

Ebooks and accessibility

Alistair McNaught and Huw Alexander

Jisc TechDis and SAGE Publications

What do we mean by accessibility and what are the issues?

Accessibility is to ebooks what labelling is to the food industry. When you purchase a ready meal from a supermarket you expect to be able to check the ingredients straight away. Will it be suitable for my friend with the nut allergy? Is it suitable for vegetarians? By recognising that different people have different needs and preferences, the industry makes it easy for people to choose the things that suit them and many retailers make a point of signalling their “dietary accessibility” to boost sales. In a similar way, different readers have different needs and preferences, yet it can be very difficult for them to find out whether the book they are about to purchase or read will meet any of their reading needs or interoperate with their assistive technologies such as screenreaders or text to speech.

Happily, ebooks have the potential to meet a very wide range of accessibility needs. For example, with the right format and the right construction, ebooks can offer:

- Magnification with text reflow. Magnification alone is of limited benefit if it makes it harder to navigate the page. If, however, line lengths

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can reflow when text is magnified so that the line still fits the width of the screen, reading speed is significantly improved.

- Colour/contrast changes. People with some visual impairments or dyslexics with scotopic sensitivity can find reading much easier if they can adapt text and background colours or contrasts. This also benefits people working in very dark or very light environments.
- Text-to-speech support. Text to speech is a mature technology that allows text on screen to be voiced by software. Good quality human sounding voices are commercially available in a wide range of languages.
- Alternative texts for images/tables. A text description of the main points of an image or table helps convey information to blind readers, but often helps sighted readers in their interpretation of the information.
- Compatibility with assistive technology devices. Screenreaders perform a text to speech role, but also allow audio-only access to the menus and other features of the delivery platform – provided the product has been produced to recommended accessibility standards.

Ebooks with these features are accessible to a very wide range of users, including non-traditional readers – for example people with print disabilities. The term print disability refers to any disability that hinders an individual's ability to access hard-copy printed text. It is more than visual difficulty, and includes those who have difficulty decoding printed text – for example dyslexic people. Equally, spinal injury or involuntary muscle spasms may hinder someone from physically holding a book. Ebooks can potentially transform access to content for these very varied users. However, the potential benefits are not always realised. It is not unusual for barriers to accessibility to be accidentally introduced at any stage of the supply chain. Typical barriers can include:

- File format choices influence accessibility – for example PDF documents that are a “photograph” of text cannot be read out, recoloured or reflowed to fit a larger font size. Flash-based “flipbooks” can be difficult or impossible to use if you need magnified reflowable text or access to text to speech,
- Lack of accessibility awareness in the production team – even if accessible formats are used, production decisions (like tagging headings for typographical appearance rather than semantic meaning) can strip away benefits for disabled users.
- The interface of the delivery platform (e.g. ebook library systems) may lack features like font and background colour change – even when the format of the ebooks supports it.
- Lack of information or communication of the accessibility features that exist – for example, many products have no accessibility guidance, despite print-disabled people being up to 10% of the readership.

- The hardware devices (e.g. ebook readers/tablets) on which the files are displayed may lack accessibility features – for example colour/contrast options.

Procurement checklist for library staff

One of the issues with accessibility is that it can seem to get bogged down with incomprehensible technicalities – if a sales representative says “it’s Section 508 compliant” or “it was designed to WCAG specifications”, it’s difficult to argue even though neither of you has any clue what those statements mean in practice.

In 2012 Jisc TechDis was commissioned by a group of university libraries to research the provision of alternative formats¹. The final report included good practice pointers in terms of procurement practices. Jisc TechDis is very focused on the user experience so the procurement advice from the report boils down to eight plain English questions – most of which can be demonstrated there and then with the product. These questions will not guarantee 100% accessibility for all assistive technology tools, but they will allow non-specialist decision makers to ask highly pertinent questions which will help weed out products with poor accessibility.

- What is the maximum font size and does text reflow when you enlarge the font?
- Can a user change background/foreground colours or contrasts?
- Are there keyboard-only equivalents for all mouse actions?
- Is text marked up so it can be navigated in a meaningful way (for example by heading level)?
- Can text be selected and read by text-to-speech tools?
- Are text descriptions available for graphics and images?
- Which assistive technology tools has the system been tested with?
- Where can I find guidance for all these features?

