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ANNUAL REPORT

1 August 2020 – 31 July 2021

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)

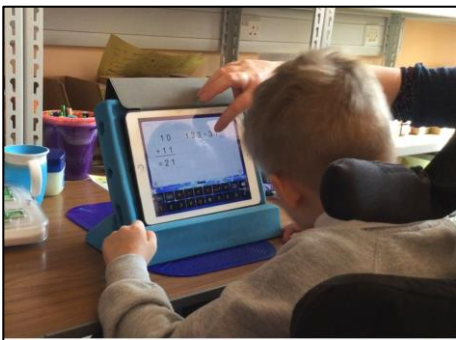


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CALL Scotland's Vision

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



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Summary

Covid-19

Throughout 2020-2021 there was continued upheaval in Scottish education due to the impact of Covid-19. Children and young people returned to school for the autumn 2020 term and then schools were closed for the second time in the winter term of 2021. Even when schools opened, some learners and teaching staff were unable to attend due to illness or the need to self-isolate. National 5 examinations were cancelled in October 2020, Highers and Advanced Highers in December, and National Qualification awards were based on evidence of attainment from teachers and lecturers in the summer term of 2021.

For CALL and the learners and practitioners that we support, the situation resulted in a continuation of the online support for learners, practitioners and parents and professional learning that we had developed in 2020. In-person visits to schools were able to commence, where essential, in August 2020 but largely ceased when schools closed in January 2021. The team made fewer personal visits to provide assessment and support, while the number of online support sessions increased. Online assessment and support does enable more frequent support and reduces travel time but most of the learners referred to CALL do require a personal visit due to the complexity of their additional support needs.

All CALL professional learning courses were delivered online and this resulted in a significant increase in the number of participants who attended compared to the in-person courses that we delivered in previous years. Similarly, most of the 31 Inset sessions were delivered online which enabled 917 participants to attend – another increase compared to the past. Online courses last 90 minutes compared to our previous half or full day in-person format, so cannot cover material in the same depth, but they do enable a larger number of practitioners to participate. The free CALL Webinar programme has continued to expand, with 5,766 people registering and an average of 455 viewing the webinar recordings. There is now a waiting list of presenters wishing to contribute to the webinars. Further details are in [Career-Long Professional Learning](#).

Covid-19 coincided with a number of other events and initiatives during 2020-2021 which are resulting in significant changes in the Scottish educational landscape.

ASL Review and Action Plan

The ASL Action Plan¹ was published by Scottish Government in October 2020 in response to the release of Angela Morgan's review² in June 2020. The review found a "*significant disconnect between experience and the stated aspirations of the legislation and policy*". We discuss the role of communication and assistive technologies in supporting the actions to address this disconnect later in the section on the [ASL Review](#). A positive outcome from CALL's response to the Action Plan has been delivery of teaching to under- and post-graduate students in Moray House.

International Council of Education Advisers

The second report³ of the International Council of Education Advisers (ICEA) was published in December 2020 and the proposal that the Scottish educational system should be 'universally designed' is of particular interest. Universal Design for Learning (UDL) is a widely used framework

¹ Scottish Government (2020) [Additional support for learning: action plan](#), 21/10/20.

² Scottish Government (2020) [Review of additional support for learning implementation: report](#). 19/6/20.

³ Scottish Government (2020) [International Council of Education Advisers Report 2018-2020](#). 17/12/20.

in inclusive education world-wide and features in many of our CALL Scotland professional learning offers. UDL⁴ is based around concepts of:

- **multiple means of engagement**, recognising that *“learners differ markedly in the ways in which they can be engaged or motivated to learn”*;
- **multiple means of representation**, where we design learning with an understanding that *“learners differ in the ways that they perceive and comprehend information that is presented to them”*;
- **multiple means of action and expression**, which accepts and plans for learners who *“differ in the ways that they can navigate a learning environment and express what they know”*.

It is evident that UDL can improve opportunities for inclusion for learners with additional support needs and the ICEA report argues that universal design can create a more resilient system and avoid *“crisis-driven responses that are typically insufficient and that incur temporary and sometimes lasting harm as a result”*. We will seek to work with partners to raise awareness of the role of UDL in 2021-2022.

1:1 device initiatives

Accessibility and universal design are even more important in a context where more and more learners have access to a personal digital device, and where Scottish Government has committed to *“provide every school pupil in Scotland with a laptop or tablet”* by 2026⁵.

A personal digital device offers huge potential for a learner with additional support needs, particularly now that mainstream devices and applications have much improved built-in accessibility tools. It is essential that devices provided – whether based on Windows, iOS or ChromeOS – are accessible for learners with additional support needs but years of experience and evidence tells us that this cannot be assumed or taken for granted. For example, parents, teachers and colleagues in the ATLAS group report that some learners with ASN in some local authorities are not being provided with essential apps and resources because the processes for carrying out Data Protection Impact Assessments is onerous and time consuming (see [Accessibility Standards, Equality and GDPR legislation](#)). It appears that practice and provision varies across the country. There is no point in providing a learner with a device if he or she cannot access it, and we hope that the Scottish Government initiative will improve provision and equality of access to digital technologies for all learners. We propose the development of national Accessibility Standards for devices and digital learning resources, to ensure that learners with additional support needs are able to access digital learning.

Secondly, some learners with more complex needs require a more specialised response either because devices provided as standard by the local authority are not the optimum resource, or because additional assistive hardware or software is required to provide access.

These issues are discussed in [1:1 Digital Technology](#).

OECD Review of Curriculum for Excellence

The independent review of Curriculum for Excellence was published on 21 June 2021⁶ and Scottish Government response (accepting all 12 recommendations) on 22 June⁷. The review notes that

⁴ CAST (2021) [About Universal Design for Learning](#).

⁵ Scottish Government (2021) [Devices for 700,000 children](#). 16/8/21.

⁶ OECD (2021), *Scotland’s Curriculum for Excellence: Into the Future, Implementing Education Policies*, OECD Publishing, Paris, <https://doi.org/10.1787/bf624417-en>.

⁷ Scottish Government (2021) [Curriculum for Excellence: Scottish Government response to OECD Review](#). 22/6/21.

“CfE’s vision to achieve excellence for all students is widely shared by stakeholders and continues to be an inspiring example equated with good curriculum practice internationally”, observes “some ambiguity about the role of knowledge” and suggests that adjustments to assessment in the senior phase may be required. We felt that additional support for learning and inclusion did not seem to be adequately considered by the review, which given that 32.3% of learners⁸ are identified as having an additional support need, seems remarkable. A subsequent paper on senior phase assessment was published on 31 August 2021⁹, and while the date of publication falls outwith the period of this annual report, we note that Scottish Government identifies future options¹⁰ to include:

- *the development of a Senior Phase qualification system based on a combination of teacher assessment and exams*
- *the simplification of S4-5 assessment by “de-cluttering” the historical diet of exams*
- *the increased use of online exam resources and oral presentations as an assessment format*
- *the inclusion of pupils views in decisions around assessment*
- *enhancing the role of vocational qualifications.*

It is essential that any developments of the qualification system includes the views of learners with additional support needs (bullet 4) and that online assessment resources are accessible to the 36.6% of learners identified as having additional support needs in mainstream secondary schools¹¹. CALL’s expertise with digital question papers and the use of technology as assessment arrangements is particularly relevant here and we hope to be able to contribute to the work of any new organisation that may replace SQA.

Period covered by the Annual Report

The 2020-21 report covers the period from 1 August 2020 to 31 July 2021 to report on activities over the academic session.

Development Priorities 2020-21

Our priorities for development for 2021-22 are to:

- Continue to support local authorities, practitioners, parents and learners through assessment, support, information, advice, provision of free resources, loans of equipment and professional learning.
- Work with colleagues and Scottish Government to: progress National Strategic Commissioning; assist with implementation of the AAC legislation; take forward the actions from the ASL Review; ensure that personal digital technologies provided through 1:1 programmes are accessible for learners with ASN; ensure that SQA digital question papers are accessible for learners with ASN regardless of which devices are used.
- Align CALL’s strategic aims, objectives, structures and processes in response to Scottish education policies and priorities, including the ASL action plan; emerging models and procedures for Commissioning of National Services; and legislation on provision of Communication Equipment.
- Continue to research options for use of the Scottish and Gaelic computer voices on ChromeOS, iOS and Microsoft’s Immersive Reader.

⁸ Scottish Government (2020) Schools in Scotland - summary statistics: 2020. 15/12/20.

⁹ Stobart, G. (2021), "Upper-secondary education student assessment in Scotland: A comparative perspective", OECD Education Working Papers, No. 253, OECD Publishing, Paris, <https://doi.org/10.1787/d8785ddf-en>

¹⁰ Scottish Government (2021) [National qualifications and assessments](#). 31/8/21.

¹¹ Scottish Government (2021) [Pupil census: supplementary statistics](#). 21/4/21.

- Continue to support colleagues in local authorities and ATLAS (Assistive Technology for Learning Across Scotland), and raise awareness of the need for Assistive Technology services.
- Develop a 5 year plan for CALL Scotland.

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. SQA funds our partnership and development work around use of technology in examinations and assessments.

Assessment and support of individual pupils in schools is funded by partnership agreements with local authorities. We also generate income through delivery of professional learning from CALL and on site in schools and now online.

The core grant has remained static since 2011, while inflation has run at 24.6% to 2020. CALL has received core funding from Scottish Government since 1991 but the grant is still provided on an annual basis, and planning and managing our budgets and the organisation is a challenge. We have succeeded in generating additional income through our partnerships over the last decade, but our financial position is becoming increasingly difficult and at present we cannot afford to recruit a full-time member of the team to replace Allan Wilson. Several members of the CALL team are likely to retire in a few years, and we need to develop a plan to recruit new colleagues and provide succession and a positive future for CALL Scotland.

We hope that funding and stability may improve as National Strategic Commissioning is developed through the Doran process (see [Doran Review](#)).

Paul Nisbet, Director.

CALL Staff Team 2020-21

Allan Wilson (1.0 FTE)	Information Coordinator (General Enquiries)
Claire Harrison (1.0 FTE)	Development Officer, Assistive Technology & Complex Needs
Craig Mill (1.0 FTE)	Assistive Technology Specialist
Esther Beeston (0.7 FTE)	Resource Developer/Assistant Administrator
Gillian McNeill (0.8 FTE)	Specialist Speech and Language Therapist
Joanna Courtney (0.8 FTE)	Specialist Speech and Language Therapist
Paul Nisbet (1.0 FTE)	Director; Engineer and Educational Technologist
Robert Stewart (0.9 FTE)	Technology Resources, Web Designer/Manager
Sarah Marjoribanks (0.8 FTE)	Office Manager
Shirley Lawson (0.8 FTE)	Development Officer & Professional Learning Coordinator



Figure 1. The 2020-21 CALL team

Allan Wilson – thank you!

Allan Wilson, CALL's Information Coordinator, retired at the end of August 2021 and leaves a huge legacy. Allan first worked with CALL as a consultant in the early nineties to create our FileMaker databases (which still support many of our processes today) and then joined as the Information Officer in 1983. One of Allan's roles was responding to requests for advice and information and he has helped thousands of children, parents, adults and practitioners over the years. In the process he accumulated a great deal of knowledge and expertise which was then disseminated via CALL quick guides and products such as the CALL posters and wheels of apps. One of Allan's responsibilities was desktop publishing – the [iPad Apps for Learners with Dyslexia](#) has been downloaded over 175,000 times since it was first launched in October 2019.

Allan created excellent working relationships with voluntary organisations in particular: with Dyslexia Scotland, he manned the CALL stand at the annual Education Conference for many years providing advice and disseminating thousands of CALL posters and leaflets, and drove across Scotland to provide talks and workshops to local associations in his own time in evenings and weekends. Allan took the CALL stand to every Communication Matters conference since 1983 and his reflections over these years were published in the April 2021 Communication Matters Journal¹²; you can also [watch him on YouTube](#). Allan was a member of the Doorway Accessible Software Trust that manages the hugely successful free [Doorway Online](#) web site, and the Chair of Trustees of the Edinburgh-based [PassITon](#) charity that provide free adapted computers for people with disabilities.

For me though, it's Allan's commitment and determination to make the world a better place that always stands out.

In recent years Allan developed a keen interest in theatre and with retirement we hope he'll have more time to develop this interest: he says he has a script in preparation!

You can read Allan's reflections in his final blog on [a career in Assistive Technology: 1993 to 2021](#)

CALL Steering Group 2020-21

Dr. Mike Gibson	Chair of Steering Group
Melanie Lowe	Support and Wellbeing Unit, The Scottish Government
Deborah Lynch	Support and Wellbeing Unit, The Scottish Government
Heather Palmer	AAC Policy Manager, Assisted Communication Team, The Scottish Government
Donna Baillie	Quality Improvement Officer, Glasgow City Council (ASLO representative)
Cheryl Burnett	National Parent Forum of Scotland
Fiona Buttle	Head Teacher, Langlee Special Nursery, Scottish Borders Council (from 09/18)
Fran Foreman	Senior Education Officer, Inclusion, Education Scotland (from 02/20)
Dr Kirstie Rees	Depute Principal Educational Psychologist, East Renfrewshire (ASPEP Representative from Nov. 2020)
Professor Sheila Riddell	Moray House School of Education, University of Edinburgh
Jackie Swan	ASN Service Manager, East Dunbartonshire Council (ADES / ASLO Representative)

¹² Wilson, A (2021) [Reflections on 28 Years of Communication Matters Conferences](#). CM Journal Vol. 35 (3), August 2021.

Strategic Leadership & Collaboration

Funded by: Scottish Government Learning Directorate Core Grant

OBJECTIVES

1. To provide strategic leadership in all matters relating to Assistive Technology (AT) and Augmentative and Alternative Communication (AAC), in partnership with the Scottish Government, Education Scotland, SQA, AAC Leads and NHS Health Boards, voluntary organisations, families, schools and local authorities in order to inform policy, represent the interests of pupils with additional support needs and promote effective practice.

Expected outcomes include ensuring greater awareness and expertise regarding the potential impact of Universal Design for Learning (UDL) and AT and AAC in helping young people with additional support needs to achieve equity in accessing the Curriculum for Excellence. In addition, there will be improved accessibility of ICT in schools to reflect the positive policy framework that is in place.

2. To align CALL's strategic aims, objectives, structures and processes in response to Scottish education policies and priorities, emerging models and procedures for Commissioning of National Services and legislation on provision of Communication Equipment.

Expected outcomes include strengthened relationships with key stakeholders in respect of CALL Scotland's national impact and role.

OUTCOMES

Scottish Government

Doran Review

The Doran Review¹³ was published in 2012 and the *Strategy for the learning provision for children and young people with complex additional support needs 2017-2026* in September 2019¹⁴. 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 strategy and proposed commissioning plan will therefore impact directly upon CALL’s core funding from Government.

The National Commissioning Group met in November 2019 shortly before the outbreak of the Covid-19 pandemic in early 2020, and then on 28th April 2021. We understand that the 10 year Strategy timeline may be extended to 2028-2029 due to the delays caused by the pandemic. Minutes of meetings are at <https://www.gov.scot/groups/nscg/>.

To support the development of the policy and plan, qualitative research will be commissioned “on ways in which support for pupils with complex additional support needs is provided within Scotland to reach their full potential”. The tender for this research¹⁵ was listed on 7th October 2021 and closed on 28th October 2021.

Work is also underway to pilot a programme to enhance senior leadership knowledge in the area of complex additional needs.

A CALL objective for 2020-21 is to “align CALL’s strategic aims, objectives, structures and processes in response to Scottish education policies and priorities, emerging models and procedures for Commissioning of National Services” but Covid-19 has delayed the development of these models and procedures.

ASL Review

The *Review of additional support for learning implementation* was published on 19/6/20¹⁶ and in response, Scottish Government published an *Action Plan* on 21/10/21¹⁷.

The CALL Scotland Annual Report 2019-2020¹⁸ offered comments on the Review and Action Plan and we were “disappointed that the immense potential of communication and assistive technology does not feature more prominently”.

¹³ 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.](#)

¹⁴ 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](#)

¹⁵ Scottish Government (2021) [Research into provision for pupils with complex additional support needs in Scotland tender notice, 7/10/21.](#)

¹⁶ Scottish Government (2020) [Review of additional support for learning implementation: report, 19/6/20.](#)

¹⁷ Scottish Government (2020) [Additional support for learning: action plan, 21/10/20.](#)

¹⁸ CALL Scotland (2020) [CALL Scotland Annual Report 2019-2020.](#)

In “*Recommendation 4.2 Role of Grant Aided Special Schools*” the Review states that:

“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.”

The **Actions to be taken forward**¹⁹ are:

“Through continued work towards implementation of the Doran Review recommendations, the Grant-Aided Special Schools and National Centres, as well as the Scottish Government will work with Local Government and other key partners to consider opportunities to share the expertise of staff supporting children and young people with complex additional support needs in specialist settings throughout the wider education system.

The Doran Strategic Commissioning Group which makes recommendations to the Cabinet Secretary on options for strategic commissioning, will consider this recommendation at a future meeting of the group.

ADES will consider this recommendation further in relation to local commissioning which has progressed since the Doran Review.”

We note that CALL Scotland, Enquire and SSC (the three national centres) already deliver national services to complement statutory mainstream and specialist provision. The Grant Aided Special Schools (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.

We therefore do not think it is appropriate that CALL, Enquire and SSC are bracketed with the GASS as we argue that the National Centres are already national and are more aligned with other organisations part-funded by Scottish Government to provide national services such as Dyslexia Scotland, Scottish Autism, Salveson Mindroom, or the National Autism Implementation Team.

CALL Scotland’s workplan and activities are supporting many of the recommendations and actions outlined in the Review and Action Plan. Some examples are given below:

Table 1: ASL Review recommendations, Actions and CALL Scotland support

Recommendation	Action	CALL Scotland support
1. 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.	At both local authority and school level we will seek to fully involve and listen to children and young people in the development of local policy and guidance. In doing this, the Scottish Government and Local Government will seek to ensure that any barriers to participation of children and young people are considered and support is put in	Effective participation requires an effective means of communication: children and young people with communication support needs are supported through for example CALL’s assessment and support service; information and advice and web sites; the Symbols for All web site.

