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Institutional change for improving accessibility in the design and delivery of distance learning – the role of faculty accessibility specialists at The Open University

Submission to: Special issue on Accessibility of Open, Distance and e-Learning for Students with Disabilities, for The Journal of Open, Distance and e-Learning (Open Learning)

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Abstract

The Open University has an established infrastructure for supporting disabled students. Historically the thrust of this has focused on providing accessible adjustments post-production. In 2012 the OU implemented Securing Greater Accessibility (SeGA) to raise awareness and bring about an institutional change to curriculum design so that the needs of all students, including disabled students, are taken into account from the outset of module design and production. A core component of SeGA is the introduction of faculty accessibility specialists (AS). This case study discusses the successes and challenges for AS in motivating and supporting production teams in the adoption of inclusive anticipatory practices to make new curriculum accessible. It also outlines the process of reasonable adjustment during presentation. It shows how collaborative working between AS has helped standardise design and production processes for accessibility, principles with wider relevance for supporting disabled students in other Higher Education Institutions (HEIs).

Key words: Accessibility; distance learning; disability; module design.

Introduction

With around 200,000 students (OU, 2014a) the Open University (OU) is the UK's largest provider of supported open and distance learning in higher education. Its reach goes well beyond the UK; many qualifications are available across Europe and some worldwide. The OU is the largest provider of higher education for people with disabilities, in 2012/13 more than 20,000 students declared a disability (ibid.).

The OU is committed to improving accessibility for disabled students and to delivering a study experience equivalent to that of non-disabled students. This commitment is set out in the OU's Equality Scheme which has a vision of creating an inclusive university community where inequalities are challenged and different needs and circumstances are anticipated and responded to positively 'so that everyone can achieve their potential' (OU, 2013, p4). One of the aims of the scheme is to promote and advance equality of opportunity including 'taking steps to meet the needs of people that are different to the needs of other people' (ibid., p4).

The OU's Equality Scheme is underpinned by equality laws in England, Wales, Scotland and Northern Ireland, and the Equality Challenge Unit (ECU) (2014) provides a summary of key equality laws specific to disability. The Equality Act 2010¹ requires universities to avoid discrimination and provide reasonable adjustments for disabled students. The purpose of the reasonable adjustment duty is to 'provide access to an education as close as is reasonably possible to the standard normally offered to students at large', hence the duty goes beyond 'simply ensuring that some access is available to disabled students' (Equality and Human Rights Commission, 2012, p89). The UK Quality

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¹ The Equality Act (2010) applies to England, Wales and Scotland. The Disability Discrimination Act 1995 remains in force in Northern Ireland.

Code for Higher Education states that higher education providers 'offer disabled students learning opportunities which are accessible to them, by means of inclusive design wherever possible and by means of reasonable individual adjustments wherever necessary' (Quality Assurance Agency for Higher Education (QAA), 2012, p4).

According to the UK Government there is potential overlap between the reasonable adjustment duties required of Higher Education Institutions (HEIs) under the Equality Act 2010 and some of the Government funds provided to individual students via the Disabled Students' Allowances (DSAs) (Department for Business, Innovation & Skills (BIS), 2014). DSAs are non-repayable grants to help towards 'additional' costs incurred by disabled students as a result of their study compared to non-disabled students. The UK's Department for Business Innovation and Skills is revising DSAs and changes include removal of grants for standard specification computer equipment and some categories of non-medical helpers (Willetts, 2014; Clark, 2014). Changes to computer equipment support will come into force for the academic year 2015/16 whilst other changes have been postponed to 2016/2017 following concerns raised by disabled students and representative bodies (Willetts, 2014; Clark, 2014). In part these changes are to ensure that HEIs meet their anticipatory duties and provide reasonable adjustments as set out in the Equality Act 2010.

The OU's commitment to inclusivity is in keeping with these legal and policy changes. It is also in keeping with a move towards a 'social' model of disability (Barnes, 2000; Mole, 2013) where student needs are included at the design, production and implementation stages, rather than retrofitting an adjustment to redress an exclusive design. Fully realising the OU's commitment and legal anticipatory duties in practice requires developing more inclusive curriculum design in production. This represents a shift from a previous reliance on post-production adjustments and retrofits. Such an anticipatory

approach is also likely to be more cost-effective than retrofitting materials, which, in some cases, can be difficult to implement to be timely for the student. However, even with an inclusive design a number of individual reasonable adjustments post-production will still be required given the complexity of some student's needs.