Risks and opportunities

Practice perpetuates culture and cultures perpetuate practices. The model described shows how a publisher or supplier with little awareness of accessibility gives end users little information on their accessibility features. Many print-impaired people have only a scant idea of how ebooks could meet their needs, and even library staff and disability officers are not necessarily aware of the wide benefits that accessible digital text provides. This ignorance can lead

¹ Jisc TechDis. Libraries and alternative formats research. Parts 1–5. http://www.jisc.techdis.ac.uk/techdis/multilinkres/details/main_site/laafr

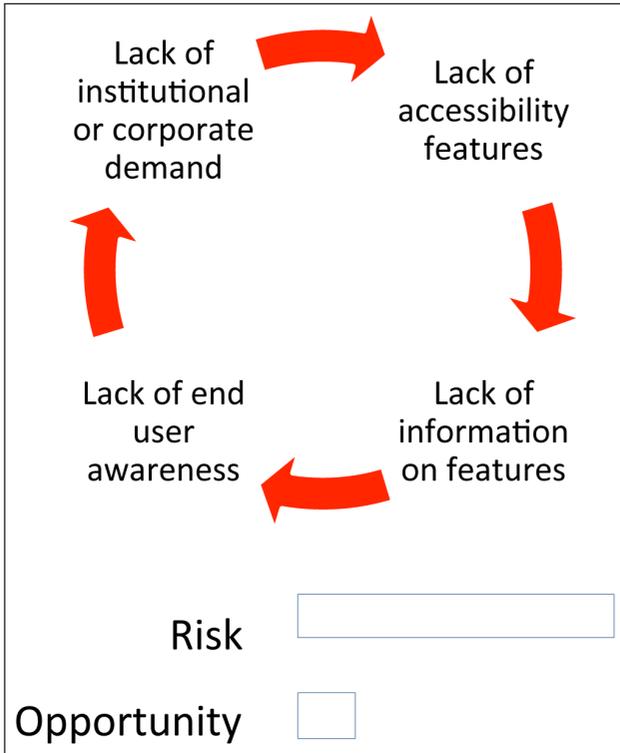


Figure 1: Flow diagram showing how lack of accessibility and accessibility information perpetuates end-user ignorance, reinforcing the status quo. This is a high-risk approach because customer awareness can change very rapidly, particularly if they come across a more accessible rival supplier.

to a dangerous complacency for less accessible publishers. Customer awareness can change in a single day by reading an article or attending a webinar or a conference. Research by Jisc TechDis² in 2012 showed that 10% of the 49 higher education institutions (HEIs) surveyed had accessibility as a “deciding factor” in their procurement policies. Colleges and universities can implement such policies faster than publisher workflows can adapt to keep in the market – giving accessible publishers a significant market advantage. **Figures 1 and 2** illustrate the difference between the “hope the issue will go away” approach and a more proactive “let’s show the customer what we can provide” approach. The key point here is that accessible suppliers can sustain existing

² Libraries and alternative format research. Part 4: Are some organisational approaches more effective? pp. 3-5 <http://www.jisctechdis.ac.uk/assets/Documents/laafr4.pdf>