¹⁹ Scottish Government (2020) [Additional support for learning: action plan](#), Section 4.2. 21/10/20.

	place to encourage their participation.	
1.2 To ensure that there is no reduction in aspiration and ambition for all children and young people to achieve to the maximum of their learning potential, a national measurement framework for additional support for learning must be developed. The National Improvement Framework must be revised to ensure parity for additional support for learning.	ASLIG will develop a national measurement framework which draws on information from a range of sources. This should include evidence from professionals, including Allied Health Professionals. This measurement framework will seek to record outcomes for children and young people and the impact of different support interventions.	CALL staff have specialist expertise in supporting children and young people to achieve to the maximum of their learning potential through assistive technology. It is essential that the measurement framework includes outcome measures related to assistive and communication technology, particularly given the Scottish Government plan to ensure that all learners are provided with a digital device ²⁰ .
2.1 The Independent Review of Curriculum for Excellence must fully integrate the findings of this review and focus on all children, affording equity to those with additional support needs.	The Independent Review of Curriculum for Excellence will draw on relevant international and Scottish data and available evidence from education stakeholders and partners. This will include the review of implementation of additional support for learning.	Assistive Technology can help children and young people to become: <ul style="list-style-type: none"> • successful learners, by enabling learners to access books and learning materials through technology such as text readers and the Scottish voices. • confident individuals, by reducing the need for support from others to read, write for you or interpret. • responsible citizens, by enabling more independent means of participation and inclusion. • effective contributors, by providing tools to speak, write and communicate.
3.1 There must be clear values-driven leadership, shared communication, support and challenge at all levels of the system to ensure that the experiences and achievements of children and young people with additional support needs are visible and continue to be improved.	Through continued work towards implementation of the Doran Review recommendations, the Scottish Government will work with Local Government and other key partners, including the Grant Aided Special Schools and National Centres, to consider opportunities to share the expertise of all professionals who support children and young people with complex additional	All of CALL Scotland services and activities support this recommendation and actions: <ul style="list-style-type: none"> • direct assessment and support for learners, families and practitioners; • free advice and information; • collaboration with national and local government and agencies; • professional learning across a range of levels and methods;

²⁰ Scottish Government (2021) [Devices for 700,000 children](#). 16/8/21

	support needs in specialist settings throughout the wider education system.	<ul style="list-style-type: none"> • free technology resources. • loans of technology for evaluation.
3.2 Children and young people with additional support needs must be proactively and fully considered in policy making and appropriate cross-Government links made at the earliest stage.	The Scottish Government will continue to engage, as appropriate, across Government at the earliest stage to ensure that children and young people are actively considered in policy making and development, in line with the guiding principle of children and young people participation.	CALL Scotland works across Education and Health, in particular, to support children and young people with communication support needs who require communication technology which is essential for making their views known.
5.1.2 All teachers understand what additional support needs are, and are clear about their role in supporting the identification of additional support needs and the need to adapt their teaching to ensure a meaningful learning experience for all their learners.	<p>The General Teaching Council for Scotland (GTCS) publishes the Guidelines for Initial Teacher Education (ITE) Programmes in Scotland. This states that the overall aim of ITE programmes is to prepare student teachers to become competent, thoughtful, reflective and innovative practitioners, who are committed to providing high quality teaching and learning for every learner.</p> <p>The Guidelines also confirm that student teachers should develop their understanding and practice in key areas such as additional support needs including: ADHD, autism, dyslexia and adverse childhood experiences; and that programme design and delivery should develop and promote equality and diversity and empower student teachers to adopt.</p>	<p>In response to this action, CALL initiated discussion with Moray House Programme Directors of under and post-graduate provision and this has led to a series of planned inputs for the following courses in 2021-2022:</p> <ul style="list-style-type: none"> • PGDE Secondary Education; • MSc Transformative Learning and Teaching; • MA(Hons) in Physical Education; • Primary Education with Gaelic (MA Hons).
5.1.4 Practice learning and development at local level must include where and how to access specialist expertise and support.	The Scottish Government will seek to work with Local Government and other partners to ensure that teachers can access support and expertise from other professionals when this is required. We will also encourage and support whole school and inclusive classroom approaches to support improved impact and outcomes We will seek to support this through the	CALL's information and advice, web sites, resources and professional learning offers contribute directly to supporting this action.

	refresh of the Code of Practice.	
5.2 The Classroom Support Staff working group must, as part of their work, undertake a review of roles and remit of Pupil Support Assistants. This must include the development of clear specifications for how classroom teacher and pupil support assistant roles interact and complement each other. It must also consider standards of practice, learning pathways, career progression routes and remuneration.	<p>The Classroom Support Staff Working Group membership consists of representatives from Scottish Government, COSLA, ADES, Unison, Voice, Children in Scotland and Education Scotland.</p> <p>The Group will develop clear specifications for how classroom teachers' and pupil support assistants' roles interact and complement each other.</p>	<p>CALL Scotland staff work directly with Pupil Support Assistants when providing assessment and support for learners, and offer training and resources to support staff to work with assistive technology.</p> <p>CALL professional learning resources such as the AAC Online Learning Modules are appropriate for Pupil Support Assistants.</p>

1:1 Digital Technology

Prior to Covid-19, several local authorities in Scotland had embarked upon 1:1 technology programmes: pupils in Primary 6 and above in Glasgow²¹ and Scottish Borders²² schools were being provided with iPads while learners in Aberdeen²³, Highland²⁴, Stirling²⁵ and West Dunbartonshire²⁶ were provisioning Chromebooks. Covid-19 and the requirement to support learning at home led to an acceleration of this process, and Scottish Government provided further support to help learners and families get access to technology and digital connectivity. City of Edinburgh Council announced a 1:1 iPad initiative²⁷ in April 2021.

In March 2021 John Swinney said *“Just as in my day, the teacher handed out a jotter to all, so in this internet age, we will hand each child the device they need to learn and prosper”*²⁸. Scottish Government has begun working with local authorities *“to provide every school pupil in Scotland with a laptop or tablet”* and is considering *“how to deliver consistent digital infrastructure across Scotland’s 2,500 school buildings”*²⁹.

Access to a digital device in class may or may not help learners become more successful, confident, responsible and effective – that remains to be seen - but there is undoubtedly huge potential for learners with additional support needs. Ten years ago, assistive technology was relatively uncommon, rare, expensive, often heavy and hard to manage and only available through a referral process to specialist services. Today, learners are being provided with their own devices which are much more practical and which have excellent in-built accessibility tools. Digital

²¹ Glasgow City Council (2018) Digital Glasgow Strategy. Available at:

<https://www.glasgow.gov.uk/councillorsandcommittees/viewSelectedDocument.asp?c=P62AFQDN2UUTDNUT81>.

²² Scottish Borders Council (2019) Inspire Learning FAQs. Available at:

https://www.scotborders.gov.uk/info/20009/schools_and_learning/914/inspire_learning_faqs.

²³ LendED (2020) Aberdeen schools make curriculum accessible to all learners with Read&Write.

²⁴ Highland Council (2015) Final ICT in Learning Strategic Action Plan 2015.

²⁵ Stirling Council (2018) Chromebooks and G Suite.

²⁶ West Dunbartonshire Council (2016) 2016/17 Administration Strategic Budget and Capital Plan

²⁷ City of Edinburgh Council (2021) Digital boost for pupils with 39,000 iPads in 1:1 roll out. 1/4/21.

²⁸ SNP (2021) A laptop or tablet for every school child. 28/3/21.

²⁹ Scottish Government (2021) Devices for 700,000 children. 16/8/21.

technology was previously only used by learners with additional support needs, which could lead to stigmatisation, but soon all learners in class will have a device. Ten years ago the concept of providing students with digital learning resources was novel; now it is accepted practice.

However, even though modern technology is increasingly accessible for learners with disabilities and additional support needs 'out the box', some learners require a different device, or additional apps, software or systems. For example, some learners cannot use a touch screen and so require an alternative method of access; some learners with visual impairment may require a device with a larger screen, or a specialist device with braille display and keyboard; some learners with complex learning needs may require apps and activities appropriate to their learning needs. One size does not therefore fit all and there is a need to provide assistive technology assessment and support for learners with more complex needs.

In a report published by the UK Department for Education in June 2020, Dave Edyburn writes that:

*"When a person finds the appropriate AT, they are able to complete tasks that they previously could not complete, did slowly, or did poorly. The right AT augments, bypasses, or compensates for a disability"*³⁰ p. 5.

However, Edyburn also warns that:

*"there is a huge gap between the potential of AT and the reality of pupils with special educational needs and disabilities who needlessly struggle on a daily basis to complete routine tasks because they do not have ready access to appropriate AT devices and services."*³⁰ p. 30.

and argues that "universal screening of children who may be able to benefit from assistive technology" (p. 29) is necessary.

Access to a digital device has little benefit unless: the technology and learning resources are accessible; working digital infrastructure is in place; and educators, learners and parents/carers have digital skills to use the technology for teaching and learning (Figure 2).

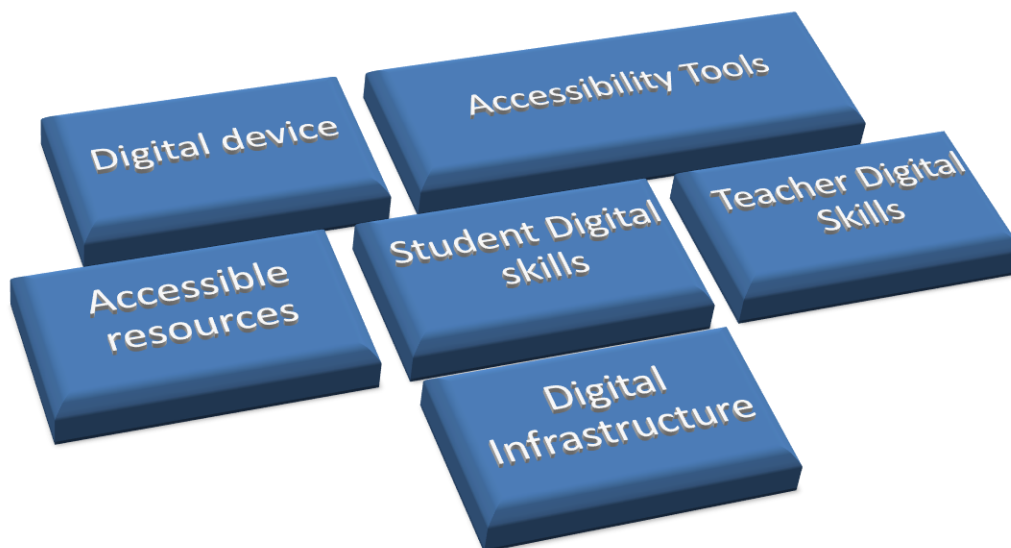


Figure 2: Components of Inclusive Digital Technology

³⁰ Edyburn, D.L. (2020) [Rapid literature review on assistive technology in education: Research report.](#)

Accessibility Standards, Equality and GDPR legislation

It is vital that accessibility standards are designed into current and planned 1:1 device programmes.

For example, in Glasgow, Scottish Borders and Edinburgh the iPad provision is managed in conjunction with CGI and learners and staff have access to a restricted set of apps provided through the 'Self Service' facility³¹. Child and data protection and security legislation does not allow for any app from the Apple app store to be installed and apps must be evaluated and undergo a Data Protection Impact Assessment (DPIA)³² prior to being added to Self Service. This process is complex and time-consuming and practitioners report that it can take up to two years. As a result, it seems that apps required for learners with low-incidence disabilities or additional support needs are not being made available. In Glasgow, the council are apparently providing 'ASL iPads' which are not managed through the CGI system in order to address the problem.

A specific example relates to the use of iPads for students with disabilities or additional support needs as Assessment Arrangements in SQA examinations. A suitable app for accessing SQA Digital Question Papers is not currently available through the 'Self Service' and so students are being provided with iPads but some learners with disabilities or additional support needs cannot use them in examinations. This is not satisfactory.

This situation is not confined to authorities that are provisioning iPads – the requirement to undertake DPIAs is on all local authorities and the difficulties of meeting the duty, for learners with additional support needs who use technology, has been raised by colleagues at ATLAS, ASLO and CALL Steering Group meetings.

Compliance with GDPR legislation is essential but so is compliance with the Equality Act 2010. The system as it is currently designed or implemented in some authorities appears to restrict access to facilities that are necessary for children with disabilities to access education, and therefore may be discriminatory under the Equality Act 2010. The Act says that it is unlawful for a school to discriminate against or victimise a pupil [with protected characteristics] *“by not affording the pupil access to a benefit, facility or service”* and that a *“school’s obligation to pupils covers everything that a school provides for pupils”* and covers *“all school activities”* as well as *“school facilities such as libraries and IT facilities”*³³ p. 29.

The Guidance advises that *“Indirect discrimination occurs when a school applies a provision, criterion or practice in the same way for all pupils or a particular pupil group ... but this has the effect of putting pupils sharing a protected characteristic within the general student group at a particular disadvantage.”* (p. 54).

In October 2014, the Scottish Government published Statutory Guidance for education authorities on planning improvements for disabled pupils' access to education which recommends that:

*“Procurement decisions for hardware and software have due regard to accessibility and reasonable adjustment duties under the Equality Act. In particular, no extra cost should be charged for changes made to systems as part of reasonable adjustments made.”*³⁴

What practical steps can be taken to address this situation and ensure that all 700,000 learners in Scotland are able to benefit from digital technology?

³¹ Glasgow City Council Remote Deployment: Early Years and Teacher iPads.

³² Information Commissioner's Office. Data Protection Impact Assessment..

³³ Equalities and Human Rights Commission (2014) Technical Guidance for Schools in Scotland

³⁴ Scottish Government (2014) Planning improvements for disabled pupils' access to education: guidance for education authorities, independent and grant-aided schools.

1. The processes for provision of digital technology for learning must be designed such that accessibility tools, apps and resources can be made available for learners with disabilities and/or additional support needs. As part of the programme of provision of digital technology, we suggest that Scottish Government should develop and provide Guidance on Accessibility Standards to support local authorities and responsible bodies.
2. The DPIA process for apps and digital learning resources must not discriminate against learners with disabilities and additional support needs. Practically, processes might 'fast-track' tools needed by learners with protected characteristics, or perhaps Scottish Government and local authorities could work together to undertake DPIAs more efficiently as currently it seems that a DPIA for one app or resource has to be undertaken by every authority.

Education Scotland

- Paul is a member of the [Addressing Dyslexia Toolkit](#) working group funded by Scottish Government and chaired by Fran Foreman, Senior Education Officer, Inclusion, Educational Scotland.
- Fran Foreman represents Education Scotland on the CALL Scotland Steering Group.
- Shirley hosted a Wee Blether on **Assistive technology to support learners with additional support needs** on 27th August 2020
- Shirley presented a workshop for the Education Scotland Teacher Leadership on 27 October 2020.
- Claire hosted an Education Scotland Wee Blether on **Technology Tools for Complex Needs Learners** on 20th April 2021.
- Paul liaised with Education Scotland staff regarding methods to raise awareness around the legal use of files from Books for All, which resulted in a blog on [Textbooks and Copyright](#) on 28/1/21.
- Paul advised Education Scotland staff on the accessibility of resources for the [National eLearning Offer](#).
- Craig advised Education Scotland staff on production of subtitles and captions for video resources on the [National eLearning Offer](#). (We note that the NeLO and West OS video lessons are hosted by [ClickView](#), but we (nor students on Moray House undergraduate ITE courses) cannot access them because the University of Edinburgh does not have access. We explored this with colleagues in Education Scotland and the University but have yet to find a solution.)

Scottish Government has announced that Education Scotland (and SQA) will be reformed³⁵ and we hope to contribute to the consultation and development of policy around additional support for learning and digital technology.

Regional Improvement Collaboratives

CALL staff liaised with Education Scotland staff and others involved in Regional Improvement Collaboratives on a range of topics. Shirley attended a meeting of the [South East Improvement Collaborative](#) on 20 May 2021.

³⁵ Scottish Government (2021) [Reform of the SQA and Education Scotland: advisor draft remit](#). 22/6/21

Association of Support for Learning Officers Scotland (ASLO)

Paul presented to ASLO on 7 May 2021.

Scottish National Standardised Assessments

Covid-19 has impacted upon the use of SNSAs and the most recent national report was published in January 2020 prior to the pandemic. We understand that the [£17 million contract](#) to provide the next set of SNSA has been awarded to [AlphaPlus](#), a UK firm based in Manchester. The contract runs from April 2021 to August 2024. CALL provided advice on accessibility of assessments to AlphaPlus in 2018 when the firm was developing the [Welsh National Personalised Assessments](#); we will endeavour to support AlphaPlus and Scottish Government to ensure that the new assessments are accessible for learners with additional support needs.

Scottish Qualifications Authority

In 2020-2021 we continued to work with SQA to provide advice, support and professional learning on use of technology as Assessment Arrangements to SQA, schools and learners. This work is funded by SQA and involves provision of advice and information to colleagues in SQA, local authorities and schools, learners and parents and research, development and knowledge exchange through for example the CALL Adapted Digital Assessments web site³⁶.

Covid-19 had significant impact on teaching, learning and assessment in Scotland and upon assessment and award of National Qualifications: the 2020 examination diet was cancelled³⁷; 2021 National 5 external examinations were called off in October³⁸; and in December 2020 Scottish Government cancelled Highers and Advanced Highers examinations³⁹. An Alternative Certification Model (ACM) was developed with “teachers and lecturers using their professional judgement of learner evidence to determine a provisional result”⁴⁰ for National Qualifications.

CALL continued to work with and advise SQA colleagues regarding Digital Question Papers and Answer Booklets and the use of technology as Assessment Arrangements.

In December 2020, SQA asked CALL Scotland to undertake environmental scanning (Albright, 2004⁴¹) into the use of assistive and inclusive technologies by learners who require Assessment Arrangements during the 2020-21 academic session, in the context of changes to assessment of National Qualifications due to the Covid-19 pandemic and response. The work involved desk-based research around guidance and publications from the Scottish Qualifications Authority, Scottish Government and Education Scotland; video meetings with practitioners in schools and local authorities; and research into and testing of specific technologies.

The conversations with teachers, lecturers and parents raised a number of urgent issues and questions and in response we created and published blogs⁴² on the CALL Scotland web site on many of the topics discussed in this report. A full list is provided in [Knowledge Transfer, Research and Development](#).

³⁶ CALL Scotland (2021) [Adapted Digital Assessments](#).

³⁷ Scottish Government (2020) [Update on school closures and exams](#) 19/3/20.

³⁸ Scottish Government (2020) [SQA Awards 2021](#). 7/10/20.

³⁹ Scottish Government (2020) [Coronavirus \(COVID-19\) - education sector: Deputy First Minister statement 8 December 2020](#).

⁴⁰ SQA (2020) [Update from the National Qualifications 2021 Group: Support and guidance for Higher and Advanced Higher in session 2020-21](#). 16/12/20.

⁴¹ Albright, K. (2004) [Environmental Scanning: Radar for Success](#). The Information Management Journal, May/June 2004.

⁴² CALL Scotland (2020-2021) [Digital Assessments during Covid-19](#).