Working towards realising this challenging aim of inclusive design is the focus of this case study. In 2012 the OU initiated Securing Greater Accessibility (SeGA), a university-wide programme to 'ensure the needs of all students, including disabled students, are considered at the initial module design stage, thereby reducing the need to retrofit materials when a student faces difficulties' (OU, 2014b). An important component of SeGA was the introduction of faculty accessibility specialists (AS). One of the key roles of AS is to motivate and guide academic and support staff in embedding accessibility in production. They also advise on reasonable adjustments during presentation. This case study focuses on the work of AS in increasing awareness and understanding of disabled student experiences and anticipatory obligations, and in achieving academic and support staff commitment to, and implementation of, more inclusive design. It also outlines a process for reasonable adjustments of module material post-production. The successes and challenges to-date are highlighted, including progress made towards standardising procedures and content which should have relevance for the support of disabled students in other higher education institutions.

The next section gives a brief summary of how study at the OU has evolved, followed by disabled student registrations and declared disabilities, and student support. The role of the AS in developing inclusive design and embedding accessibility is then discussed together with achievements through cross-faculty working. Future areas of work are highlighted before concluding with the contribution AS has made to accessibility for disabled students studying at the OU. A glossary of acronyms is provided at the end.

The evolution of OU study

Over the 40 years since its launch, the OU has been at the forefront of using new technologies with print materials supplemented by audio/video using cassettes, CD-ROMs, DVDs and more recently online 'virtual' learning environments. It also runs OpenLearn, which provides free online taster materials for prospective students based on current and legacy OU modules.

The OU has recently moved to a more qualification-oriented curriculum rather than a module-based one, and most OU degree offerings now have a mix of printed copy and online materials. However some qualifications are moving to fully online (or 'on-screen') supported learning, including online tutorials in place of traditional face-to-face ones. This brings new challenges and opportunities for improving accessibility for disabled students.

OU students with disabilities

In 2012 175,924 students had registered with the OU for undergraduate modules, of which 21,083 (12%) had declared that they had one or more disability (Richardson, 2014), which is double the proportion it was three years earlier (OU, 2014d). The actual number of students with a disability will be greater as some students choose not to disclose. This increase will be due to a number of factors, including efforts by the OU to encourage students to provide information about their disability and related needs.

Declarations are mapped on the twelve main Higher Education Statistics Agency (HESA) disability categories depicted in Table 1 and shown as a percentage of all declarations, among all students with disabilities, and among all students (adapted from Richardson, 2014). As some students declare multiple disabilities, the total number of declarations is higher than the number of students.

Table 1 – Prevalence of specific disabilities in OU students in 2012 (adapted from Richardson, 2014)

Category	Number of declarations	Percentage of all declarations (%)	Among all students with disabilities (%)	Among all students (%)
Blind or partially sighted	1724	4.4	8.2	1.0
Deaf or hard of hearing	1323	3.4	6.3	0.8
Restricted mobility	4945	12.6	23.5	2.8
Restricted manual skills	3052	7.8	14.5	1.7
Impaired speech	534	1.4	2.5	0.3
Dyslexia or other specific learning difficulties	4961	12.6	23.5	2.8
Mental health difficulties	7291	18.5	34.6	4.1
Personal care support	977	2.5	4.6	0.6
Fatigue or pain	7221	18.4	34.3	4.1
Other disabilities	3205	8.2	15.2	1.8
Unseen disabilities*	3530	9.0	16.7	2.0
Autistic spectrum disorder	552	1.4	2.6	0.3
Total	39315	100		

^{*} e.g. diabetes, epilepsy or asthma

Table 1 highlights that most declarations are made against mental health difficulties, fatigue or pain, dyslexia or other specific learning difficulties, and restricted mobility. Some of the largest increases from 2010-2012 are amongst students declaring mental health difficulties and/or dyslexia or other specific learning difficulties. This range of declared disabilities has implications for the way the OU plans and delivers its teaching, and for the way it provides student support.

Supporting disabled students at the OU

The OU's Pro-Vice Chancellor (Learning and Teaching) stated that '[we are an] inclusive organisation – it's one of our values and it's a key principle of our teaching strategy.

Academic staff [...] have a key role to play in keeping accessibility at the forefront when

designing our curriculum, teaching and assessment. More than ever before, accessibility has become a key component in ensuring we retain students and keep satisfaction high' (Tynan, 2013).

The OU has established infrastructure in place for supporting disabled students. For example, the OU's Disabled Student Services (DSS) unit has, for many years, provided accessible alternatives to learning resources such as: DAISY talking books; comb bound or large print books; information about, training in, and loan of assistive technologies; Disabled Students' Allowance (DSA) support and assessment; tutor briefings and training for specific disabilities. Module specific study support for students is delivered by Associate Lecturers (ALs), coordinated by one of the OU's 13 National and Regional Offices across the UK. Together they are responsible for providing adjustments to teaching support. With the move to online learning, other formats of new online content such as electronic books (eBooks) are available to all students and may improve accessibility for some disabled students.