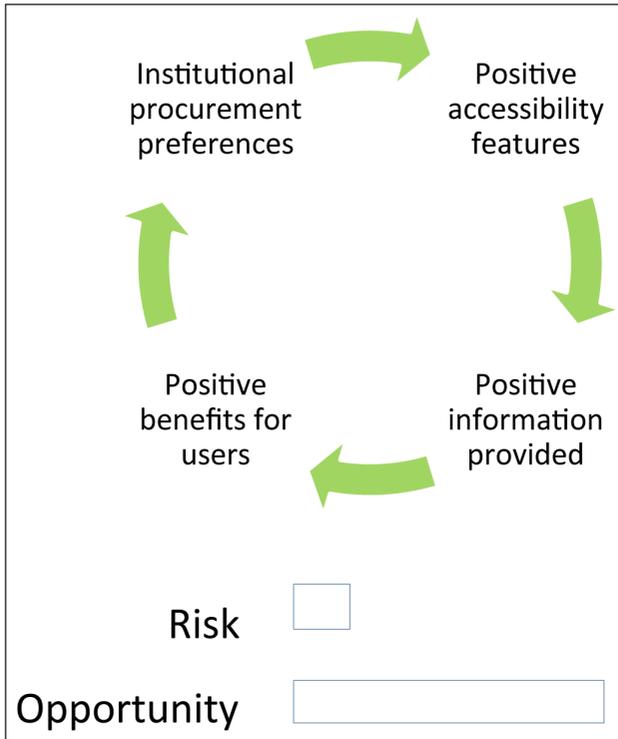


Figure 2: Flow diagram showing how proactive publishers perpetuate a demand for their accessible products.

markets and create new ones. As we see later in this chapter, proactive accessibility provides significant new opportunities.

How are accessible publishing practices evolving?

The transition to a digital publishing world has facilitated the provision of new, innovative products and content to our audiences. The natural corollary of this shift has been the opening up of content to people with visual impairments or print disabilities. Awareness of print disability within the education environment has risen sharply over the past decades, but it is only now that the tools have been made available to effectively meet the needs of this community. Previously the provision of content in an accessible form (Braille, spoken word) was a time-consuming and expensive process. The digital revolution is allowing for a wider range of content to be made available in a more timely and cost-effective fashion. The disadvantages experienced by the

visually impaired or print-disabled student are being peeled away. In essence a level playing field is emerging which affords everyone equal access to the content that they require for their studies.

Changing mindsets

This new accessible environment is still nascent and there is much work to be done, but publishers are now much more embedded in the process. The redraft of the *Creative Skillset Nation Occupational Standards for Publishers*³ resulted in 40 mentions of accessibility themes. The previous standards had zero. Content can be designed and created with accessibility at the forefront of publishers' minds. An "accessible" book now means a "better" book. This constitutes a tremendous shift in the mindset of publishers – one wrought by the need to design content with the delivery method as a central concern. Society itself has changed considerably in the last decade and the dependence on access to information in digital form at the point of demand, be it from a tablet or smartphone, has fundamentally altered the approach of publishers.

Changing opportunities

Digital has afforded a myriad of opportunities to publishers, both in the type of content that can be created and the ways in which it can be delivered. Fortunately, among the main beneficiaries of this sea-change are the visually impaired and print disabled communities.

HESA statistics⁴ show that between 600–700 print impaired students could be expected in an average-sized university. If each learner only required two core texts a year that would still result in well over a thousand requests per institution. Current requests to publishers are well below that for most institutions⁵ but they are rapidly increasing. They will increase even further. Changes in the disabled student allowance put more expectation on learning providers

³ http://standards.creativeskillset.org/assets/0000/0572/Book_and_Journal_Publishing_2012_FINAL.pdf

⁴ The range in values reflects the fact that whilst specific learning difficulties, visual and motor impairments are the main print impairments, other disabilities (like mental health) can create a need for alternative access. Within a single disability there can be a big variation on the impact on print impairment. Finally, the figures for average size university can be significantly skewed by the inclusion of the Open University. The figures quoted are regarded as a conservative estimate. <https://www.hesa.ac.uk/dox/dataTables/student-andqualifiers/download/Disab1213.xlsx>

⁵ <http://www.jisctechdis.ac.uk/assets/Documents/laafrfull.pdf> Median of annual alternative format requests to publishers = 5-15/year... not the thousand plus that might be expected.