An initial report was submitted to SQA in January 2021 and we were asked to update the paper to take account of events throughout the remainder of the 2020-21 academic session. This second paper was submitted to SQA on 6th August 2021. The report contains findings that are of interest to all stakeholders and a revised version will be published by CALL in October 2021. Key findings are:

- The ACM resulted in a significant increase in the number of individual assessments conducted which increased workload and complexity for provision of Assessment Arrangements for students with disabilities or additional support needs.
- The Covid-19 pandemic and response has driven an increase in the use of digital technology for teaching, learning and assessment. Students in several local authorities have been provided with personal digital devices and Scottish Government has committed that every pupil in Scotland will receive a digital device.
- Students are using devices based on Windows and iOS and Chromebooks and guidance and policies on technology-based assessment arrangements should reflect this context.
- The research suggests that SQA Digital Question Papers in PDF (particularly question-and-answer papers) were not commonly used by candidates using iPads or Chromebooks in 2020-21 due to technical, administrative and policy-related factors. Action research with practitioners and students is required to investigate and address these issues.
- The research indicates that Digital Answer Booklets in .docx format are not accessible to students using Chromebooks or word processor tools such as Immersive Reader in Microsoft Word. DABs should be re-designed accordingly.
- The functionality, accessibility and security of Digital Question Papers and Answer Booklets varies depending on the device and software/app used by students.
- SQA policies on assessment arrangements and internet access and use of accessibility and learning tools (e.g. spellcheck) do not align with current technologies and practices in schools and should be reviewed and developed in co-operation with practitioners.
- DQPs and DABs in PDF have functional and accessibility limitations and consideration should be given to creating assessments in other digital formats.
- Comprehensive research into the Assessment Arrangements that were provided for students as part of the Alternative Certification Model in 2021 would provide valuable information to inform the development of policy and guidance on assessment arrangements, the use of technology, and Digital Question Papers and Answer Booklets.

Paul is a member of the SQA Equality and Inclusion Key Partners group and contributed to the development of the Scottish Government Equality Impact Assessment of 2020 Results using Teacher and Lecturer estimates⁴³.

⁴³ Scottish Government (2020) [Coronavirus \(COVID-19\) teacher and lecturer estimates - 2020 results: EQIA](#). 23/12/20.

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.”⁴⁴

Scottish Government published [Guidance on the Provision of Communication Equipment and Support in using that Equipment⁴⁵](#) to support delivery of the legislative duty in May 2018 followed by *The National Augmentative and Alternative Communication (AAC) Core Pathway⁴⁶* on 30th August 2018.

Covid-19 impacted upon the implementation of the legislation, with Scottish Government, health boards and AAC services developing new ways of working in response to the pandemic. The National AAC Advisory Group met in July 2021 and the [AAC Work Plan](#) was updated in September 2021. Kevin Stewart MSP, the newly appointed Minister for Mental Wellbeing and Social care with responsibility for work around the AAC legislation attended the Advisory Group meeting. Information was shared about the range of AAC assessment and support services provided across Scotland and issues highlighted where development work is required to improve the efficiency and equity of service. The Minister requested urgent action to collect information on the impact of the legislation, confirming that data collection is vital in order to progress change. He also considered AAC user engagement as a top priority and a working party to focus on this has recently been established.

Kim Hartley-Kean of the Royal College of Speech and Language Therapists subsequently invited the Minister to a meeting to discuss the recommendations from the 2019/2020 survey undertaken jointly with the SLT AAC Leads and AAC Collaborative lobby group⁴⁷. This survey gathered views of AAC practitioners and AAC users. Gillian attended this meeting on 25th October with the other survey collaborators, and presented and discussed priorities with the Minister. These are:

Action 1

A project to develop partnership working between Health Boards/Social Services with their Local Authorities (Education) and other providers of AAC services (including National AAC Services and Third Sector) to ensure that people who use AAC have access to appropriate levels of assessment and support, and that services are delivered jointly.

Action 2

Set up a national and local AAC workforce development action plan, with a training strategy to improve availability and access to training for SLTs, families and multidisciplinary/multi-agency colleagues, to ensure that all those involved in supporting AAC users have the necessary knowledge and skills. The Minister discussed the survey recommendations and work is to continue

⁴⁴ Scottish Parliament (2016) Health (Tobacco, Nicotine Etc. And Care) (Scotland) Act: [Provision of Communication Equipment](#)

⁴⁵ Scottish Government (2018) [Guidance on the Provision of Communication Equipment and Support in using that Equipment](#)

⁴⁶ Scottish Government (2018) [The National Augmentative and Alternative Communication \(AAC\) Core Pathway](#)

⁴⁷ RCSLT (2020) [Scotland's AAC services: 2020 report](#)

on gathering the views of AAC users, evidence of effective practice and areas where improvements are required, across Scotland.

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, as members of the [ACiP:S](#) executive committee, provide leadership and participation on national AAC issues. On 30th August 2021, Gillian took over the role of Chair for this network group, Joanna joined as a committee member and Allan retired from his role as Secretary. Other committee members represent AAC services across Scotland.



During 2020 - 2021 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. A topic of recent interest to many in the group being approaches to core vocabulary teaching for AAC users. This is a potential topic for ACiP:S to offer training to those involved in supporting AAC. As a first step the committee have a discussion and planning session arranged.
- Partnership working with the Royal College of Speech and Language Therapists Scotland Office and the AAC Collaborative lobby group, to identify and share findings collected from two surveys about views on the impact of the AAC legislation. Formulate recommended strategic actions for Scottish Government ACT team. Gillian joined with other survey collaborators, to present these to Kevin Stewart, MSP at a meeting on 25th October.
- Preparing for an online Family Fun Communication Technology Event, as an in-person event at Moray House School of Education was not possible due to Covid-19 restrictions. Scheduled to take place during October (AAC awareness month), the event was hosted on Zoom, on 30th October. The theme was Halloween, with fun activities for children including inclusive storytelling, singing and joke telling using AAC, as well as a Q&A section for parents, to find out about ways to support these activities at home. Families joined from across Scotland, with excellent engagement and positive feedback received on the day; further written feedback is being sought.

Communication Matters

The annual Communication Matters International Conference, due to be held in September, was replaced by the CM Sessions a series of online presentations throughout October to mark AAC Awareness Month. Gillian, Joanna and Allan attended individual presentations. Communication Matters helped to promote CALL's AAC-related courses through their weekly 'Friday Announcements'.

Scottish Book Trust

In 2020-2021 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 20 local authorities and schools in 2020-21; see [Pupil Assessment and Support](#) and [Career-Long Professional Learning](#).

A new partnership with Glasgow City was formed, for the first time, which mainly involved provision of advice and consultancy and delivery of online professional learning.

Angus Council Education Department funded the development of nine video resources for staff. These were created by Craig and Shirley in cooperation with colleagues in Angus and the playlist is publicly available on the Angus Council TV YouTube channel⁴⁸.

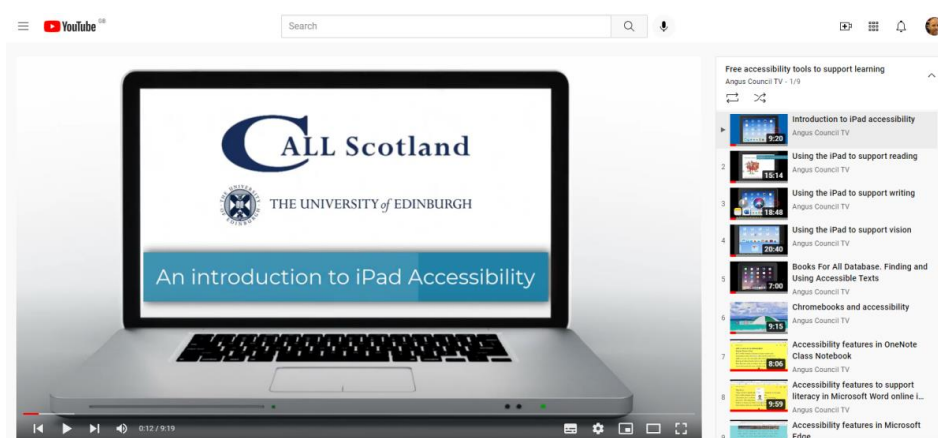


Figure 3: Video learning resources created for Angus

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. The group is convened by Claire Harrison and currently has 28 members (including CALL staff) representing 20 Local Authorities. We continue to have concern that some local authorities do not have a named contact with specific responsibility for assistive technology for learners with additional support needs.



The group communicates online via a Google Group forum: posting and answering questions, sharing resources and suggesting solutions to problems. The ATLAS group met by video conference on 23rd September and 25th November 2020 and 24 March 2021. The meetings provide a valuable opportunity to share best practice, hear about new developments and discuss a wide range of current issues. Topics included:

⁴⁸ Angus Council TV (2021) [Free accessibility tools to support learning](#).

- supporting pupils who are learning at home;
- mental health and assistive technology;
- roll out of laptops and devices to support learners during Covid-19;
- impact of the Alternative Certification Model and use of technology for assessments in 2020-2021;
- the impact of DPIA on access to apps and software.

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.

Other collaborations

- Discussions with software and communication aid suppliers, making an input to product development.
- Presentations at Dyslexia Scotland online events (Allan, Craig, Shirley).

2020-21 Advisory and working group memberships

- AAC Advisory Group (Gillian and Joanna)
- AAC Leads for Scottish Health Boards (Gillian and Allan)
- Addressing Dyslexia Toolkit Working Group (Paul)
- Augmentative Communication in Practice: Scotland (Gillian and Allan)
- 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

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OBJECTIVE

To provide free Assistive Technologies and resources across Scotland to help local authorities and schools meet obligations under accessibility and equality legislation, and to support UDL.

Expected outcomes include greater awareness and expertise in schools; and schools and local authorities report that they are better able to meet Accessibility obligations.

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 137,161 visits in 2020-21.

1,972 new accounts were created on the web site and 7,380 books were downloaded. This is a drop in downloads compared to the previous year.

Table 2: Books for All web site

New Books for All web site	2019-2020	2020-2021
Number of user accounts	3,535	5,507
Number of books downloaded	11,144	7,380

Several factors may have influenced this trend. In July 2020, the publisher Hodder Gibson asked us to remove the TeeJay Maths books from the database because there was evidence that files were being shared illegally on the internet: TeeJay books were some of the most popular titles and so this will have effected the download figures. The situation in schools as a result of Covid-19 may also have had an impact and there were clear spikes in the number of downloads from the web site during school closures in summer 2020 and winter 2021.

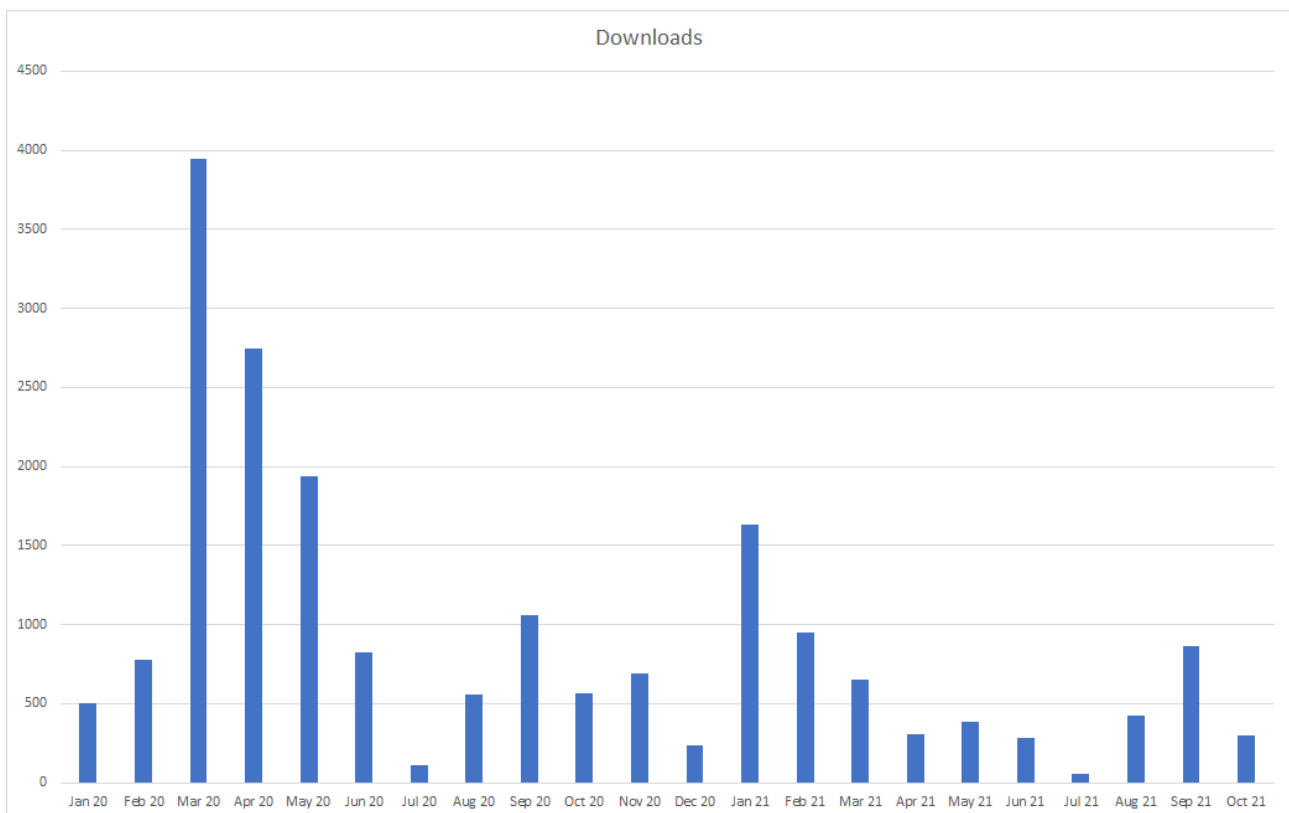


Figure 4: Books for All web site downloads

Copyright

We held meetings with colleagues from Hodder Gibson and Education Scotland to discuss how to raise awareness of the terms and conditions around legal use, and were given permission to reinstate the TeeJay *1a*, *1b*, *2a* and *2b* books with the answer boxes that enable learners to easily type answers on screen. However, we regularly come across files, downloaded from Books for All, that are freely available on school website and blogs, and books that are being shared on social media groups and so this continues to be an issue.

RNIB Bookshare

RNIB Bookshare was created in 2016 (initially drawing on the technology and experience of CALL's Books for All Database) and now has [agreement](#) from many of the UK academic publishers to distribute files to learners with print disabilities. It now offers more than 750,000 titles, including for example those from TeeJay and so there is less incentive for CALL to host files provided by publishers. Books for All still has many files in accessible formats created by practitioners and so we will continue to provide the service.

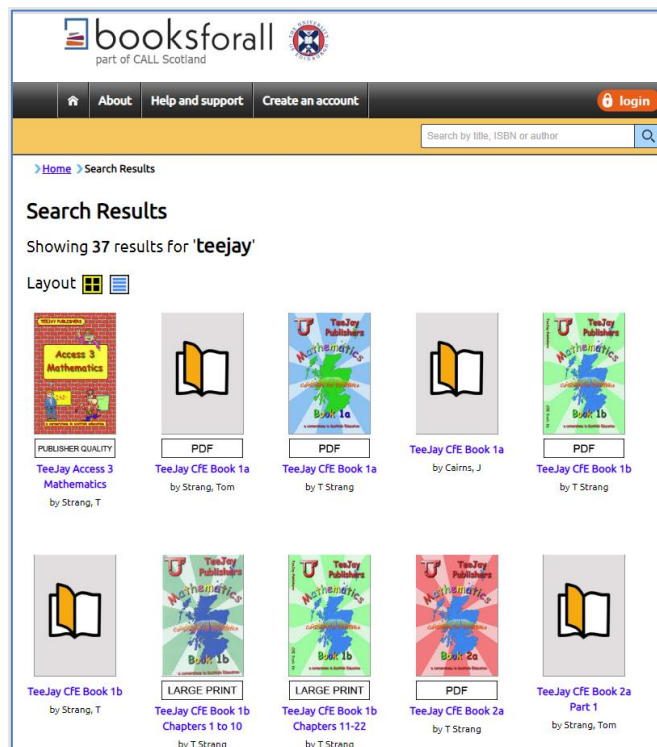


Figure 5: The new Books for All website and database

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. Learners can read the books and so 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.



In 2020-2021 the accessible digital Bookbug books were made available in:

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

Bookbug Digital Bookshelf

The digital books are available as PowerPoint, Keynote, Grid 3 & Grid for iPad files.

Click on the icons under the books on the bookshelf to download the files.

These books have all been finalists in the Bookbug Picture Book Prize 2009-2021. CALL Scotland have worked with Scottish Book Trust, the authors and publishers to create Accessible Copies of these books so that learners with print disabilities can read and participate in the Book Prize.

Professionals working in schools in Scotland can create a free account and download these books for their learners with print disabilities.

Print disabilities can include people with physical, sensory or learning difficulties.

The Accessible Copies are available from: www.booksforall.org.uk/bookawards/

books for all

Symbolised Resources

Many of the stories on the bookshelf have additional symbol supported resources. There are communication boards, labels for simple communication devices and more. Go to <http://bit.ly/BookbugResources> to download the symbolised printable PDF resources.

Sounding Board Resources

There are talking communication boards for the free iOS 'Sounding Board' app. Each board has its own set of story specific vocabulary. Go to <http://bit.ly/BookbugResources> and look for the Sounding Board icon to download the talking communication boards.

Clicker Resources

There are some scaffolded writing and book review grids for Clicker 8 and the Clicker Writer App. There are Sentence Set grids and scaffolded Book Review grids. Go to <http://bit.ly/BookbugResources> and look for the Clicker icon to download these Clicker grids.

Bookbug illustration by Debbie Clark

www.callscotland.org.uk

CALL Scotland

Version 2.0, June 2021 CALL Scotland, The University of Edinburgh, CALL Scotland is part funded by the Scottish Government.

Figure 6: An interactive poster was created with quick links to the books in all the formats

Joanna, Claire and Gillian created **symbolised resources** for each of the Bookbug books. These enable children to participate when reading the books and to talk and and vote for their favourite. The resources 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;
- overlays for teaching activities related to the books;
- accessible digital versions of the books and communication resources, together with the teaching activities, in Grid 3 format for use on Windows and iPad devices.



In 2019-20 we developed new learning activities for learners to communicate and write about the books in Clicker and Grid formats, and following positive feedback we repeated the exercise for the 2021 Bookbug books.

The **Clicker** resources can be used on Windows, iPad and Chromebook while the **Grid resources** are for Windows and iPads. The resources provide children with a means of writing about the story using vocabulary from the communication resources and reviewing the book content.

Clicker and ClickerWriter are very effective tools for supporting children's early literacy and also provide accessibility features such as text-to-speech and large keyboards for learners with physical access needs.

Grid 3 is a communication, computer control and curriculum access environment and is particularly suitable for students with complex access needs who use eye-gaze or switches.

The resources provide a complete toolkit for teachers to include young children so that they can access the books, participate in learning, and join in with voting.