Planned changes to DSAs in England will impact upon how support is provided to disabled students. As outlined above, the removal of some areas of funding, especially in relation to some non-medical help, places a greater onus on HEI's provision for disabled students and their obligations for anticipatory and individual reasonable adjustments (BIS, 2014). Hence, the AS role at the OU is likely to become even more prominent in helping to improve accessibility through more inclusive design of content during production, to complement the established infrastructure in place to provide individual adjustments.

With the introduction of new student funding rules in 2012, the OU has seen a fall in the number of DSA applications. The number of OU students receiving DSAs reached a peak in 2012/13 of around 6,400, but applications fell significantly in 2013/14 and are expected to be no more than 2,250 in 2014/15 (Beesley, personal communication, 6

October, 2014). In 2012/13 the average DSA spend per OU student was around £1,300 (ibid.), considerably less than the national average DSA spend for under-graduate part-time study of around £2,300 per student (BIS, 2014).

Around half of the OU students' DSAs were spent on specialist equipment (Beesley, personal communication, 6 October, 2014), much of which will still be eligible under the planned DSA changes, although students will be expected to contribute the equivalent cost of an standard specification computer as these are no longer considered an 'additional' cost compared to non-disabled student costs. Adversely affected disabled students from a low income household may apply for OU financial support for computer equipment.

Just over 40% of OU students' DSAs were spent on non-medical help with the remainder on general items and travel (ibid.). Non-medical help is now divided into 4 bands, with the least specialised lowest paid help in band 1 and the most specialised highest paid help in band 4. Under the DSA changes, funding will be targeted at more specialist support and will no longer be available for lower level support. Non-medical help provided to OU students falls mostly under the higher bands which reflects the national picture (BIS, 2014). Where students may be adversely affected the expectation is on the University to provide inclusive methods to improve accessibility and to provide any individual lower level support.

The role of the OU's faculty accessibility specialists (AS)

A key element of SeGA is 'ownership' of accessibility by Central Academic Units (referred to here as faculties). Accessibility has been made explicit in the portfolios of relevant Associate Deans (ADs) / Directors in each faculty who are responsible for the curriculum. The role of faculty accessibility specialist (AS) was created to support and

operationalise the work and responsibilities of the ADs.

All faculties appointed at least one AS; there are currently 14 AS spread across the University. AS appointments were made from existing OU staff members, predominantly Curriculum Managers (those staff who manage modules or qualifications), or academics involved in module production. On appointment the AS were expected to have a solid working knowledge of their own curriculum area, and OU systems and processes, together with an understanding of the requirements of disabled students. There was no additional payment for taking on the role but AS were given dedicated time within their workload (on average between 15-25 days per annum) and SeGA provides regular and ongoing specialist training for AS to develop the knowledge and skills necessary to carry out their role. Critical to the success of the AS role is an ability to work with others to facilitate 'buy-in' and to be pro-active to develop networks and harness expertise both within and across other faculties and supporting units.

The role of the AS can be categorised into the following areas:

- Increase disability awareness amongst academics and support staff responsible for curriculum content;
- Support production teams to embed accessibility in curriculum design and production;
- Help to deliver individual adjustments for content and assessment post production;
- Advise faculties and support teams about subject-specific anticipatory and individual adjustments that contribute to the development of a better understanding of reasonable adjustments.

Increase disability awareness amongst academics and support staff responsible for curriculum content

AS have carried out a number of activities to help increase disability awareness amongst academics and support staff. The intensity of these activities has varied across different faculties partly informed by, and positively correlated with, module production schedules. Examples of awareness raising activities include:

- Workshops and seminars for inclusive design and anticipatory adjustments in curriculum production;
- Workshops and seminars for individual reasonable adjustments post-production;
- Presentation, talks and updates at faculty and departmental meetings;
- Briefings with student support staff;
- Share good practice between AS via regular meetings and training sessions;
- Share good practice across the OU though quality enhancement initiatives;
- Input into SeGA resources for staff and development of the SeGA website;
- Availability of accessibility resources as part of module production workspaces;
- Input into University wide guidance, such as approval processes;
- Workshops as part of the OU's Annual Disability Conference.

As well as raising awareness and understanding of anticipatory and reasonable adjustment responsibilities, these activities have been important for developing a dialogue between AS and production teams and together with more targeted support have helped to achieve 'buy-in' from academics and support staff.