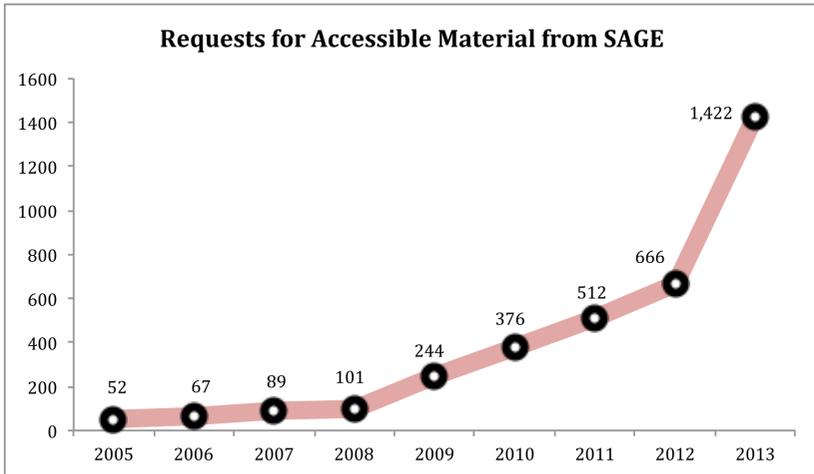


Figure 3: Graph illustrating a nearly 30-fold increase in accessibility requests over eight years with a gradually accelerating demand.

to take responsibility for sourcing accessible content in the first place. Annual requests for digital versions of textbooks by librarians and disability officers (by year) are shown in **Figure 3** for SAGE Publications.

As explored below, SAGE embraced the demand and made fundamental changes to effectively meet this challenge. But this has involved close collaboration with stakeholders, and has had far-reaching ramifications across the business. These kind of figures illustrate the drivers for change. Although the demand for physical copies of textbooks is unlikely to go away, publishers have a vested interest in ensuring that the processes that lead to either physical books or ebooks result in an accessible electronic version. The more accessible the mainstream products become, the fewer costs will be incurred in meeting specific learner needs.

Support and guidance for publishers

The Publishers Association, the Publish Licensing Society, EDItEUR, Jisc TechDis and the Royal National Institute of Blind People have provided the industry with invaluable advice on how to deliver content of the highest quality to our whole audience (see Further reading and resources). The *Accessible Publishing Best Practice Guidelines for Publishers*⁶ is a truly indispensable guide

⁶ Hilderley, S. (2011), *Accessible Publishing Best Practice Guidelines for Publishers*. http://www.accessiblebooksconsortium.org/inclusive_publishing/en/accessible_best_practice_guidelines_for_publishers.html

to the business of publishing not only accessible content but better books. The advice provided by the aforementioned groups is also supplemented by the conference circuit, where the provision of accessible content is a consistent discussion point. Attendance at events held at the London and Frankfurt Book Fairs, Association of Learned and Professional Publishers (ALPSP), University College London's Digital Forum, the Independent Publishers Guild (IPG) and the guidance provided by the Publishers Association Accessibility Action Group⁷ will allow you to keep informed about the changes in the industry. The Trusted Intermediary Global Accessible Resources (TIGAR⁸) project currently being developed by the International Publishers Association will be a huge step forward in the provision of accessible content on a global scale. The opportunities are far-reaching and exciting, and publishers are endeavouring to make a difference, to disable barriers to access and enable learning environments. In the following case study we shall examine the reasons behind the decisions SAGE have taken to help foster this community and the benefits that have been reaped from these decisions.

SAGE and Accessibility: A Case Study

In 2008, SAGE saw firsthand the rise in interest amongst our customers for accessible content. Until this point the provision of files to the visually impaired and print disabled had been a fairly ad hoc process undertaken by the rights and permissions department. The rise in demand, however, was seen as an opportunity to build relationships with our customer base and champion the provision of content to the library community.

Engendering support within the business

The SAGE Vision Statement advocates that SAGE play “a creative role in society by disseminating teaching and research on a global scale, the cornerstones of which are good, long-term relationships, a focus on our markets, and an ability to combine quality and innovation.” In redeveloping our approach to the provision of accessible content and support of students, we began by turning everything upside down. The central tenets of the business proposal presented to senior executives were those of speed and simplicity. The most consistent issue identified by librarians regarding content was the time it took publishers to provide the files. Solving this issue was intrinsic to implementing

⁷ McNaught, A. (2014), *Overview of guidance for publishers*, compiled by A. McNaught to support the Publishers Association Accessibility Action Group presentation at the London Book Fair. <http://tinyurl.com/LBFaccess>

⁸ TIGAR Service: <http://www.accessiblebooksconsortium.org/tigar/en/>

a successful makeover of our systems, and the answer was simple, if possibly controversial. The aim would be to respond to all enquiries within 15 minutes of receipt – a plan that would involve prioritising all requests for accessible content above every other project or request. SAGE provides all accessible content free of charge, and proposing that we prioritise a non-revenue stream above say Amazon had the potential for a difficult conversation with the upper echelons of the company.