249 books were downloaded this year with 3,313 symbolised resources and files.

The 2020-2021 symbolised Bookbug and Explorer Pack resources are all available on the Symbols for All website at www.symbolsforall.org.uk/bookbug.

To mark the 10th year of our collaboration with Scottish Book Trust we created a Bookbug Birthday Pack with video, a digital poster with links to author videos, communication boards for each book, and tips and video examples for parents on how to use the resources at home.



Figure 7: Interactive poster with links to resources

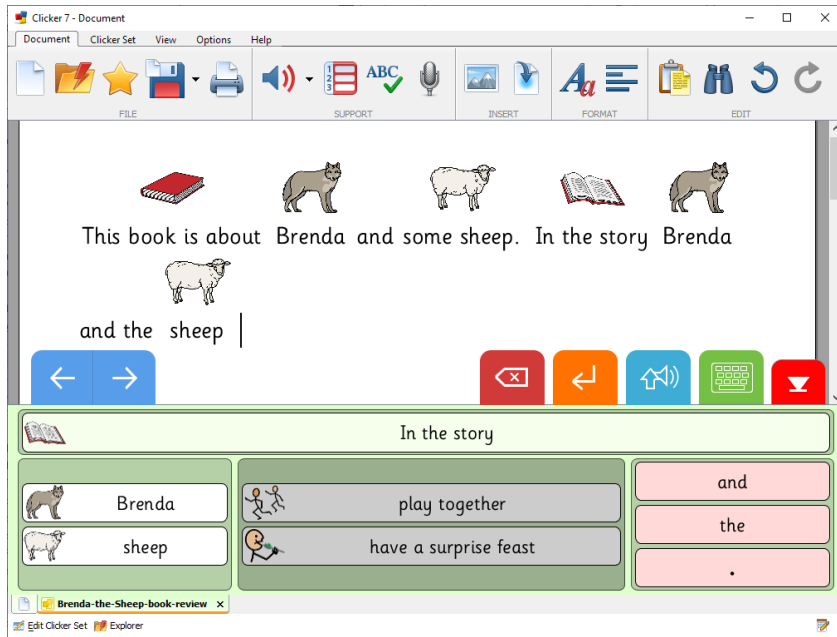


Figure 8: Writing a book review with Clicker

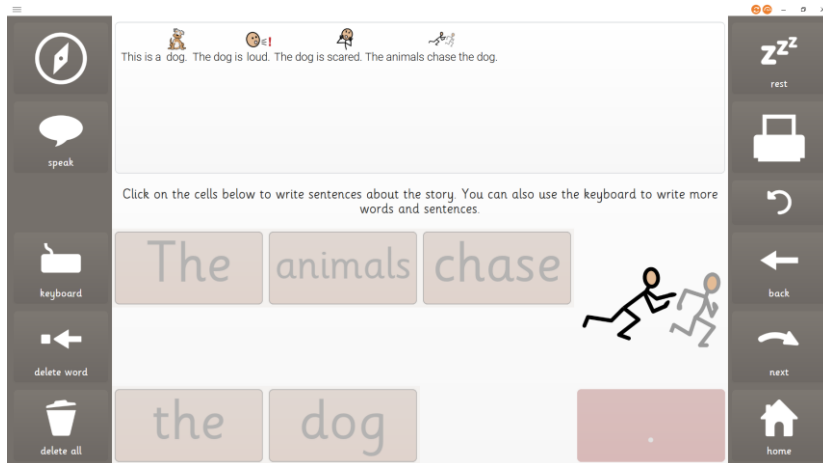


Figure 9: Grid set with writing activity

Feedback

" Angus loves having access to the books on the iPad. It means he is able to participate in nursery when they are reading a story as he automatically has the relevant vocabulary available to him, making it quicker and easier for him to join in. He absolutely adores 'Shark In The Park on a Windy Day' and this has been a gateway to different activities as well including making and decorating a telescope with his nursery friends.

It is just another way of making books accessible and fun for kids with additional needs, and is such a valuable resource.!"

Parent

"I've found the Bookbug resources really engaging and motivating for the children I have been introducing to AAC. It's been great to see how much enjoyment they get from being able to read and participate in the stories with their families and teachers."

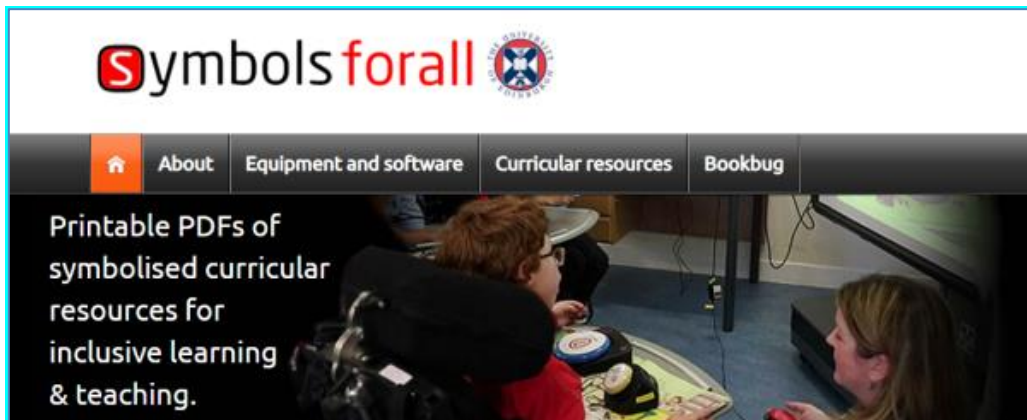
Speech and Language Therapist and AAC advisor

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.

Research⁴⁹ 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 site provides resources for primary learners with PCS [Boardmaker](#) symbols and now secondary resources with [Widgit](#) symbols.

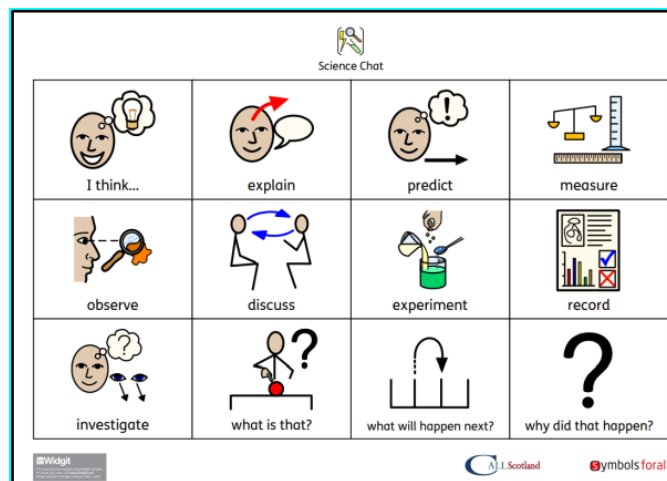


Figure 10: Science Chat communication board with Widgit Symbols

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.

⁴⁹ Symbols in Education - <https://www.widgit.com/about-symbols/booklets/Symbols-in-Education.pdf>

The number of visits to the site and the number of resources downloaded both decreased compared to the previous year.

Table 3: Symbols for All visits and downloads

Symbols for all Website	2018-19	2019-20	2020-21
Symbols for All web site visits	16,547	38,297	23,686
Symbols for All downloads	9,001	16,802	16,190

Covid-19

Many of the symbol resources are useful when communicating about topics relevant to Covid-19.

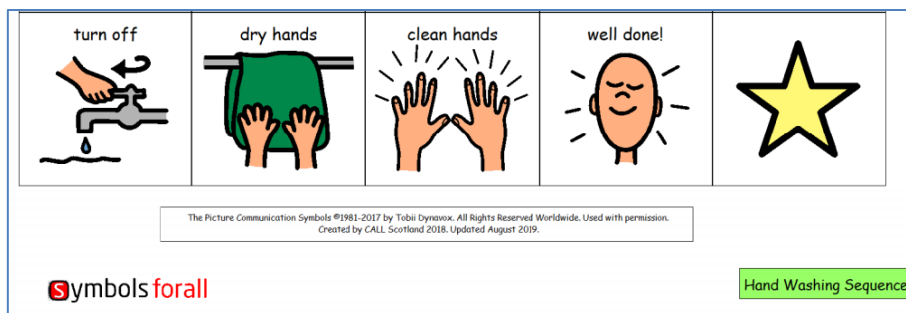


Figure 11: Symbol board for hand-washing

Symbol resources for learners who use eye gaze and special access

In 2020 we created twelve resource sets for children and young people who use the Grid 3 communication and access environment. We have added to these and there are now 40 different grid sets available from the the [SmartBox Online Grids site](#). (SmartBox are a UK assistive technology firm that have integrated the Scottish computer voices into their products and we are pleased to extend our partnership through creating these resources.)

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.

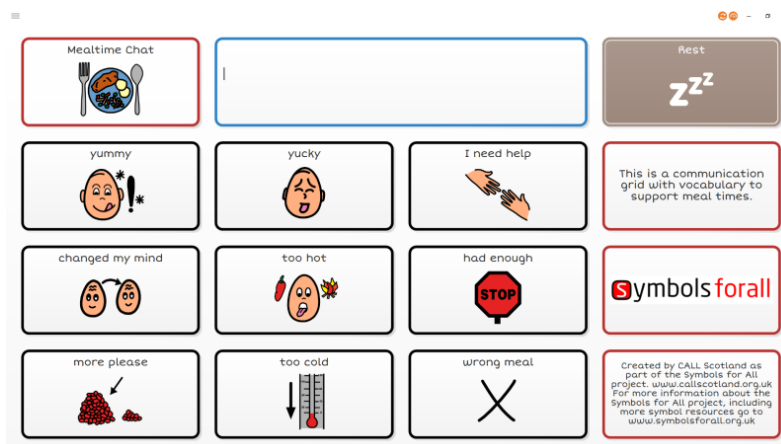


Figure 12: Mealtime communication page

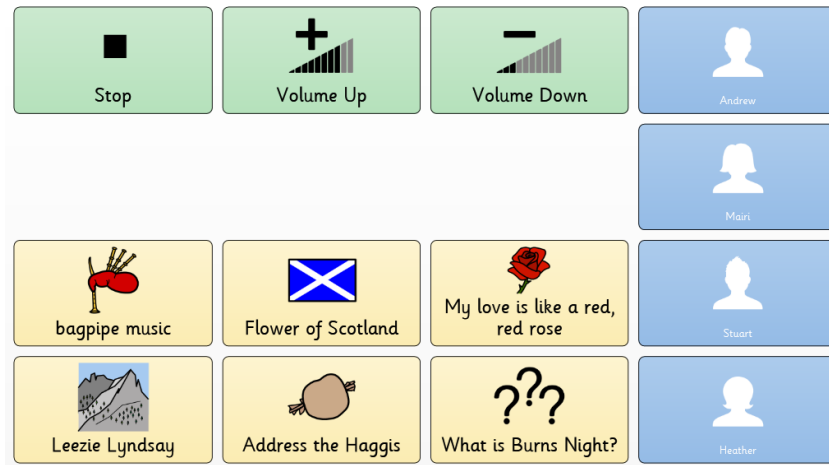


Figure 13: Grid page to control 'Alexa' for Burns night activities

Symbols for All AAC Core Word Toolkit

Scottish Government Section 10 funded the development of the Symbols for All Core Word Toolkit and one outcome from the project was a physical Kit to help school staff get started with and develop their use of symbols across the curriculum by creating communication opportunities based on the principles of Core Words.



Figure 14: Sample of equipment in the CALL Core Word Toolkit

Core Words are the building blocks of language and make up around 80% of what we say. When we create teaching and learning experiences using the principles of Core Words, evidence suggests that using them will enable learners who use symbols for communication to communicate more effectively and flexibly.

Core Words can be used across the curriculum with a small number of words used again and again to communicate in a variety of topics and contexts. By augmenting Core Words with a small number of more specific topic words, learners can experience and use these Core Words all day every day.

The kit is available for schools (in Scotland) to borrow from our CALL Scotland loan bank for staff to learn the principles of teaching with Core Words and embed communication across the school day. The kit has everything a teacher will need, from simple communication devices (and batteries!), printed symbol boards in a variety of formats, to digital resources and more.

A new information section about the [Core Word Kit](#) was added to the website and a free CALL training webinar is planned for October 2021. Some changes were made to the practical materials in the kit to ensure they were COVID-safe for schools, and the contents of the kit continues to evolve in response to feedback and evaluation from schools.

CALL Core Word Kit

What's in the Kit?

Instructions/Activities/Information:

- ✓ Introductory Booklet including links to research including key concepts for introducing Core Vocabulary.
- ✓ Link to Core Word level selection tool
- ✓ 'Quick Guides' for each of the pieces of Hardware
- ✓ Suggested lesson plans for each activity including curricular links:
 - 'We're Going on a Treasure Hunt' PowerPoint Sensory Story including script and all props.
 - 'Pirate Bingo' including all printed materials and instructions.
 - 'Will it float or sink?' Including instructions all practical materials.
 - Shared Reading Fiction and Non-Fiction Books including hard copies of 3 fiction and 1 non-fiction books with integrated Core Word boards.

Printed & Matt Laminated Core Vocabulary Boards:

- ✓ Single & multi-message Device labels for Boardmaker Picture Communication Symbols (PCS) standard and High Contrast
- ✓ 4 cell PCS Board

www.symbolsforall.org.uk

Symbol resources made with Boardmaker Picture Communication Symbols, PCS and Boardmaker are trademarks of Tobii Dynavox LLC. All rights reserved. Used with permission.

Figure 15:

<https://www.symbolsforall.org.uk/core-word-kit/>

"The kit helped us to be braver about using technology in different ways...it's a brilliant concept, it helped to change mindsets and made us more willing to try things...I wish we had resources set up in the same way around topics!"

(Teacher in a Special School.)

Scottish Computer Voices for Scottish schools and public sector

Table 4 gives the number of visits and downloads of the [Scottish computer voices](#). 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.

Table 4: Scottish Voice visits and downloads

The Scottish Voice	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Scottish Voice web visits	19,973	23,890	26,468	34,432	40,867	38,238	42,683	68,448
Heather downloads	855	786	912	954	908	775	534	704
Stuart downloads	742	679	644	722	741	603	479	596
Ceitidh downloads			288	267	259	249	124	147
Callum downloads							165	155
Isla downloads							161	162
Andrew downloads							128	111
Mairi downloads							129	107

Scottish Voices on Microsoft Immersive Reader

The Scottish Voices can be downloaded and installed on Windows and MacOS computers. However, Microsoft's popular [Immersive Reader](#) and Read Aloud tools are restricted to using Microsoft's own voices and they cannot read with the Scottish Voices, or with the *Ceitidh* Scottish Gaelic voice.

We believe that Microsoft could adapt Immersive Reader to use the Scottish voices and have made contact with company representatives to suggest this development. In the meantime learners can use the [Speak button](#) provided with Microsoft Office, or a free text reader such as ATBar (provided with our MyStudyBar) to read with the Scottish Voices.

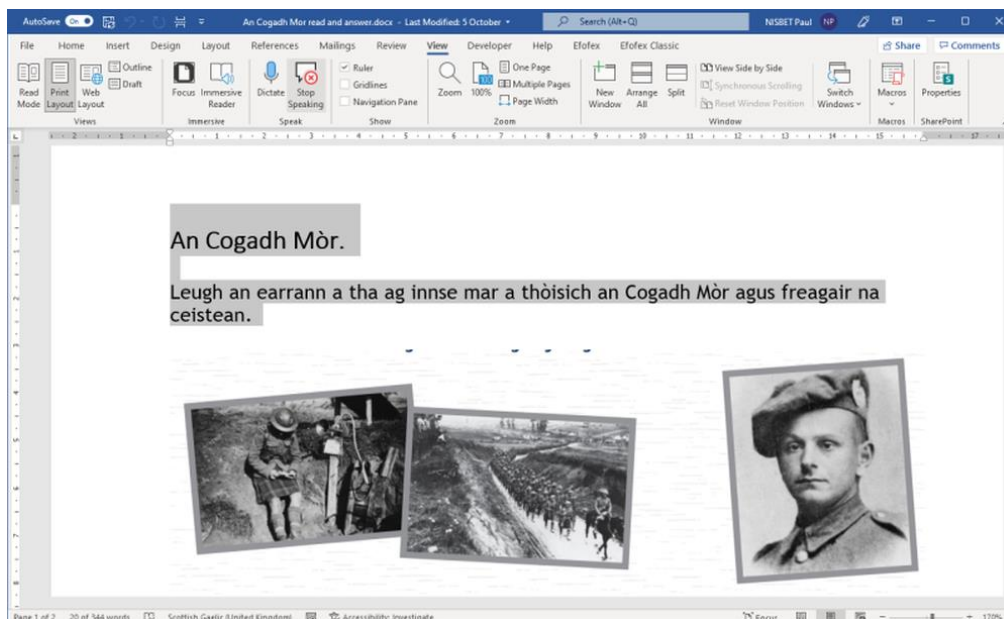


Figure 16: Reading a Gaelic Word document with the Ceitidh Gaelic voice

Scottish Voices on iPads

Learners in P6 and above in Glasgow and Scottish Borders are being provided with personal iPads, while City of Edinburgh Council has announced a similar scheme.

At the present time Apple do not provide a technical mechanism for additional voices to be installed on the iOS operating system. The built-in system voices available on iPads are good quality but are all adult voices; Scottish English accents are not provided, nor is a Scottish Gaelic voice. CereProc is the only provider of a Scottish Gaelic voice in the world and so we have a situation where learners with dyslexia or reading difficulties attending the Glasgow Gaelic School are provided with iPads but do not have a text reader in the language of their learning.

Table 5: iOS 14.7 built-in English voices

English (UK) voices	English (Australia) voices	English (India) voices	English (Ireland) voices	English (South Africa) voices	English (US) voices
Daniel Kate Oliver Serena Siri	Karen Lee Siri	Rishi Siri	Moira Siri	Tessa Siri	Alex Allison Ava Fred Nicky Samantha Siri Susan Tom Victoria

It is possible to use the CereProc Scottish and Gaelic voices on iPads but the voices must be integrated into specific apps by the app developer. We have worked with SmartBox to make the voices available in their [Grid 3 communication app](#), and with [Claro Software](#) who so far have *Mairi* and *Andrew* in one of their apps. If Claro did integrate the other voices, learners in Scotland would be able to read documents and PDFs, write and communicate with Scottish English and Gaelic voices and this would be a great benefit for learners in Glasgow, Scottish Borders and Edinburgh in particular. We will continue to liaise with Claro and other app developers, and CereProc, so that the Scottish and Gaelic voices are made available to learners.

