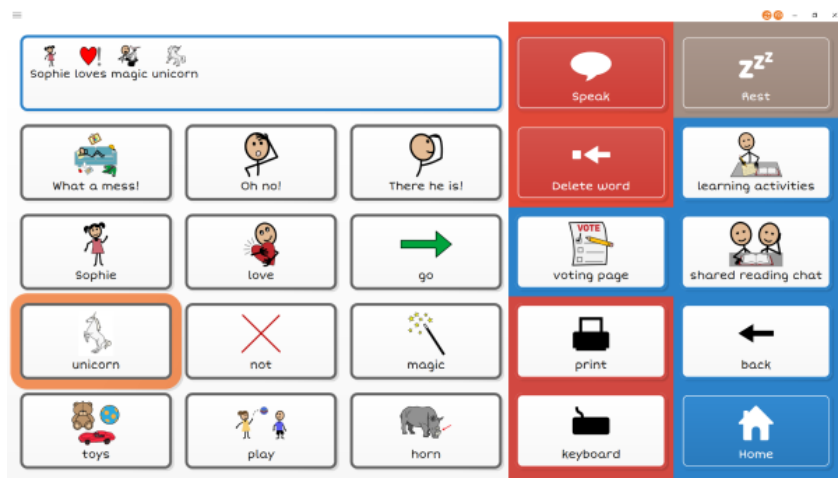**Figure 17: Eye gaze accessible gridset with the books, chat boards and activities**

Figure 18: Communication grid for eye gaze

GLOSSARY

AAC	Augmentative and Alternative Communication
ACiP:S	Augmentative Communication in Practice: Scotland
ADES	Association of Directors of Education in Scotland
ASL	Additional Support for Learning
ASLO	Association of Support for Learning Officers
ASN	Additional Support Needs
ASPEP	Association of Scottish Principal Educational Psychologists
AT	Assistive Technology
ATLAS	Assistive Technology Leaders Across Scotland (formerly ICTSLS)
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
FAACT	Fife Augmentative and Alternative Communication Team
FE	Further Education
GASS	Grant Aided Special Schools
GIRFEC	Getting It Right for Every Child
HE	Higher Education
HI	Hearing Impairment
ICT	Information and Communication Technology
IDT	Inclusive Digital Technology
JISC	Joint Information Systems Committee (in FE/HE)
Keycomm	Edinburgh & Lothians AAC service
LA	Local Authority
MH/MHSES	Moray House/Moray House School of Education and Sport
PL	Professional Learning (previously referred to as CPD)
QMU	Queen Margaret University

RCSLT	Royal College of Speech and Language Therapists
RNIB	Royal National Institute for Blind People
SAVIE	Scottish Association for Visual Impairment Education
SCRAN	Scottish Cultural Resource (charity and online resource base)
SCTCI	Scottish Centre for Technology for the Communication Impaired
SG	Scottish Government
SIG	Special Interest Group
SLA	Service Level Agreement
SLF	Scottish Learning Festival (Education Scotland run event every September)
SNSA	Scottish National Standardised Assessments
SQA	Scottish Qualifications Authority
SSC	Scottish Sensory Centre
TASSCC	Technological Assessment and Support Service for Children and the Curriculum (Aberdeen)
UoE	University of Edinburgh
VI	Visual Impairment
VIP	Visually Impaired Persons
VQ	Victoria Quay

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