This difficult conversation did not arise. The proposal was made that from a legal, ethical and commercial point of view implementing this proposal would serve to benefit SAGE both qualitatively and quantitatively. The goodwill generated by this approach would build stronger relationships with the library community, university faculty and students, and would support our commercial interests. The executives at SAGE immediately discerned the benefits and the ties that could be forged by reshaping our provision of accessible content in line with the SAGE Vision Statement. It was also, simply, the right thing to do.

Implementing a simple, customer-centric approach

The policy was swiftly adopted and the profile was raised across SAGE. The message was a simple one. All accessibility requests would be handled centrally through the sales department and everyone within the company knew this. It solved the speed issue in one motion, as any issue linked to accessibility could be passed to the appropriate person. The rise in the number of requests was thus met by a simplification in the processes for delivering the content files. Complicated licence agreements were pared down to simple usage rules, dedicated FTP sites were created, and the whole of our digital archive was redeveloped to focus on ease of discoverability of our own in-house content. In essence the process became a one-stop service whereby the librarian requested the content and we would deliver as soon as possible (the record being within two minutes of receipt). The workflow has been simplified in **Figure 4**.

The goal for SAGE was always to disseminate teaching, and the swiftness of our response would enable our visually impaired and print disabled customers by giving them the material at the same time as their peers. Again, the level playing field at work.

Influencing the bottom line

This decision was vindicated by the positive responses we received from our library partners, and ultimately we were honoured to receive the inaugural Jisc TechDis Publisher Lookup Award for Library Services in 2010. We are

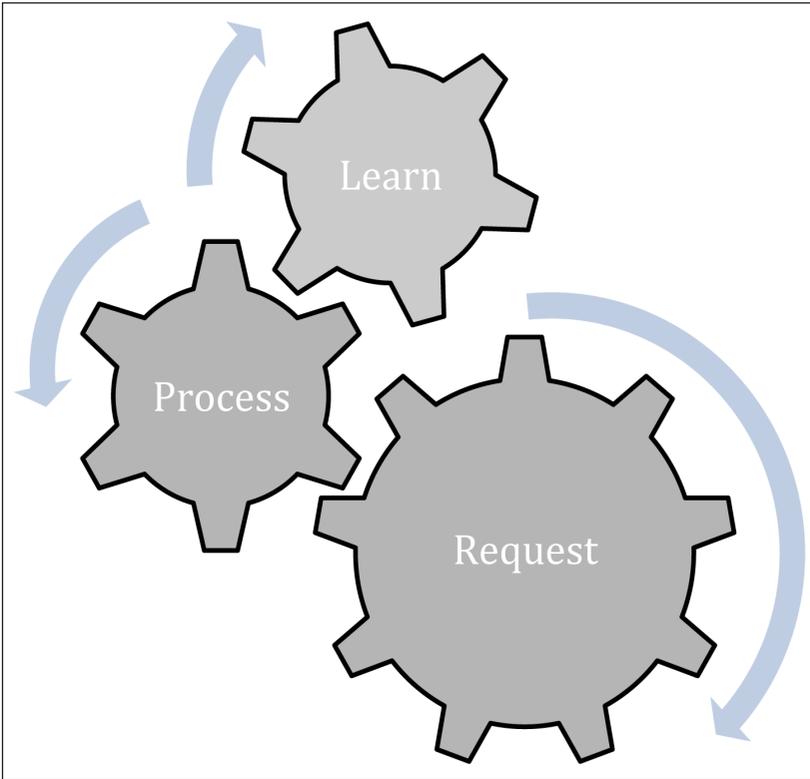


Figure 4: SAGE's workflow for the provision of accessible texts – the priority is to process the request then learn from process in order to improve the fulfilment of future requests.

happy to have developed close working relationships with over 500 academic libraries worldwide, a number that is growing every day.