Support production teams to embed accessibility in curriculum design and production

Embedding accessibility in design and production is challenging, especially when working

within accelerated production schedules and with a plethora of multimedia tools available to deliver and enhance learning. AS work directly with production teams from the start of the process. Most of this AS support can be categorised into three main strands.

The first strand comprises working towards standardising procedures for embedding accessibility. The AS meets with the production team at the outset to ensure it is aware of its responsibilities and understands the mechanisms available to identify potential issues. The aim is for the original material produced to be accessible and where this is not appropriate to provide an alternative learning experience. Standardised procedures are evolving, but, to date, include the following:

- Production teams have a dedicated accessibility coordinator as part of the team;
- Accessibility of materials is detailed in approvals paperwork;
- Accessibility is a standard item in meeting agendas or dedicated meetings where appropriate;
- Checklists are provided to aid the production process and provide an audit trail, including a design/planning checklist, and an asset and accessibility production checklist.

All modules provide information to disabled students regarding potential accessibility issues, and production teams are advised to provide specific information relating to the content, the anticipatory adjustments provided or other solutions to address accessibility barriers. There are a number of ways in which this information can be provided: in a module description, available to students prior to registration; as a standalone 'Accessibility Study Guide' for the module; or in an accessibility section as part of a broader module guide. The latter two are currently only available to registered students. Where there are generic issues aligned to the subject area (rather than specific to the

module), for example numerical formulae and scientific equations in Science, Technology, Engineering and Mathematics (STEM) subjects, then a more appropriate approach may be a qualification or subject accessibility guide. Traditionally, accessibility guides have not been produced as a standard item, and the module descriptions are inadequate for outlining where there may be accessibility issues, but the work of the AS has helped deliver significant progress in this area (see below) to enable disabled students to make informed choices about their study direction.

The second strand is AS support for production teams to provide 'standard' adjustments. As detailed previously, other areas of the University provide some adjustments to mode of delivery, however where an adjustment relates to module content directly, it is the responsibility of the production team to identify the need for, and produce, an adjustment. Standard adjustments include extended figure descriptions for all figures, transcripts for audio and visual assets and closed caption subtitles. The AS has enabled this through production of guidance for teams and development of agreed procedures. In addition, AS have also been involved in developmental work to identify mechanisms for providing future standard adjustments, for example the use of audio descriptions for video material and tactile diagrams.

The third, and often the most challenging strand, is working with teams to produce alternative accessible versions of bespoke assets where the original version is not accessible. This is often related to activities, third-party content, software (e.g. Flash, or subject-specific software) and/or incompatibilities with assistive technologies. For example, a new Science, Technology and Maths Access module, aimed at new and underconfident learners uses an OU created online environment called OpenStudio for students to upload and discuss images produced as part of their studies. The AS worked with the module team and OU support staff to provide alternatives and guidance for visually

impaired students including different ways of submitting images, how to provide text rather than image descriptions and when assistance may be appropriate.

Help to deliver individual adjustments for content and assessment post-production

Embedding accessibility in design and production involves a transition period as many legacy modules were produced before anticipatory duties were introduced. In addition, however carefully design and production is thought through it is likely there will be a requirement for a small number of individual reasonable adjustments post production to meet complex needs.

Figure 1 shows the units involved in responding to an individual reasonable adjustment request from a student during their study. All requests, regardless of which unit/individual initially receives the request, are handled using a four-stage decision-making process:

- Stage One Is the student at a substantial disadvantage because of their disability?
- Stage Two Is it practicable and effective to provide an adjustment?
- Stage Three Is the adjustment something that could be provided via DSA?
- Stage Four If the adjustment is not provided by the DSA, or the student is not eligible for DSA, is it something that is reasonable in terms of costs and/or resources?

Only those that require adjustments to teaching material, delivery methods or method of assessment are directed to the module team, usually the Curriculum Manager in the first instance. If this cannot be resolved, support is available from the AS, who may also act to ensure that the reasonable adjustment framework has been used and decisions

have been documented. If, in turn, the AS is also unable to resolve the request they can seek advice from supporting units or SeGA for a final decision.

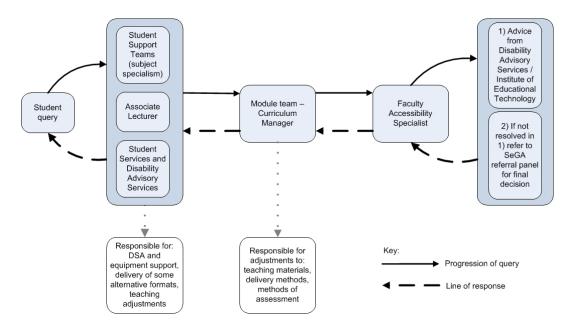


Figure 1 – Units involved in responding to a reasonable adjustment query including the role of accessibility specialists

In many cases, decisions can be made swiftly and adjustments provided for the timely benefit of the student (e.g. printed versions of materials in place of online content, or providing assessment and tutorial information in advance), but some cases are more complex and can require input from a number of units outside the faculty.