Scottish Voices on Chromebooks

Some local authorities such as Highland, Aberdeen City and Stirling are providing Chromebooks to learners and Scottish computer voices are not available with the ChromeOS. The Scottish and Gaelic voices can now be installed on some Chromebooks via an [Android app](#) and so this offers a partial solution for ChromeOS, for Chromebooks that can run Android apps and where apps can be installed. The voices retail at 59p each; we will explore possibilities of extending the Scottish public sector licence so that the voices can be freely available for all learners in Scotland who use Chromebooks.

We have also raised this topic with Texthelp, developers of [Read&Write for Chrome](#). Read&Write is already offered with the Gaelic *Ceitidh* voice and so it should be reasonably straightforward, both technically and in terms of licencing, so make the other Scottish voices available. Aberdeen City, Highland and South Lanarkshire all have authority-wide licences for Read&Write.

Free Text Reader Technologies

Text-to-speech technology can provide an effective support for learners who have difficulties with reading⁵⁰.

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 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 originally created by Rod Macauley in 2005. The current version has been downloaded 250,460 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 some versions of Windows and Word sixteen years later.

The number of visits to CALL's WordTalk site dropped by over one third in the past year, but the number of downloads actually increased, though not to the high levels of a few years ago.

Microsoft's built-in **Immersive Reader** now meets the support needs of many Word users, though it does not work with the Scottish computer voices.

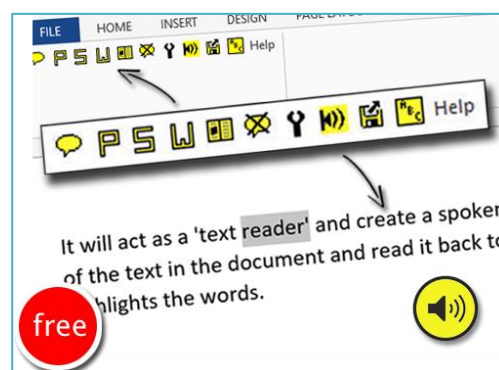


Table 6: WordTalk visits and downloads

WordTalk	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
WordTalk (visits to site)	130,518	208,088	166,240	233,810	324,804	269,579	173,074
WordTalk (downloads)	19,555	21,472	26,395	32,731	19,588	7,471	10,506

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 free tools for Windows devices including for example Ivona MiniReader and NaturalReader, along with the built-in tools in [iPad](#) and [Android](#) tablets, and [Chromebooks](#).

NaturalReader

NaturalReader is a free, 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 permission to provide version 13 of the software from the CALL website that may work more effectively on older devices.

⁵⁰ Wood SG, Moxley JH, Tighe EL, Wagner RK. Does Use of Text-to-Speech and Related Read-Aloud Tools Improve Reading Comprehension for Students With Reading Disabilities? A Meta-Analysis. *J Learn Disabil.* 2018 Jan/Feb;51(1):73-84. doi: 10.1177/0022219416688170. Epub 2017 Jan 23. PMID: 28112580; PMCID: PMC5494021.

Table 7: NaturalReader 13 downloads

NaturalReader 13	2017-18	2018-19	2019-20	2020-21
NaturalReader 13 downloads	309	465	405	160

MyStudyBar 4

Craig Mill's [MyStudyBar 4](#) was launched on 30 August 2017 and was downloaded 6,379 times in 2020-21. 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. It is interesting that although there is greater awareness and use of built-in accessibility options in Office 365 and other software, there is still an increasing demand for a stand-alone option like MyStudyBar. One advantage of MyStudyBar is that it can run from a USB stick and so the tools do not need to be installed on a school computer.



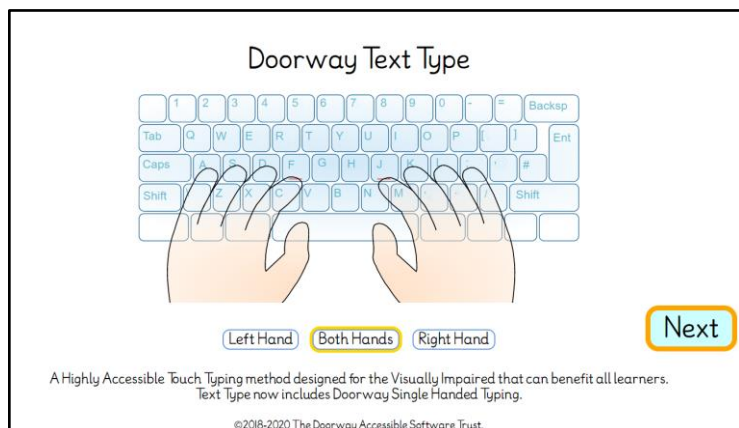
Table 8: MyStudyBar downloads

MyStudyBar 4.1	1.9.17 – 31.3.18	2018-19	2019-20	2020-21
MyStudyBar 4.1 downloads	3,346	5,216	5,483	6,379

Doorway Online

[Doorway Online](#) is a collection of free and accessible online educational activities that learners can use independently. Each activity has a range of accessibility and difficulty options. Originally developed in the early 1990s by Philip Whittaker, it is now managed by the Doorway Accessible Software Trust, a Scottish charity. Allan, Craig and Shirley are all trustees.

CALL Scotland 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, including [First Phonics](#), [Cashing In](#) and [Text Type 3](#) have now been converted to HTML5 as their original Flash format is no longer supported by browsers. Remaining resources will be converted in due course.



The Welsh Government invited Doorway last year to produce a Welsh language version of the [Text Type 3](#) online typing tutor. After some delays, a contract for this work is about to be signed, involving a partnership with Penfriend Ltd, with whom CALL have also worked in the past.

Doorway Online continues to be very popular, with 1,067,641 visits recorded in 2020-21, including 125,776 to Text Type 3.



Pupil Assessment & Support

Funded by: Partnership Agreements with local authorities (primarily)

OBJECTIVES

- To deliver direct Assessment and support using AT and AAC, to children and young people with complex additional support needs for access to Curriculum for Excellence, and to their parents, families, carers and staff, across Scotland.
- **Expected outcomes** include specifying effective AT and AAC resources to meet the learning and communication needs of individual children with complex additional support needs; and parents and families will report feeling supported in accessing useful information/resources.

OUTCOMES

- 40 pupils were referred for assessment and support (36 in 2019-20).
- 20 pupils received a comprehensive assessment for communication and/or assistive technology (45 in 2019-20).
- 41 pupils were helped through 98 online support sessions, frequently including the pupil, members of the local support team and parents. (10 pupils in 16 online sessions in 2019-20).
- 10 pupils were supported through 16 school or home visits, when guidance permitted this.
- 209 pupils in 24 local authorities were supported directly in school or indirectly through telephone, online or email advice (201 pupils / 26 local authorities in 2019-20).
- 16 [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 Renfrewshire, Falkirk, Highland, Inverclyde, North Ayrshire, Perth & Kinross, Renfrewshire, Shetland, South Ayrshire, South Lanarkshire, Stirling and West Dunbartonshire. We also have agreements with East Dunbartonshire and Inverclyde to provide support for learners as required on a 'pay as you go' basis. We were contracted by Angus Council to work with their ASN team on the production of video resources to support learning. An agreement was also negotiated with one special school to provide training for staff and limited support for pupils.

Figure 17: Title screen for one of a series of nine videos produced for Angus Council



Table 9: Assessment and Support 2015-21

Number of ...	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
New referrals	39	42	48	49	36	40
Pupils assessed/supported on site	72	99	90	104	90	11
Pupils supported online	-	1	1	4	16	41
Assessment/support sessions	135	188	163	174	129	114
SLA/Partnership agreements with local authorities and schools	17	17	17	19	19	16
(Number of days work)	182.75	196	183.7	203.3	213.0	210.0

Impact of Covid-19

- **Number of referrals to CALL.** After a significant decrease in referrals for assessment and support between March and July 2020 when we received only four referrals, numbers began to return to more normal levels in 2020-21.
- **Assessment / Support Visits.** As a result of periods of lockdown, and of restricted access to schools it was only possible to carry out essential assessment and support visits to see learners in school. Where possible, assessment and support was provided online. On-site support is the best option for many learners, particularly for those with complex needs, but the advantages of online support are that it can bring together CALL staff, the local support team, parents and the learner in a manner that might not otherwise be possible. Online support also reduces travel time for CALL staff. In some cases initial online support was provided followed by a face-to-face assessment when it was possible to visit a school. The impact of this different model of support is difficult to determine, given the very significant impact of Covid-19 as a whole, but there are some types of support that simply cannot be undertaken through a video call.
We provided fewer days of support than planned and we are grateful to local authorities who have carried forward contracted time (69 days) into the 2021-22 session. This additional time should enable the CALL team to provide any support in 2021-2022 that could not be delivered during lockdown or school closures.
- **Safe Working Procedures.** We researched and devised a set of working documents to govern our risk assessments and procedures for making visits to schools. These are 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 2020-21

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 10 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, 2.85 factors giving rise to additional support needs are reported in the referral forms sent to CALL. Although we do not specialise in support for learners with a visual impairment, this affects a significant number of the learners referred to CALL and will be addressed as part of the overall assessment and support package that we provide.

Where assistance is required for Augmentative and Alternative Communication, the main focus is on the provision of a high-tech communication aid for social interaction, although most students who use an AAC device also require technology for accessing curriculum materials and for writing and creating.

Referrals for Assistive Technology focus more on devices for writing / recording, or to support reading, though there has been an increasing number of referrals where support for numeracy has been requested.

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



Learners using CALL Scotland's Bookbug symbolised resources as part of an initial AAC assessment.

The assessment and support service not only helps the learners, parents, teachers and practitioners: it also helps the CALL team to better understand what is needed, so that we can create more appropriate web sites and resources, and professional learning opportunities.

Table 10: Pupils Referred to CALL in 2020-21

Factors giving rise to ASN	Number		Areas where assistance is requested	Number	
	19-20	20-21		19-20	20-21
Speech, Language / communication needs	19	18	Augmentative and Alternative Communication		
Visual impairment	18	16	- social communication skills	9	16
Mild / moderate learning difficulty	15	16	- low tech, e.g. printed symbols	4	3
Mild / moderate physical disability	3	12	- high tech, i.e. communication aid	12	11
Severe / complex learning difficulty	13	10	Assistive Technology for:		
Autism Spectrum Conditions	14	8	- reading	18	21
Severe / complex physical disability	7	8	- writing or recording	25	34
Dyslexia / specific learning difficulty	4	7	- numeracy	12	18
Social, Emotional & Behavioural Difficulties	5	6	- participation and control	5	8
Hearing Impairment	4	3	Alternative access	13	12
Family circumstances	2	2	Personalised resources	17	22
Learning environment	1	2	Teaching & learning strategies	17	27
English as an Additional Language	0	0	Teaching & learning software / apps	24	30
Other	3	6			

Case Example: Supporting a new client during the pandemic

Once a new referral has been allocated to a CALL team member there is generally a phone or video call with the lead contact in school to arrange a suitable date for an assessment visit. Prior to the visit we gather as much information as possible from teachers, families and other

professionals about the student's strengths and challenges, the school environment, the learning tasks, and the tools and technologies that are currently employed.

We ask for photos, videos and examples of work in paper or digital format. We complete a Data Gathering pro forma based on the [SETT framework](#) (Student, Environment, Task, Technology) and equip ourselves with a range of technologies to evaluate during the assessment in the expectation that we will likely lend some technology for a period of evaluation.

Throughout the period of the pandemic, face to face contact with learners in schools was restricted, and during school closure, not possible. There were some rare occasions when we visited clients at home or in hospital but we had to adapt our assessment and support model for 95% of our caseload.

Below Shirley describes how she worked flexibly round the restrictions, for one client, and discusses the advantages and disadvantages of remote assessment and support.

Pupil A

Pupil A is 11 years old and has speech and language communication needs and a complex learning difficulty.

I knew that going to school to conduct an assessment in person was not going to be possible for an undetermined amount of time, so my goal from the start was to not put the assessment process on hold but to be proactive in providing support and advice based on my data gathering and research.

The key areas I focussed on were:

- Requesting video footage of the pupil undertaking specific tasks.
- Setting up a Microsoft Team for the pupil where I could store all relevant documents, samples of work, pupil videos, meeting notes, discussion points.
- Arranging Teams meetings with teachers, Pupil Support Assistants, families and the pupil himself.
- Liaising with a software supplier for trial licences to be sent to the school (and with Local Authority IT department re software activation).
- Creating short videos on the use of built in accessibility features on the iPad.
- Providing online training with the class teacher and Pupil Support Assistant, followed by creating resources collaboratively.

This helped me to build a picture of the needs and challenges my pupil faced, not just in school but also as he worked at home accessing online digital resources. I could provide support to his mother about the device he was using at home and share my computer screen via Teams to call and talk through different aspects.

Reviewing the video footage of the pupil was a vital part of my decision-making process and I was able to request further, more specific videos to help me. There were issues at first with the school as no-one was sure how to send a big video file but this two-way learning model helped to create a good relationship, with the interests of the child, using the GIRFEC model, firmly at the centre.

The use of Microsoft Teams as a mechanism for sharing information with the team around the child was not successful for this particular pupil, but worked well with other clients. I concluded that we had perhaps Team too far when teachers were doing so much teaching online and upskilling on cloud-based classrooms. I moved to keeping client notes as a OneNote notebook which I could share with CALL Team Speech and Language therapist colleagues to compare notes, and get peer support.

Being able to provide training online was extremely useful and is an element which I will continue to offer when we go back to a 'normal' way of working. I felt that we had better opportunities to engage with the Pupil Support Assistant and for the teacher and the PSA to have time together to talk through what the assessment goals were, to see demonstrations of assistive technology and understand how they could increase the pupil's independence and communication.

I made initial recommendations based on my new remote assessment process with the proviso that as soon as we were allowed, I would be visiting the school in person. For this particular pupil I was able to make a visit in May 2021 (with lateral flow test, mask, track and trace etc) and meet the pupil, teacher, PSA and Mum. Feedback was very positive on the support that had been provided prior to the visit. Evaluation of loan equipment and software is ongoing and the sharing of video, online training and review on Teams is now our normal, easy and effective way of working together.

Specialist Information & Expert Advice

Funded by: Scottish Government Learning Directorate Core Grant

OBJECTIVES

- To provide an expert Scottish national information and advice service to all those involved in meeting the AT and AAC support needs of pupils with complex additional support needs and make accessible in a variety of forms.
- **Expected outcome:** all those involved in meeting the AT and AAC support needs of pupils with complex additional support needs will be able to access the information they need to be successful in their role.

OUTCOMES

Information and Advice

- 745 significant enquiries were received and responded to between 1/8/20 and 31/7/21, compared with 735 for the same period in 2019-20.
- 51% of enquiries in 2020-21 were from education (51% in 2019-20); 28% from people with disabilities, parents and relatives (24%); 8% from health/social work (8%), and 13% were from other sources (17%).
- The nine websites maintained by CALL received a total of 1,582,777 visitors in 2020-21, compared with 1,226,281 in 2019-20; a 29% increase on last year.
- 55 blogs received 17,532 views in 2019-20, compared with 66 blogs receiving 27,830 views last year, representing a 24% decrease in average views per blog.
- 108,177 information posters were downloaded from the CALL Scotland website in 2020-21, compared with 62,880 in 2019-20, representing a 72% increase in downloads. In the time since the information posters were first made available in 2013, 504,359 posters have been downloaded.

Impact of Covid – 19

- **Need for Information.** With continuing periods of lockdown during 2020-21 there has been an ongoing need for information to help teachers and parents identify suitable resources for supporting learners with additional support needs at home. CALL contributed towards this through blogs and directing people towards existing resources via social media. As an example of this, Paul provided information and highlighted some of the issues facing learners with ASN when teachers provided assessments that were not fully accessible through a series of blogs under the heading, 'Technology-based Assessment Arrangements'.
- **Assistive Technology Support Survey.** Some parents continued to seek advice through the [Survey Form](#) we launched in May 2020, while others made contact through the regular channels of phone, email and social media.
- **Learning at Home Blogs.** The series of 'Learning at Home' blogs that started in April 2020 had three additions in 2020-21. With blogs on [Textbooks and Copyright](#), [Creating a Custom Toolbar in Word](#) and [Making Teams Accessible](#).
- **Social Media.** Social Media, primarily Facebook and Twitter has continued to be a useful means to inform people about resources created by CALL, and to disseminate information from the Scottish Government, Education Scotland and other trusted sources.

Websites

CALL Scotland now hosts nine separate websites. They all require regular review to ensure that content is up to date and relevant. In addition to this maintenance, Robert Stewart has continued to develop new features and facilities for the websites:

- The [WordTalk](#) web site was refreshed and a new site launched in June 2021.



- The [ASL and Technology](#) web site was updated to include an automatic booking system for the online conference. Participants can pay by invoice or card and have entry tickets emailed out to them automatically. The new system asks people to confirm their email address before registering, which reduces the number of acknowledgement emails 'bouncing back' as a result of an error in the email address.
- Updates to the [CALL Scotland](#) website will bring new training and webinar booking systems and other features improving the user experience for visitors to the web site and to save time for CALL staff. The new site should go live in Autumn 2021.
- Additional administration features were developed for the [Books for All](#) site to provide enhanced tracking of user interaction.

The total number of visitors to the nine CALL websites increased by 29% to 1,226,281. The main CALL site accounted for a large part of the increase, but six sites received more visitors ([CALL Scotland](#), [AAC Scotland](#), [ASL and Technology](#), [Adapted Digital Assessments](#), [Books for All](#) and [The Scottish Voice](#)), while three showed a decrease ([Personal Communication Passports](#), [Symbols for All](#) and [WordTalk](#)). Other than the main site, the AAC Scotland site had the biggest increase in visitors, which was slightly surprising as the number of people tackling the AAC Modules, the main attraction to the site, was lower than in 2019-20.