The efforts made to promote accessibility within SAGE have also informed our publishing decision-making and the development of our own products and platforms. SAGE publishes in both the book and journal sectors, and the development of our digital platforms has been undertaken with a keen eye on the accessibility of the content. Accessible content is better content. It has not always been an easy process and it has been a steep learning curve at times, but the benefits have been manifold. An eye-opening comment from the recent ALPSP meeting by Rachel Thornton, Copyright Clearance Officer at Leeds Metropolitan University, was that librarians were requiring faculty to adopt only titles that had accessible content available. A fair request by librarians and one that SAGE is able to support through the systems we have put in place. No one should be left without access to content that their peers are readily able to consume.

The SAGE checklist for publishers

Based on SAGE's experience the following recommendations are aimed at publishers who are seeking to improve their dissemination of accessible content to the library community: the mnemonic should prove helpful...

A.C.C.E.S.S.I.B.L.E.

Archive

Gather all your digital files into one central repository organised by year of publication and ISBN. Searching for content will be simplified and efficient. The dual benefit of this undertaking is that you will discover content that can be sold through conventional ebook channels.

Centralise

Assign responsibility to one person for accessibility issues within your company. So many of the issues surrounding the provision of content are explained by a lack of responsibility within the company, and requests falling through the cracks between departments. Define the role and the responsibilities and make sure that in-house staff know who to turn to when a request is received.

Communicate

As well as communicating internally make sure that your efforts are being advertised externally. Clearly state your policy on your website and make sure that your contact details are present on the Publisher Lookup website. Prepare a short FAQ document for customer-facing staff so that they know what to answer when faced with questions regarding accessibility. Giving field sales staff the opportunity to say "Yes, we can do that" will increase the chances of winning that adoption.

Explore

Keep yourself informed. Attend conferences and seminars on the issue of accessibility in publishing and wider society. The Accessibility Action Group set up by the Publishers Licensing Society is a hub of such information and news.

Simplify

Simplify everything from workflows to usage rules. The processes for supplying accessible content do not need to be complicated. Librarians and

publishers are already inundated with work, so strip away the layers of bureaucracy and make the fulfilment of requests as simple as possible. Rules for the use of content do not need to be draconian – they need to be viable, straightforward and informative. If you cannot trust a disability librarian in this world, who can you trust?

Speed

From simplicity comes speed. Installing a bureaucracy-heavy approach to delivering content to the visually impaired or print disabled will only serve to take up your time and theirs. The aim should be to get the content and knowledge in their hands as swiftly as possible. Put yourself in their shoes. Imagine how hard university is at the best of times. Now imagine it without access to the books you need to study. Perfectly impossible. Make it possible.

Inform

Use the information gleaned from your accessible publishing programme to inform the decisions taken at the heart of your business. Develop your platforms in a manner consistent with your accessibility policies – make the best content possible for every audience. Identify trends in your accessibility requests that will inform your digital strategy – at SAGE if someone requests content that has yet to be digitised then it is processed as a priority and feeds into our commercial ebook channels. Use accessibility requests as a guide to demand.

Build

Build accessibility into your entire production workflow. Explore the opportunities afforded by EPUB2 and EPUB3 and a fully XML-first workflow. But don't ignore the humble PDF. A finely crafted PDF can be an example of great accessibility and a widely saleable asset in the library community.

Listen

Listen to your customers. They will all be saying the same thing, whether from within the accessibility community or outside. Everyone wants better access, better information, better platforms, better books. Do not let accessible issues be a secondary concern, make them central. The user experience is everything.

Enthuse

If you've done something good, produced something wonderful or made a terrible hash of it, share your experiences. We all make mistakes, it is how we learn from them that is important. Make appearances on the conference circuit to communicate what you have done, what worked and what didn't. Sharing ideas and policies is the only way to improve the services we each strive to offer.

Learning providers as catalysts for change – sourcing alternative formats and providing feedback

There are many different ways of obtaining text in digital format – and these were explored in some detail at the E-books and accessibility conference⁹ coordinated by Jisc TechDis in 2013. A notable statistic from this was the annual cost of scanning textbooks¹⁰ for print disabled learners – £50,000 to meet the needs of seven learners. Publishers able to provide accessible content either directly from their mainstream ebook offers or indirectly via an accessible PDF are an extremely attractive option compared to those that can't.

There are different ways in which accessible content can be obtained and Jisc TechDis have put together detailed guidance with a helpful flow diagram¹¹ that takes a number of different factors into account in order to help library and disability staff work out the quickest and most cost-effective way of meeting learners' needs.

The Publisher Lookup website¹² was created by Jisc TechDis and the Publishers Association in order to facilitate easy communication between library/disability staff and publishers. The Publisher Lookup website provides an opportunity for library and disability staff to leave feedback on publisher responsiveness – both to praise good practice and to highlight poor practice. Publishing is a complex business with multiple demands. The Right to Read Alliance has worked hard to make accessibility a positive marketing benefit. Jisc TechDis, a key member of the Right to Read Alliance, sponsored the Publisher Lookup awards to raise awareness of good practice in the industry. Providing positive feedback to publishers is essential in helping to justify changes to practice. The Publisher Lookup awards brought positive

⁹ E-books and accessibility ugly duckling or adolescent swan? (2013), Senate House, London, 13 Feb. <http://www.jisctechdis.ac.uk/techdis/events/detail/2013/ebook13022013>

¹⁰ McMahon, A. (2013), Presentation entitled: "Accessible books – who pays?" http://www.jisctechdis.ac.uk/assets/documents/events/130213ebooks_amcmahondundeeuni.ppt

¹¹ <http://www.jisctechdis.ac.uk/assets/Documents/guidetoaltformat.pdf>

¹² <http://www.publisherlookup.org.uk>



Figure 5: The Jisc TechDis Publisher Lookup Awards raised awareness of both good practice in the business process (Elsevier, Palgrave MacMillan and SAGE) and responsiveness to library requests (SAGE, Hodder Education and Wiley Blackwell).

publicity to five publishers including SAGE, who were successful in both awards (**Figure 5**).

Conclusion

Publishing has been able to make giant strides in recent years in the provision of accessible content. Help is now widely available to publishers unsure as to how to implement a successful accessibility programme. The emergence of organisations such as Load2Learn¹³ in the UK and BookShare¹⁴ and AccessText¹⁵ in the USA provide platforms for the delivery of content, and removes the complexity from the process.

The numbers of students seeking accessible content will continue to grow in the years ahead. By engaging with the issue now, publishers will be able to shape the future by building relationships with the network of decision

¹³ Load2learn. Delivered by RNIB and Dyslexia Action. <https://load2learn.org.uk>

¹⁴ BookShare is the world's largest online library for individuals with print disabilities. <http://www.bookshare.org>

¹⁵ Accesstext Network. All post-secondary institutions in the USA are eligible to join the network at no cost. Members can request files and permissions from leading publishers with one simple form. <http://accesstext.org>

makers across higher education. Pressure also needs to be exerted on device makers and digital vendors so that content is open to all. It is then that we will see the true benefit of digital, and a convergence of demand and supply where anyone who wants to access information will be able to do so in the format that they desire. It is hopefully a day that is not too far away, and by working together we can accomplish it and just make books better. Inclusivity in every respect will be essential; we have the tools at our disposal and it is time to use them.

Further reading and resources

- Copyright (Visually Impaired Persons) Act 2002. <http://www.legislation.gov.uk/ukpga/2002/33/contents>
- Free online training resources on accessibility. http://www.visionip.org/inclusive_publishing/en/
- Guidance on alternative text formats. <http://www.jisctechdis.ac.uk/techdis/technologymatters/altformat>
- Jisc TechDis guidance for publishers. <http://www.jisctechdis.ac.uk/techdis/keyinitiatives/publishers>
- Online accessibility self evaluation for library staff. <http://www.jisctechdis.ac.uk/techdis/resources/oaseslibrary>
- Publishers Association's guidelines for provision of content to VIPs. http://www.publishersassociation.org.uk/index.php?option=com_docman&task=doc_download&gid=273&Itemid=
- Research report on alternative format provision in HE. Sponsored by CLAUD group – Creating Libraries Accessible to Users with Disabilities. http://www.jisctechdis.ac.uk/techdis/multlinkres/detail/main_site/laafr