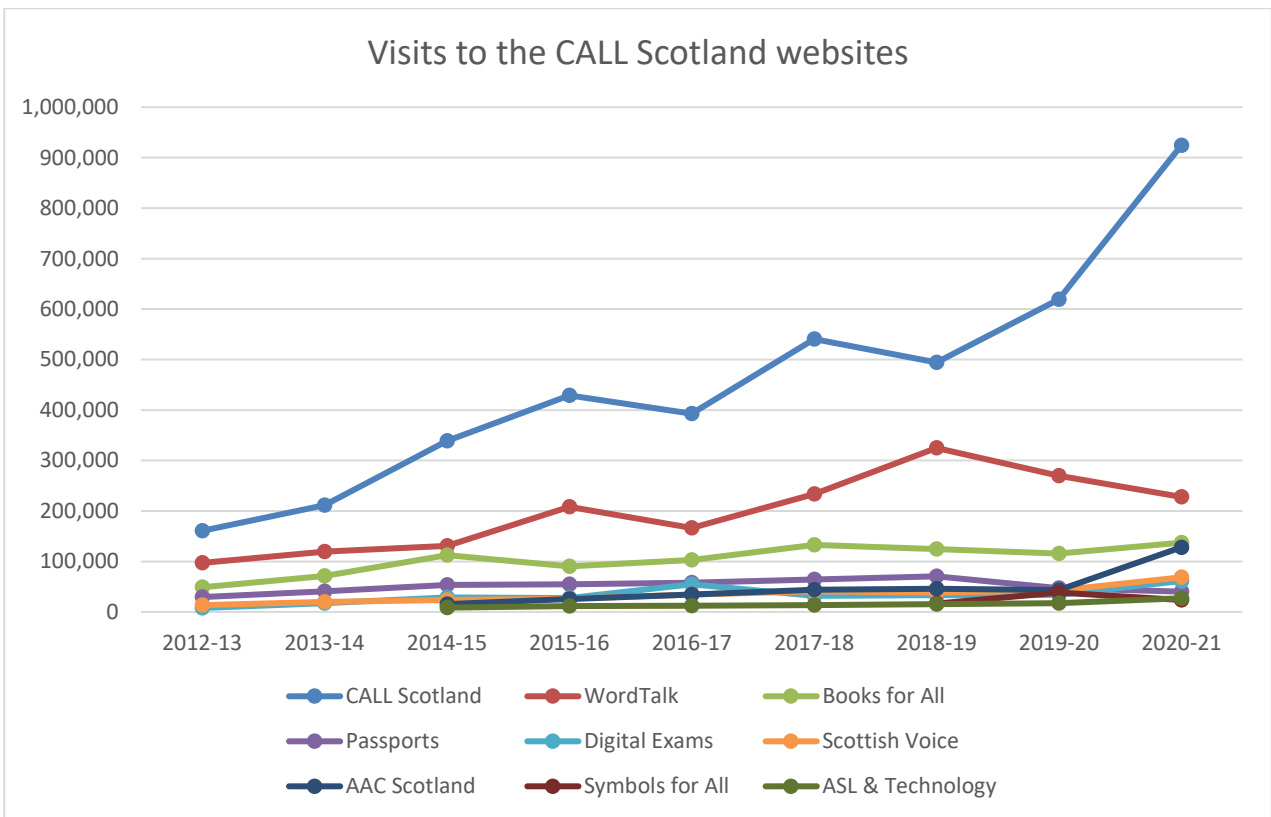
A summary of figures for visitors to the CALL websites and downloads between 2016 and 2021 is provided in [Table 11](#).

Table 11: CALL website visits and downloads

CALL Scotland Websites	2016-17	2017-18	2018-19	2019-20	2020-21
CALL Scotland main site (visits)	392,536	540,301	494,161	619,079	924, 251
CALL Scotland (resources downloaded)	269,357	245,644	252,862	293,313	228, 062
WordTalk (visits)	166,420	233,810	324,804	269,579	173,074
WordTalk (copies downloaded)	26,395	32,731	19,588	7,471	10,506
The Scottish Voice (visits)	34,432	40,867	38,238	42,683	68,448
<i>Heather</i> downloads	954	908	775	534	704
<i>Stuart</i> downloads	722	741	603	479	596
<i>Callum</i> downloads	-	-	-	165	155
<i>Isla</i> downloads	-	-	-	161	162
<i>Andrew</i> downloads	-	-	-	128	111
<i>Mairi</i> downloads	-	-	-	129	107
<i>Ceitidh</i> (Gaelic voice) downloads	267	259	249	124	147
Books for All (visits)	103,155	132,505	124,555	115,331	137,161
Books for All Database - old (downloads)	51,449	42,725	34,855	17,447	n/a
Books for All Database – new (downloads)	n/a	n/a	n/a	5,528	7,380

CALL Scotland Websites	2016-17	2017-18	2018-19	2019-20	2020-21
Communication Passports (visits)	57,703	64,435	70,444	46,978	39,860
Digital Exams and Assessment (visits)	54,515	32,117	33,231	33,680	61,337
ASL and Technology Conference (visits)	12,019	13,446	15,252	17,064	27,021
AAC Scotland (visits)	34,214	43,729	45,523	43,590	127,939
Symbols for All (visits)	n/a	n/a	16,547	38,297	23,686
Symbols for All (downloads)	n/a	n/a	9,001	16,802	16,190
Total visits	854,994	1,101,210	1,116,755	1,226,281	1,582,777

Figure 18: Visits to CALL websites 2012 - 2021



Other Information Resources

Table 12: Other Resources downloaded from the CALL website in 2020-21.

Other Downloadable Resources	2018-19	2019-20	2020-21
Electronic Books and Reports			
A Guide to Word Prediction (2019)	-	662	2,742
Making the Most of Microsoft Word 2016 to Support Learners with Reading Difficulties (Revised 2018)	1,354	1,688	1,927
What's new in iOS 11 (Revised 2017)	368	179	237
Talking in Exams Project Report (Published 2016)	469	620	369
iPads for Communication Access Literacy and Learning (Revised 2014)	2,502	12,293	9,231
Keep Talking! (Published 2012)	2,006	10,860	11,902
Accessible Text: Guidelines for Good Practice (Published 2010)	1,177	5,000	3,549

Quick Guides were temporarily withdrawn from the CALL Scotland website in 2019 to allow time for some much-needed updating of resources and a general reorganisation of categories. They should be available again in the autumn of 2021.

Blogs


The CALL Scotland website has featured a [Blog](#) section for many years with information about forthcoming events, new equipment, Government initiatives and other developments. 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. If people ask for information about a new development in assistive technology on a regular basis, a blog will often be the best way to respond.

Last year saw a record of 66 blogs, mainly as a response to Covid and the need to provide information to teachers and parents on the use of technology to support learners with ASN under lockdown. The figure for 2020-21 was down a

little at 55 new blogs, but this is still higher than in pre-Covid years. On average, an individual blog was viewed 319 times in 2020-21, compared with 422 times in 2019-20.

The most frequently viewed blogs in 2020-21 were:

- [iPad Short Video Guides to Support Reading and Writing](#) (12/1/21) - 1,953 views
- [More Complex Needs Home Learning Resources](#) (7/1/21) - 1,418 views
- [Using Immersive Reader with Teams](#) (2/11/20) - 1,084 views
- [Creating Accessible Documents and Formats](#) (18/2/21) - 1,075 views



iPad Short Video Guides to Support Reading and Writing

Tuesday, 12 January 2021. Posted by [Craig Mill](#)

'iPad short video guides to support reading and writing' is a series of quick guides explaining how to use the iPad's built-in tools to support reading and writing. The guides can also be used on an iPhone. There are 12 videos in total which are organised in a contextual YouTube Pl...

[Read more](#)

Videos from CALL Scotland

Videos can provide an accessible and effective method of providing information and advice so in 2019-20 we created YouTube Playlists on:

- [Using Eye Gaze with the Bookbug Books](#) (5 videos) and
- [Windows 10 to Support Visual Impairment](#) (12 videos).



Two further playlists on

- [iPad Short Guides to Support Reading and Writing](#) (12 videos) and
- [Creating Accessible Word Documents and Formats](#) (11 videos)

were produced in 2020-21. The individual videos in these playlists have been viewed 3,281 times.

We were also commissioned to produce two videos for Dyslexia Scotland (on [Google Classroom](#), and [Office 365 and Immersive Reader](#)) and a series of nine videos for Angus Council on [Free Accessibility Tools to Support Learning](#). Between them, these videos have been viewed 2,544 times.

In addition, CALL staff often produce short video clips to help teachers and staff support individual learners tackling a particular learning task – for example, to use a text-to-speech program to read text from a digital book.

Social Media

From the beginning of the Covid-19 pandemic we expended use of social media for receiving and disseminating information about new resources, training courses, webinars and developments in assistive technology and AAC.

The CALL [Twitter](#) account featured 583 tweets, 4,270 followers and 1.022 million tweet impressions in 2020-21, compared with 683 tweets, 3,584 followers and 952,000 impressions in 2019-20).

The CALL [Facebook](#) account featured 90 original posts, 3,451 followers. The number of Facebook followers has increased by 42% since last year. The CALL Facebook Page now has a “reach” of 162,614. This is the number of people who see any content from the Page, or about the Page, including Posts, stories, ads, social information from people who interact with the page.

Other Information Services

- 19 paper-based publications from the past were sold, with Personal Communication Passports (15 copies) accounting for most of the sales.
- Five issues of CALL’s [email newsletter](#) were distributed during 2020-21. The email newsletter had 3,390 subscribers by the end of July 2021 compared with 3,066 in 2020. There were 588 new subscribers and 264 people either unsubscribed or were removed as addresses became defunct to comply with GDPR.
- It has not been possible to operate the CALL hard copy library during the pandemic.

Consultation sessions

Prior to Covid, we offered a limited number of invited face-to-face consultations at CALL for parents / learner, and sometimes teachers. These generally arose from phone or email enquiries, when we agreed that it would be easier for the learner to come to CALL to explore options.

Three online consultation sessions were held in 2020-21

- two for an S4 learner with dyslexia and ADHD, the first including his mother and the second also involving his support for learning teacher.
- one for an S5 learner with a visual perception difficulty, which meant that although she could read well, information “will not stick in her brain”.

The increased use of video calls has offered an alternative to face-to-face consultations.

Feedback

"I just discovered your incredible resource guides after a friend shared one as a possible support for my daughter who has dyslexia. They are really excellent. I am working in the field of information management and will be using some of these ideas not only for developing our materials but also for their design. Keep up the wonderful work!"

(Parent of dyslexic learner, commenting on CALL information resources.)

"As GK recently pointed out, CALL Scotland seems to be the hub of so many good things in the world of AT. I would love to visit one day when the world returns to some kind of normality and thank them for their dedication and relentless pursuit of best practice. Here's a recent blog post that gives you a sense of the level of testing they do so many of the rest of us don't always have to. I probably owe them a large donation for all the resources I've used and shared over the years!"

(Australian OT on Facebook, referring to blog on [Switch Access to the Chromebook](#).)

"Thank you so much for that information. It's frustrating that we don't have a wonderful system like yours. Honestly, I'm blown away by Call Scotland – and have just used your help notes to show schools how to 'speak screen.' We are really lagging behind, I fear. Thanks so much for your help. You've gone above and beyond, with me being over the border!"

(Advisory Teacher, based in England, thanking Paul for information on digital exams.)

Career-Long Professional Learning (CLPL)

Funded by: (a) Scottish Government Learning Directorate Core Grant (PL development)
(b) Charges for course participants (PL delivery)

OBJECTIVES

- To develop and deliver Professional Learning for staff and training for parents on AT and AAC.
- **Expected outcomes** include providing continued professional learning that meets the needs of staff and local authorities linked to implementing the Code of Practice; and further models of CPL delivery will become available (e.g. email/internet support).

OUTCOMES

Professional Learning at CALL Scotland

Information on CALL's Programme of online Professional Learning (CLPL) for 2020-21 was distributed to around 2,700 schools via local authority intranet systems. Throughout the year there was further promotion of courses via direct emails to schools, Twitter, CALL blog posts and e-newsletters.

The Professional Learning programme is led by Shirley Lawson with input from the whole CALL team. Robert Stewart takes the lead for technical aspects, while Esther Beeston and Sarah Marjoribanks manage bookings, invoicing and administration. Craig Mill led the 2021 Inclusive Digital Learning Masters-level course and hosted most of the weekly webinars.



Impact of Covid-19

- The University campus remained closed and so we continued to offer a series of 90-minute courses online.
- INSET courses requested by schools and local authorities were all run online as it was not possible to deliver courses in schools.
- Following the success of the half-day Virtual ASL and Technology conference in 2020, we ran a full-day ASL and Technology conference on 16th June, which was also successful.
- There was increased interest in webinars, with an average of 275 people registering for each, peaking at 733 for Jo Grace's webinar on *Ambitious Sensory Story Sharing*.
- The AAC Online Learning Modules have continued to be well-used, particularly during periods of lockdown.

GTCS Standard for Career-Long Professional Learning

The Standard for Career-Long Professional Learning provides an aspirational and developmental framework for teachers. It describes the advanced professional knowledge and pedagogical expertise that registered teachers could develop and maintain as they continue to progress in teaching and the education profession. This Professional Standard supports the professional growth of teachers in Scotland. (General Teaching Council for Scotland www.gtcs.org.uk).

CALL Scotland's Professional Learning aligns with the GTCS standards and we deliver relevant and practical training opportunities for teachers who will then record this as part of their Professional Update. Our work in schools and in discussion with University colleagues has made us realise that teacher focussed training is only one avenue to go down. We are now developing new training opportunities for two distinct and sometimes overlooked groups of people: Pupil Support Assistants and students (ITE, PG and MSc).

Pupil Support Assistants

Pupil Support Assistants are often excluded from whole staff training days or twilight sessions in schools yet these are the people who are more likely to be spending one-on-one time with pupils with Additional Support Needs and need to know how to support them using assistive technology. Their level of confidence using technology may be low and their time very limited on learning new things and knowing what to focus their learning on. We will support them by providing a bespoke course for Pupil Support Assistants which will give them with basic assistive technology skills and allow them to better support their pupils. As with all our courses, the link we make with the participants does not stop after the course ends; there is ongoing support on offer and the

opportunity for further discussion, advice and to see repeat demonstrations of anything covered in the course.

Student teachers

The ASL Review and Action Plan identifies the need for student teachers to develop understanding and practice in ASL. CALL Scotland endeavours to strengthen the links between our organisation and the University of Edinburgh and share our expertise by offering free online (and in person) awareness raising session on the use of assistive technology to support learners with Additional Support Needs. We have been pro-active in ensuring these sessions are scheduled into the busy timetables and that they have prominence at the beginning of the academic terms so all students can take advantage of what they learn when they are out in school on placements throughout the year.

Professional Learning Delivered Online

Covid restrictions meant that all Professional Learning that we have traditionally provided as full-day or half-day courses at our base in Paterson's Land had to be delivered online.

Lengthy online courses can be tiring for presenters and participants so the 2020-21 courses ran from 16.00 – 17.30. Online courses are more convenient for participants further away from the central belt and the timing of courses enables practitioners

to attend at the end of the school day. Participants are provided with a link to the recording of the course and handouts for follow up and in case of any difficulties in accessing the live session.

In 2020-2021 we used the University 'Collaborate' platform because it proved easier for participants than for example Microsoft Teams, Zoom or Google Meet.

Disadvantages of the online training include:

- reduced collegiality and interaction;
- lack of in-person hands-on support;
- limitations on content that can be covered in 90 minutes, compared to a half or full day;
- online participants do not always have access to the same technology being demonstrated;
- difficulties in providing live support for technical issues.

The average number of participants attending the online courses was far greater than average attendance for full or half-day face to face workshops in previous years, perhaps reflecting the reduced cost and greater convenience.

It is likely that we will retain online delivery of the courses delivered in CALL in future, although we will review this during 2021-2022.



Table 13: CLPL Courses delivered online, August 2020 – July 2021.

Course Title	Date	Number of participants
Chromebooks and G-suite applications for pupils with literacy difficulties	10.9.20	30
How Assistive Technology can increase engagement for pupils with complex learning needs	17.09.20	7
Using Windows 10 to support learners with a visual impairment	24.9.20	Cancelled
Using inclusive digital technologies in assessments and SQA exams	1.10.20	20
Choosing and using Symbol-based communication apps on the iPad	8.10.20	9
Choosing and using Text-based iPad AAC apps for young people and adults	29.10.20	3
Office 365 apps and assistive tools for dyslexic students	5.11.20	20
Mental health challenges in secondary education: How can assistive technology raise self esteem and attainment?	12.11.20	18
Shared reading activities using technology for pupils with complex learning needs	26.11.20	18
Exploring fun learning activities using assistive technology for pupils with complex learning needs	3.12.20	18
Using a Windows device to support pupils with dyslexia in Primary School	21.1.21	11
Implementing the Symbols for All Core Word Toolkit: theory and practice	4.2.21	Cancelled
Using a Windows device to support pupils with dyslexia in High School (including SQA exams)	25.2.21	29
Using Assistive Technology to develop your Communication Friendly Environment	25.3.21	13
Using an iPad to support literacy difficulties in high school	6.5.21	16
Assistive Technology & Complex Needs: Theory and Practice	3.6.21	19

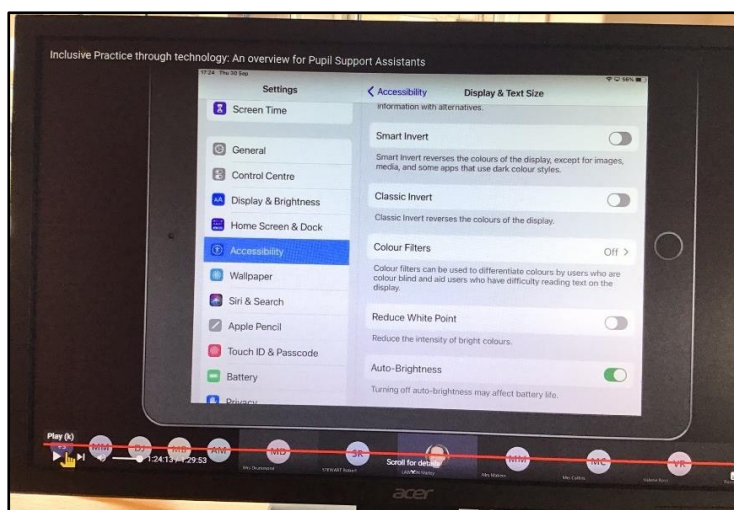
Table 14: Number of courses and participants on CALL based courses

PL courses delivered in CALL	2015-16	2016-17	2017-18	2018-19	2019-20 (online)	2020-21 (online)
Number of courses	13	13	13	12	9	14
Number of participants	146	212	147	80	138	231
Average number of participants per course	11.2	16.3	11.3	6.7	15.3	16.5

INSET Professional Learning

We provided a wide range of in-service courses in response to requests from school and local authority colleagues. Prior to Covid-19 these would have been delivered in a school or a local authority base, but in 2020-21 they were all delivered online.

During 2020-21 CALL provided 31 INSET sessions of Professional Learning for over 900 people (teachers, Support for Learning staff, classroom assistants, education psychologists, Speech and Language Therapists, parents/carers, etc.) across Scotland. The online sessions are often hosted by the school or local authority video-conferencing systems so we do not always have accurate figures for the number of participants. We do know that the sessions on iPads for Glasgow City Council and Scottish Borders Council were attended by well over 100 teachers.



There was another small increase in the number of INSET courses requested and delivered in 2020-21, while the numbers attending have shown a significant increase compared with last year (Table 15). The average number of participants attending online events is greater than that for face-to-face training in previous years. An advantage of the online model, compared to face-to-face, are that larger numbers of participants can attend, and the recordings can be made available for staff unable to attend on the day.

Table 15: INSET Courses provided online for schools and local authorities in 2020-21

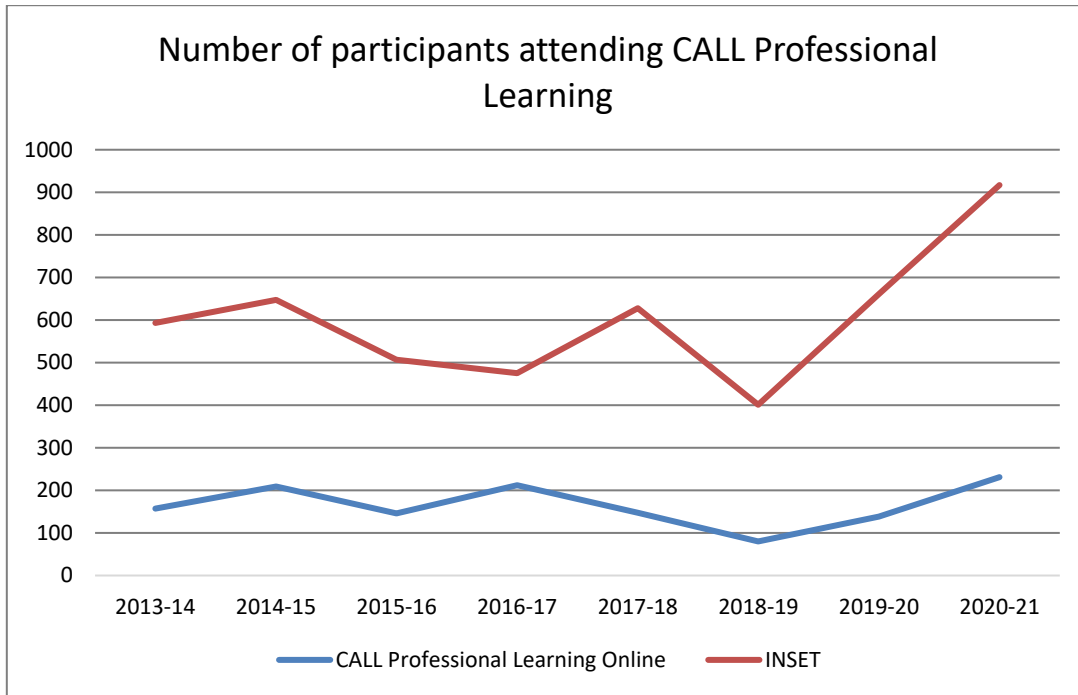
INSET topic / title	Date	Venue / Authority	Number Attending
CALL Scotland Hazelwood School Inservice	9.10.20	Hazelwood School, Glasgow	45
Introduction to OneNote Class Notebook	26.10.20	Kaimes, Edinburgh	15
Teacher Leadership workshop	27.10.20	Education Scotland	30
iPad Training – Visual Impairment	3.11.20	Glasgow	8
iPad Training – Visual Impairment	10.11.20	Glasgow	8
iPad Training – Visual Impairment	17.11.20	Glasgow	8
iPad Training – Visual Impairment	24.11.20	Glasgow	8
Assistive Technology to Support Learning Difficulties	24.11.20	Argyll & Bute	18
Using Smartbox software with Eye Gaze in the school setting	2.12.20	Castlevie School, Stirling	6
Shared Reading Activities Using Technology for Pupils with Complex Learning Needs.	9.12.20	Glasgow	20
Supporting Individuals with Communication Difficulty through Augmentative & Alternative Communication (AAC)	11.1.21	Neurodisability and Community Paediatric trainee Drs, Glasgow	5

INSET topic / title	Date	Venue / Authority	Number Attending
Exploring Fun Learning Activities Using Assistive Technology for Pupils with Complex Learning Needs	28.1.21	Glasgow	20
Introduction to CALL Scotland	29.1.21	Inverclyde	26
iPads Accessibility	4.2.21	Glasgow	170
Creating Communication Opportunities/Supporting ASN	10.2.21	Glasgow	25
iPads to Support Literacy	10.2.21	Scottish Borders	110
Creating Communication Opportunities Using Technology Access the Curriculum	16.2.21	Falkirk	12
Early Years Apps	17.2.21	Glasgow	15
iPads Accessibility	23.2.21	Glasgow	81
Online Clicker	25.2.21	Clackmannanshire	2
iPad 62Accessibility to support all learners	11.3.21	Perth & Kinross	25
Windows 10 laptops to support all learners	17.3.21	Perth & Kinross	30
Fun Learning Activities	30.3.21	Perth and Kinross	11
Technology Tools for Complex Needs Learners	20.4.21	Education Scotland Wee Blether	77
Digital Assessments	21.4.21	Perth & Kinross	6
Shared Reading Activities Using Technology for Pupils with Complex Learning Needs	5.5.21	Perth & Kinross	8
Communication Technologies (AAC) and Strategies for Learners with ASN	6.5.21	East Renfrewshire	90
Using the iPads to Support VI	7.5.21	Falkirk	18
Using iPads to support dyslexic learners in Primary School	2.6.21	Perth & Kinross	15
Exploring the Apps on the Perth & Kinross iPads for pupils with ASN	8.6.21	Perth & Kinross	2
Using Windows 10 to support ASN learners (primary)	10.6.21	Perth and Kinross	3

Table 16: Number of INSET courses and participants

PL delivered in schools/authorities	2015-16	2016-17	2017-18	2018-19	2019-20 (online)	2020-21 (online)
Number of courses	30	24	28	28	30	31
Number of participants	507	475	628	401	661	917
Average number of participants per course	16.9	19.8	22.4	14.3	22	29.6

Figure 20: Participants on CALL Professional Learning events 2013-2021



Evaluation and Feedback

Course participants are sent a link to the online evaluation form and to any additional resources provided as part of the course. Inevitably, the return rate for evaluations is significantly lower than for face-to-face courses, with 36% of evaluations being completed. Participants are asked, “On a scale of 1 to 10 how would you rate this training course?” and 2020-21 averaged a rating of 8.7, with 64% of participants giving a rating of 9 or 10.

Online in-service courses are also evaluated using either a CALL or a local authority evaluation tool but we do not always have access to results when a course is evaluated by the local authority since we rely on the course organiser to distribute the link to the evaluation form and resources. Courses held in schools or local authorities were given an average rating of 9.1, with 78% of participants rating the course 9 or 10.

Table 17: 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	Average Rating 2020-21
Courses as part of the CALL CLPD Programme	9.4 / 10	9.1 / 10	8.7 / 10
Requested INSET courses delivered online	9.3 / 10	9.3 / 10	9.1 / 10

Sample comments from evaluations:

‘Practical, relevant tips to support a variety of learners. Thank you so much for the training – one of (if not the) best training courses I’ve attended. I’m looking forward to implementing these strategies after the half-term break.’

(Teacher on iPad Accessibility – Supporting All Learners INSET for Glasgow)

‘I couldn’t give it a higher rating. I suppose the only thing that would improve it would be for it to be in person with a device per person so we can try it out as the training progresses. It

was like having a series of doors opened as the possibilities of digital support were explored – inspiring for supporting children with their learning. ’

(Teacher on iPad Accessibility – Supporting All Learners INSET for Perth and Kinross)

‘Course was very well presented, thank you. You were able to adapt the course to meet the needs of our school. Very keen that all staff are able to use the pupils’ iPads in Glasgow as a communication device and learning tool.’

(Head Teacher on Creating Communication Opportunities / Supporting ASN INSET in Glasgow)

CALL Webinars

Webinars are live, 20 – 30 minute presentations delivered over the web. Participants can listen to the presenter via audio, view materials on screen and engage in discussion via an online chat facility.

- CALL hosted 21 [webinars](#) during the year (23 in 2019-20); 7 presented by CALL staff, 8 by suppliers and 6 by other guest presenters. Guest presenters included Prof Janice Murray from Manchester Metropolitan University, sensory story specialist Joanna Grace and the North Lanarkshire Communication Friendly Resources team.
- 5,766 people registered for the webinars, compared with 1,875 in 2019-20, while 1,267 viewed the live presentations in 2020-21, representing an average of 60 participants for each webinar.
- A recording of each webinar is made available via the CALL website the day after the live broadcast. 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 stored on the CALL Scotland [YouTube Channel](#) as a [Webinars Playlist](#). The archived webinars for 2019-20 were viewed 9,565 times, an average of 455 for each recording, compared with an average of 220 people viewing last year’s archived webinars.



Figure 21: Joanna Grace presenting webinar on Sensory Stories

Table 18: CALL Webinars 2020-2021

Webinar title	Date	Number booked	Number attended	Archive Views
Ghotit apps for dyslexia and dysgraphia	26.8.20	144	30	304
Widgit Online for creating visual, communication and learning supports	2.9.20	157	27	1,394
Glean by Sonocent: Reducing stress from notetaking for students with disabilities	9.9.20	86	16	1,044
Special iApps - educational apps for pupils with additional support needs	23.9.20	245	40	231
SpeakUnique: Personalised synthetic voices for AAC devices	30.9.20	28	7	130

Webinar title	Date	Number booked	Number attended	Archive Views
AAC and clinical decision making	7.10.20	178	60	262
An introduction to literacy support app, Clicker Writer	28.10.20	193	30	693
Introducing Boardmaker 7	4.11.20	191	42	1,054
Using Scottish Children's Computer Voices in AAC Apps and Software	11.11.20	106	12	111
Medincle spellchecking and dictation software	18.11.20	86	17	70
iPad apps for pupils with complex learning needs	2.12.20	371	63	632
Introduction to the new MSc in Educational Assistive Technology	13.1.21	88	28	153
Dyscalculia App Wheel - apps to support pupils with numeracy difficulties	27.1.21	380	122	726
North Lanarkshire Communication Friendly resources	3.2.21	446	184	807
Creating learning resources with symbol supports, what are the options?	24.2.21	342	84	223
'Keep Talking' book AAC game resources	3.3.21	287	60	204
How to best use Microsoft Teams for pupils with literacy difficulties	17.3.21	459	99	397
Accessibility, assistive technologies and lived experiences from an HE environment	24.3.21	205	30	132
Ambitious Sensory Story Sharing	28.4.21	733	164	570
Seeing AI app to support those with visual impairment and also those with literacy difficulties	12.5.21	393	67	206
Using PowerPoint creatively to support learners with ASN	26.5.21	648	85	222
	Totals	5,766	1,267	9,565

Table 19: Numbers of webinars and participants 2014 - 2021

Webinars	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Number of Webinars delivered	22	23	18	20	22	21
Number of participants registering	426	738	869	1243	1875	5766
Average Number of people viewing archived webinars	157	50	79	192	215	455

CALL Scotland's regular Wednesday webinars have become increasingly popular in recent years, with the numbers viewing the 'live' webinar and the archived recording both doubling. 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 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. Figures for archive views suggest that some suppliers are directing customers to their webinar as a source for information on their products.

ASL & Technology Conference

Prior to Covid, CALL Scotland's annual [Additional Support for Learning and Technology Conference and Exhibition](#) was usually held across two days in Edinburgh and another venue in Glasgow, Aberdeen, Dundee or Inverness, in June. In 2020 we experimented with moving the conference online for a morning with 18 presentations from suppliers and members of the CALL team, delivered across two parallel streams.

The online format proved to be very popular, so we expanded to a full-day

event with 22 presentations across two parallel streams on June 16th 2021. 359 people registered for the day and 262 attended. People who registered were given access to the recordings of the sessions. We know of teachers overseas in different time zones and teachers in Scotland with teaching commitments on the day who registered in order to be able to access the recordings.

Evaluation forms were sent to participants after the event and 56 (21%) were returned. The responses suggested that people found the variety of presentations very useful, with those by the Dyslexia Scotland Young Ambassadors and Dekko Comics particularly popular. Participants were asked to rate the event on a scale from 1 to 10 and gave an overall rating of 8.7 out of 10, compared with 8.2 for last year's conference.

Sample comments from evaluations:

'The young ambassadors session was excellent – if I could take it in its entirety and deliver it to all the schools we work within we would move things on simply and effectively in schools for pupils with Dyslexia.'

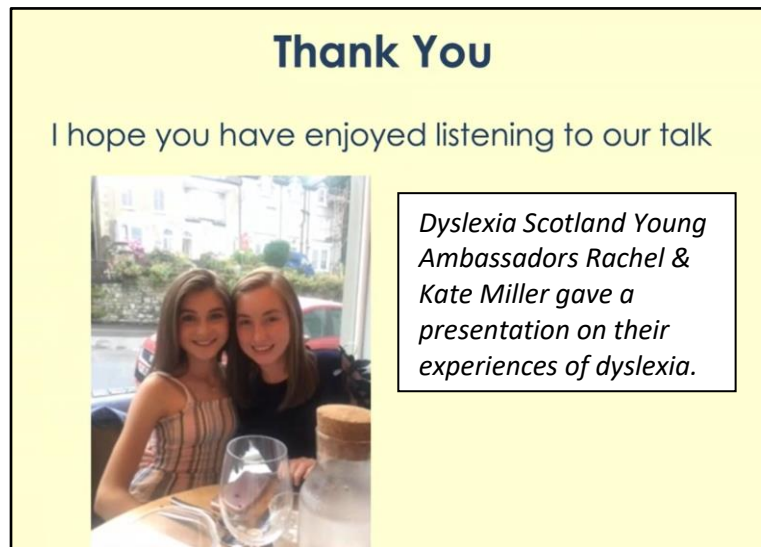
'I loved it first time and I am an experienced teacher but it was refreshing and pragmatic. Loads of creativity in there too.'

'Great to have access as a virtual viewer. Lots of ideas and it's recorded so I hope I can see the sessions I missed.'

'It was a thoroughly useful and enlightening day, providing fresh insights and challenging my thinking. Thank you very much.'

'A huge thank you to all presenters and organisers for an excellent conference; excellent CPD which I will be sharing with staff.'

'Fantastic conference overall, thank you for putting this on and available in an online format.'



Conference Presentations

CALL staff are regularly invited to give formal presentations at conferences and delivered 12 online conference presentations, listed in the [Knowledge Transfer, Research and Development](#) Section later in this report.

Online Talks for parents groups and voluntary organisations

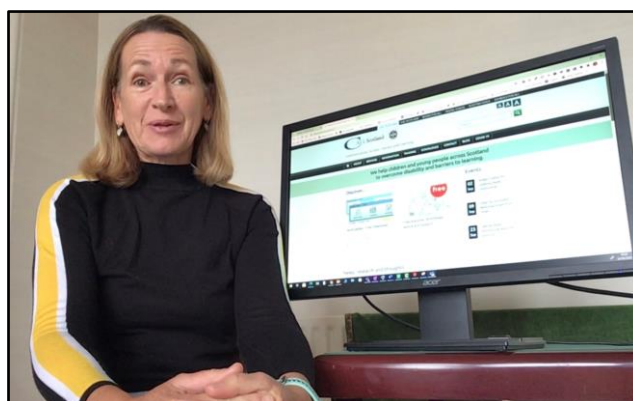
In past years we provided less formal presentations for parent and special interest groups, particularly for branches of Dyslexia Scotland, either on the work of CALL Scotland, or on how parents and carers can use technology to support their children at home.

Requests for these sessions ceased during the pandemic as many of the groups were no longer meeting. However, Dyslexia Scotland proved to be an exception. We have always enjoyed an excellent working relationship with Dyslexia Scotland and the partnership developed further as parents (and teachers) in local branches saw an increasing need to find out more about how technology could support dyslexic learners working at home. Adults with dyslexia working at home also needed this information and we also provided training for Dyslexia Scotland staff and tutors.

Table 20: Online presentations provided for Dyslexia Scotland.

Online Sessions for Dyslexia Scotland, 2020-21	Date	Event	Number
Using Windows Software to Support Dyslexia.	7.9.20	Dyslexia Scotland - Adults	19
Using Immersive Reader and other tools in Teams	29.10.20	Dyslexia Scotland South West	18
Training in Microsoft Teams	11.11.20	Dyslexia Scotland	3
Immersive Reader and other tools in Teams	28.1.21	Dyslexia Scotland, South East	36
Immersive Reader and other tools in Teams	9.2.21	Dyslexia Scotland. Angus	20
iPads and Chromebooks	4.3.21	Dyslexia Scotland	4
Windows and Chromebooks to support learners with dyslexia	16.3.21	Dyslexia Scotland	40
Introduction to Microsoft Teams	17.3.21	Dyslexia Scotland tutors	20
Microsoft Teams Training	23.3.21	Dyslexia Scotland staff	6
iPad Training	26.3.21	Dyslexia Scotland	6
Using the iPad to support dyslexia	29.3.21	Dyslexia Scotland	30
Using Technology to Support Adults with Dyslexia	26.4.21	Dyslexia Scotland, Hebrides, Skye and Lochalsh	21
Using Technology to Support Children and Young People with Dyslexia	4.5.21	Dyslexia Scotland, Hebrides, Skye and Lochalsh	18
iPad Apps to Support Children and Adults with Dyslexia	29.5.21	Dyslexia Scotland, DyslexiFest	23
		Total participants	264

Figure 22: Shirley introduces her conference presentation for Dyslexia Scotland.



Exhibitions

CALL has regularly exhibited 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 gave us a valuable opportunity for networking and dissemination of information and could lead to requests for Professional Learning.

Due to Covid-19, CALL only exhibited at the Cerebral Palsy Scotland online conference and our own ASL Technology event in 2020-21.

Family Fun Technology Day

The biennial Family Fun Technology Day run in partnership with Augmentative Communication in Practice: Scotland was due to take place at CALL on Saturday 28th March 2020 but was cancelled due to the Covid-19 lockdown.

We are hoping to run an online event for parents and children in October 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.

Under and Post Graduate teaching

CALL usually contributes to several events relating to teaching within the Moray House School of Education, but these events were severely curtailed due to lockdown.

- Craig and Allan generally give a presentation on Assistive Technology to postgraduate students on the Children and Technology module of the MSc Education. This year, Craig recorded an interview with the course organiser, while Allan put together a list of relevant online resources, both of which were made available for the students.
- Craig gave a one-hour online presentation to 80 Inclusive Education students about 'Using Technology to Support Learners with Additional Needs on 5th February.
- In response to the actions in *section 5.1 Teacher Education and Development* of the [Scottish Government Additional Support for Learning Action Plan](#), Paul gave a presentation to the Moray House Programme Directors, which has led to a series of planned inputs to Moray House courses for 2021-2022.

Inclusive Digital Technology Professional Learning

In March 2021 the third 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 pitched at SCQF level 11 (Masters) and is set within a context of underpinning academic literacies, legislation and policy at national and local levels.

15 students attended the course, an increase of 4 students on the previous year. Five of the students were from Ireland, including 3 from Cork University and 1 from Enable Ireland.

Five students completed the 3000 word case study assignment and received a Certificate of Completion.

The remaining students decided to not to submit an assignment and opted for a Certificate of Attendance. A large proportion of the students were teachers and due to a heavy workload felt



they did not have time to submit an assignment. Everyone commented that they had enjoyed the course and appreciated the level of support they had received. Similar to the previous years, feedback was very positive.

“The opportunity to discuss best practice, ask questions of various professionals contributing to the course. I thoroughly enjoyed the opportunity to undertake professional reading. I really enjoyed the course.”
2021 IDT 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. They 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.

Access to the modules reached a peak in the Spring of 2020 as teachers, therapists and care workers took advantage of the lockdown period to update their knowledge and skills through online professional learning. The modules have continued to be well used in 2020-21, clearly addressing an ongoing need for the availability of training materials in Augmentative and Alternative Communication.

We spent time in the summer of 2021 updating links to information and resources within the modules and hope to be able to add new material in 2021-22 to reflect some of the developments that have been seen in AAC over the last five years.

People who finish the modules are invited to complete a feedback form and this provides an indication of the number of users who complete the modules, and feedback on how they could be improved.

Note that the Introduction to AAC modules are also hosted on the NHS Scotland [TURAS](#) learning platform for which we do not have data for use or completions of the modules.

In response to the question “On a scale of 1 to 5 how would you rate this training module? (1 low - 5 high)”, the average responses to 31/7/21 are given in Table 21.

Table 21: AAC Online Module ratings

AAC Online Module ratings	Average rating (scale 1 to 5)
Introduction to AAC (10,270 responses)	4.73
AAC in Education (3,761 responses)	4.7

Table 22: *Introductory AAC Online Modules*

Visits and completions of Introductory AAC Modules				
Module	2018-19	2019-20	2020-21	Totals
Module 1	1,240	5,021	3,327	9,588
Module 2	922	3,614	3,350	7,886
Module 3	1,195	3,853	3,860	8,908
Module 4	761	2,806	2,649	6,216
Module 5	607	2,568	2,286	5,461
Total number of visits	4,725	17,862	15,472	38,059
Total completed feedback forms	576	6784	2910	10,270

Table 23: *AAC and Education Online Modules*

Visits and completions of AAC & Education Modules				
Module	2018-19	2019-20	2020-21	Totals
Module 1	630	2,162	1,413	4,205
Module 2	446	1,867	1,350	3,663
Module 3	401	1,554	1,189	3,144
Module 4	281	1,514	1,109	2,904
Module 5	346	1,353	1,027	2,726
Module 6	350	1,309	957	2,616
Module 7	352	1,258	993	2,603
Total number of visits	2806	11,017	8,038	21,861
Total completed feedback forms	56	3169	536	3,761

Inclusive Digital Technology Online Modules

In a context where every learner in Scotland has access to a digital device in class, there is a huge requirement for all staff, learners and parents to have equitable access to Assistive Technology training and for cost to not be a prohibitive factor. For this reason, we have been exploring the development of Inclusive Digital Technology online course modules. As the leading organisation with the expertise in this field, we are best placed to design the modules and facilitate the training which we believe should be a core component in a teacher's skillset. By offering the modules for free we will attract many more participants and with the advantage of not having to limit numbers

because the delivery is online, we can provide this much needed training to many more teachers and support staff.

According to Couper-Kenney and Riddell (2021)⁵¹ the impact of COVID-19 is likely to have had a negative impact on the educational progress of children with additional support needs and disabilities in Scotland and it will take determined efforts to rectify in the future. Upskilling teachers and support staff in the use of assistive technologies to support these learners using the popular medium of self-paced, online training modules is a desired outcome of our Professional Learning delivery.

Summary

Table 24: Summary of PL 2015-21

Summary of PL Events	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
PL delivered in CALL						
Number of courses	13	13	13	12	9	14
Number of participants	146	212	147	80	138	231
PL delivered in schools/authorities						
Number of courses	30	24	28	28	30	31
Number of participants	507	475	628	401	661	917
Webinars delivered						
Number of Webinars delivered	22	23	18	20	22	21
Number of participants registering	426	738	869	1,243	1,875	5,766
Average Number of people viewing archived webinars	157	50	79	191	215	455
Presentations at conferences	20	20	26	26	9	12
Exhibitions	14	12	10	11	9	2
Talks (online) for Dyslexia Scotland groups etc.	7	8	8	10	8	14
ASL and Technology participants	215	196	243	162	345	262

⁵¹ Fiona Couper-Kenney & Sheila Riddell (2021) The impact of COVID-19 on children with additional support needs and disabilities in Scotland, European Journal of Special Needs Education, 36:1, 20-34, DOI: [10.1080/08856257.2021.1872844](https://doi.org/10.1080/08856257.2021.1872844)

Assistive Technology Loans & Support

Funded by: (a) Scottish Government Learning Directorate Core Grant (Assistive Technology Loans and Support service)
(b) Income from services and consultancy.

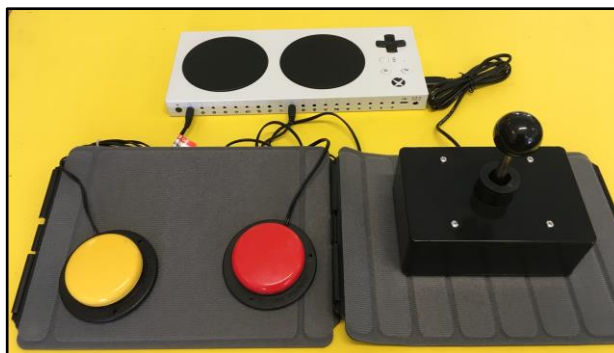
OBJECTIVES

- To provide a National Assistive and Communication Technology Equipment Bank, with technical services to enable learners with complex additional support needs to evaluate specialist technology across Scotland.
- **Expected outcome:** access to a free loan service allows for equipment to be evaluated and trialled before purchase.

OUTCOMES

- 35 devices and software with a total value of £3,234 were added to the Loan Bank last year. This compares with £4,293 spent on 68 new items in 2018-19. The most expensive items purchased were two iPads (£299 each). The other items purchased were mostly low-cost communication aids, cases, stands and interfaces.
- 24 of these items, costing £2,211, were purchased through core funding from the Scottish Government. The remaining items were purchased with other funds provided free by suppliers for evaluation purposes.
- 144 new equipment loans, with a total value of £24,723, were issued to clients in 22 local authorities.
- 80 loans were provided for CALL Scotland assessment clients, representing 57% of all loans.

Figure 23: Ultrastik Xbox / PC Games controller with Xbox Adaptive Controller and switches.



Impact of Covid-19

- While CALL staff were working from home throughout the year, we were able to access our premises to despatch loan equipment and to process returned loans.
- The number of loans issued was significantly lower than in previous years for a number of Covid-related reasons:
 - We were not able undertake assessment visits to work with learners in school for most of the year, so we were not able to leave equipment in situ for trial;
 - Learners were working at home for much of the year so teachers were perhaps not as aware of learners' additional support needs, which they might have been able to resolve with the loan of a specialist keyboard, a trackball, or other assistive technology from CALL;
 - Supply issues meant that when an iPad or laptop was found to meet a learner's needs, there could be a long delay between ordering and receiving equipment. We are reluctant to recall loans until new equipment is in place, so we were unable to 'recycle' loan equipment for use by other learners as quickly as usual.
- Arrangements remain in place for enhanced cleaning and sanitisation of equipment prior to a loan and when it is returned.

Table 25: Summary of Loans of equipment

Summary of Loans	2016-17	2017-18	2018-19	2019-20	2020-21
Number of loans	232	228	307	215	144
Value of loans	£69,000	£53,450	£44,960	£40,466	£24,723
Number of Loans to Assessment Clients	163	104	195	134	82
Number of instances of technical support	53	54	48	17	11
% "Very Satisfied" with CALL Loan Service	96	77	76	93	95

Table 26: Categories of Equipment Loaned

Type of Equipment	2016-17	2017-18	2018-19	2019-20	2020-21
Computer	16	17	22	12	5
Computer Accessory	7	13	22	7	5
Keyboard / Alternative	13	11	12	14	18
Mouse / Alternative	24	24	35	24	16
Tablet	25	24	35	20	16
Tablet Accessory	44	24	42	25	16
Communication Aid	30	23	21	25	12
Interface / Mount / Switch	41	59	69	60	36
Reading / Writing Aid	12	18	13	10	9
Toy	11	9	20	12	3
Other	9	2	2	6	3

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 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 27: Investment in Technology Bank 2011-2021

Investment in Technology Loan Bank	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21
Scottish Government Learning Directorate	18,250	8,570	15,400	10,035	12,796	3,970	
Other income	1,587	3,080	2,658	2,186	500	-	-
Scottish Government Health and Social Care Integration Directorate					30,345	3,589	
Number of items added	139	129	157	107	148	68	
TOTAL	£19,837	£11,650	£18,058	£12,221	£43,641	£7,559	

Technical Support

11 instances of technical support were recorded. This included troubleshooting problems with equipment on loan, creating bespoke learning resources for learners, fabricating adaptations to a joystick, and sorting problems with access to Books for All. Much of the support we provide relates to technology and so this particular metric is not representative of the activity and we will review whether we should continue to record 'technical support' as a category or activity.

Evaluation and Feedback

Borrowers are asked to complete a feedback form when returning equipment. There was feedback on the outcome of a loan for 92 of the 216 loans returned in 2020-21 (43%). Of these, 75% indicated that the 'Equipment met the client's need'; 9% 'did not meet the client's need' and 16% of loans were 'inconclusive'.

65 feedback forms gave an indication of future action to be considered. Of these, 75% stated that they would try to buy the system they had borrowed, while 12% planned to borrow something else, 9% wanted to seek further advice and a further 4% did not know what they would do.

Overall, 95% of borrowers who provided feedback were 'very satisfied' with the CALL Loan Service, 2% were 'satisfied' and 3% 'Did not know'.

"Thank you so much for your input. We have now bought an Xbox adaptive controller for the school. Enabling some of our pupils to access the Xbox is fantastic, and a couple of pupils in particular love it! It provides a great social time, with us sharing and playing a game together, or an enhanced cause and effect experience."

(Teacher on loan of Xbox Adaptive Controller)

"They found it much easier to use for typing activities - letters were more easily identified and therefore speed increased. Service excellent - very helpful over the phone and quick in sending out equipment."

(Teacher of learners with mild/moderate learning difficulties on loan of Clevy keyboard.)

"Thank you for the loan of the equipment. It allowed me to assess if it was the correct communication aid for R. without having to go to the expense of buying one outright to find that it wasn't suitable for him."

(Speech and Language Therapist on loan of GoTalk 4 +.)



Knowledge Transfer, Research & Development

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

OBJECTIVE

- To develop new and innovative projects and transfer knowledge of materials, resources, practices and approaches in the use of AT and AAC for pupils with complex additional support needs in order to enhance pupils' inclusion, participation and access to curriculum, to raise attainment and help pupils to develop to their fullest potential.
- **Expected outcomes** include development of a free online professional learning resource for teachers and practitioners.

A great deal of CALL's work involves research and development and particularly knowledge exchange, as discussed in the previous sections of this report.

Conference and Study Day Presentations 2020-21

- Courtney, J. (2021) **Accessible early reading and writing resources for Clicker and Grid 3 software**, ASL and Technology, Edinburgh, 16th June 2021.
- Harrison, C. (2020) **Inclusive Shared Reading Resources and Accessible Books for All**, Closing the Gap, 29th October, 2020.
- Harrison, C. (2021) **What is Tar Heel Gameplay?** ASL and Technology, Edinburgh, 16th June 2021.
- Lawson, S. (2020) **Assistive Technology and Dyslexia: Do I need an App?** Dyslexia Scotland Education Conference, 3rd October 2020.
- Lawson, S. (2021) **Free and low cost software and apps for students with dyslexia**, Association of Dyslexia Specialists in Higher Education, 13th March 2021.
- Lawson, S. (2021) **Free and low cost software and apps for students with dyslexia**, Association of Dyslexia Specialists in Higher Education, 11th June 2021.
- Lawson, S. (2021) **Why it's important for dyslexic pupils to use technology**, ASL and Technology, Edinburgh, 16th June 2021.
- Lawson, S. (2021) **ATs, UDL and Inclusive Learning Environments ?** 1st July 2021.
- Lawson, S. (2021) **Low cost and no cost software to support dyslexic pupils**, SENCO Conference, Nottingham, 7th July 2021.
- McNeill, G. (2021) **Personal Communication Passports for learners with complex needs**. ASL and Technology, Edinburgh, 16th June 2021.
- Mill, C. (2021) **CALL Scotland's Inclusive Digital Technology course - Is it for You?** ASL, ASL and Technology. Edinburgh, 16th June 2021.
- Mill, C. (2021) **Recycling the CALL Scotland Wheel of Apps**, National Association of Disability Practitioners Virtual International Conference, 9th June 2021.

We were delighted that Claire was able to give an online presentation at the prestigious international [Closing the Gap conference](#) in October 2020. Claire had originally submitted a paper, that was accepted, for presentation at the conference in October 2019, but had to withdraw. She has had another proposal accepted for Closing the Gap in October 2021.

We are also delighted that Shirley has been invited to give a Keynote Presentation on 'Getting it right for dyslexic learners using technology in schools' to the online [Dyslexia Scotland Education Conference](#) on Saturday October 2nd 2021.

Reports and articles

Nisbet, P. (2020) **Assistive Technology Assessment Arrangements in the Context of Covid-19**. Paper submitted to Scottish Qualifications Authority, 6 January 2021.

Nisbet, p. (2021) **SQA Assessment Arrangements and Assistive Technology following Covid-19**. Paper submitted to Scottish Qualifications Authority, 6 August 2021.

SQA Digital Question Papers and Assessments

Funded by: Scottish Qualifications Authority

Research into the use of Assistive Technology during Covid-19

Uptake and use of SQA Digital Question Papers and Assessments is discussed earlier in [Strategic Leadership and Collaboration](#).

In December 2020, SQA asked Paul to undertake environmental scanning (Albright, 2004⁵²) into the use of assistive and inclusive technologies by learners who require Assessment Arrangements during the 2020-21 academic session, in the context of changes to assessment of National Qualifications, and the Alternative Certification Model (ACM) 2021⁵³, due to the Covid-19 pandemic and response.

A report⁵⁴ was submitted to SQA in January 2021 and in the course of the research, Paul wrote a series of blogs in response to some of the issues and questions that arose.

[Technology-based Assessment Arrangements for SQA 2020-21 Assessments](#). 14/12/20

All National 5, Higher and Advanced Higher assessments are now going to be assessed by schools and centres internally. What does this involve for learners with disabilities or additional support needs who use technology to access learning?

[Technology-based Assessment Arrangements - Internet Security](#). 14/12/20. How can we manage and administer digital assessments for National 5, Higher and Advanced Higher in 2021? Can we use cloud-based tools such as OneDrive or Google Classroom?

[Technology-based Assessment Arrangements - Which Digital Formats?](#) 15/12/20.

Which digital formats should we use for our internal National 5, Higher and Advanced higher assessments?

[Technology-based Assessment Arrangements - Speech to Text Alternatives to Scribes](#). 16/12/20.

Modern digital devices all offer free, built-in speech-to-text or computer dictation tools. Can learners with disabilities or additional support needs use these tools for National 5, Higher and Advanced Higher assessments?

[Technology-based Assessment Arrangements - Digital Assessments Must be Accessible](#). 7/1/21.

Digital Assessments must be accessible to all learners including students with disabilities or additional support needs. In this blog we explore what this means and how to create accessible assessments.

[Technology-based Assessment Arrangements - SQA Digital Exams on iPad](#). 13/1/21.

With the latest version of Books on the iPad you can type into answer boxes on SQA Digital Question Papers. Find out how in this blog.

[How to read maths with Immersive Reader](#). 27/1/21.

⁵² Albright, K. (2004) [Environmental Scanning: Radar for Success](#). The Information Management Journal, May/June 2004.

⁵³ SQA (2021) Alternative certification model - National Qualifications 2021. <https://www.sqa.org.uk/sqa/96760.html>

⁵⁴ Nisbet, P. (2020) Assistive Technology Assessment Arrangements in the Context of Covid-19. Paper submitted to Scottish Qualifications Authority, 6 January 2021.

Last Friday a teacher asked if we knew how to read mathematical expressions with Immersive Reader. Here's how it can be done.

[Accessible Word Templates for 2021 National Qualifications](#). 11 March 2021.

2021 examinations have been cancelled and teachers and lecturers are devising their own assessments to gather evidence of attainment. We have updated pages on the Digital Assessments web site with information and advice and some downloadable templates to help practitioners create accessible assessments.

[SQA 2021 Assessments and beyond - an Insight into Using Technology](#). 29 April 2021.

Dyslexia Scotland have published an excellent video workshop by Dawn Roberts and Innes Roberts on the use of assistive technology in assessments, and more broadly. The video is well worth a view if you are a teacher, parent or student using digital technology in assessments this term.

[How to Divide and Edit SQA Question Papers](#). 3 May 2021.

Last week a teacher called us to ask how to split up SQA question papers because they need to separate out sections to use in classroom assessments. This blog has some hints and tips.

Research into the use of Assistive Technology following Covid-19

SQA asked for ongoing research throughout the 2020-2021 session in order to inform development of policy for 2021-2022 and a second report was submitted to SQA on 6th August 2021. The report contains findings that are of interest to all stakeholders and a revised version will be published in October 2021.

The key findings were:

- The ACM resulted in a significant increase in the number of individual assessments conducted which increased workload and complexity for provision of Assessment Arrangements for students with disabilities or additional support needs.
- The Covid-19 pandemic and response has driven an increase in the use of digital technology for teaching, learning and assessment. Students in several local authorities have been provided with personal digital devices and Scottish Government has committed that every pupil in Scotland will receive a digital device.
- Students are using devices based on Windows and iOS and Chromebooks and guidance and policies on technology-based assessment arrangements should reflect this context.
- The research suggests that SQA Digital Question Papers in PDF (particularly question-and-answer papers) were not commonly used by candidates using iPads or Chromebooks in 2020-21 due to technical, administrative and policy-related factors. Action research with practitioners and students is required to investigate and address these issues.
- The research indicates that Digital Answer Booklets in .docx format are not accessible to students using Chromebooks or word processor tools such as Immersive Reader in Microsoft Word. DABs should be re-designed accordingly.
- The functionality, accessibility and security of Digital Question Papers and Answer Booklets varies depending on the device and software/app used by students.
- SQA policies on assessment arrangements and internet access and use of accessibility and learning tools (e.g. spellcheck) do not align with current technologies and practices in schools and should be reviewed and developed in co-operation with practitioners.
- DQPs and DABs in PDF have functional and accessibility limitations and consideration should be given to creating assessments in other digital formats.
- Comprehensive research into the Assessment Arrangements that were provided for students as part of the Alternative Certification Model in 2021 would provide valuable information to

inform the development of policy and guidance on assessment arrangements, the use of technology, and Digital Question Papers and Answer Booklets.

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

C ALL Scotland

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