An example of a complex reasonable adjustment request came from a deaf student who requested subtitles on DVD-delivered video content, and an alternative to the online tutorial room on a legacy module. A case conference was convened by the AS that brought together disabled student support staff, with input from the student and their AL, to discuss the request. It was established that not all DVD content could be subtitled because some was third party or multimedia-generated over a decade earlier, and for the remainder, the

time required meant the student would not benefit. Instead, transcripts were provided where none existed previously and a British Sign Language (BSL) interpreter was recommended for additional support. Although an alternative to the online room could not be offered, the BSL interpreter enabled the student to follow the tutorial, and additional teaching time was provided by the student's AL. The AS ensured all evidence was gathered to document decisions, and the outcome was appropriately communicated to the student.

Advise faculties and areas that support disabled students about subject specific anticipatory and individual adjustments that contribute to the development of a better understanding of reasonable adjustments

The institutional knowledge that the AS amass when working closely with module teams means that they are able to identify subject-specific accessibility issues that may be problematic, or may need additional resource. For example, the recent revision of a chemistry module has generated several thousand individual chemical structures, presented either in-text or embedded as reaction schemes (with >3 structures in each), in addition to those structures presented as figures. While the OU requires that figure descriptions are provided for all figures, those produced were found to be complex and difficult for visually impaired students to use. Providing extended descriptions for the additional chemical structures and reaction schemes was on such a scale that it could not be achieved in the normal production cycle, and may generate assets that, like some of the figure descriptions, may be unusable. This was referred to SeGA for additional advice and as a result the AS is involved in scoping solutions that will be trialled and rolled out for future modules with chemistry content.

Issues have also been identified by the AS, and often found to be shared by more than one subject area. For example, the recent trialling of a fee-based 'print on demand'

system for access to online modules was becoming confused with the traditional agreement to print online content for disabled students as a reasonable adjustment. This enabled AS to input into University guidance for study advisors, and generate guidance for module teams on how to handle print requests on modules with 'print on demand'.

Other AS activities

AS play an important role in supporting their AD, for example through input into reporting on accessibility activity to the faculty and OU, input into strategy development, and keeping ADs informed of accessibility issues. AS also actively input into working groups across the University, adding a faculty 'voice'. This has included work to: develop online information dedicated to accessibility for each module; improve the recording and profiling of students' needs; record reasonable adjustment decision outcomes; develop changes to the approvals process; and develop internal processes to generate tactile diagrams.

In addition to the examples from Access (foundation) modules and under-graduate study drawn on in this paper, the AS role extends to wider OU provision including content of: post-graduate study, residential schools and vocational study.

During the experience of their first year in the roles, it became apparent to AS that, whilst there were some significantly different accessibility issues across all subject areas, there were many gaps in provision and potential for more standard processes that were relevant across all faculties. Many students register for an 'Open' degree where the syllabus is designed by the student from combining modules which are often from different faculties. Hence, it is important, in terms of the student experience, that students receive consistent support and materials. Additionally, whilst production teams were keen to address accessibility in module design, many academics needed more clarity about what

was required, as tasks, processes and responsibilities were often unclear. The AS decided that collective working would be the best way forward for addressing these issues, and to do this they initiated a cross-faculty accessibility working group.

The cross-faculty accessibility working group

Plans for the cross-faculty accessibility working group (hereafter referred to as the working group) were approved by SeGA, and the group was established in April 2013 for an initial period of six months. The opportunity to join the working group was offered to all AS and to relevant others who support disabled students. Active membership was drawn from a wide range of faculties as well as disability experts from supporting units. The initial work of the group was informed by feedback from working with module teams, especially in relation to requests for guidance on practical steps to help embed accessibility in design and production. The initial objectives of the working group are outlined below:

- (1) Develop the role description for the production team accessibility coordinator and outline the skills required to fulfil the role;
- (2) Consider the training provision required to develop the skills necessary for the coordinator and how training may be delivered;
- (3) Provide guidance for producing a module Accessibility Study Guide and update the template for the guide;
- (4) Consider the processes for disseminating, using and reviewing an Accessibility Study Guide;
- (5) Consider steps for addressing accessibility across qualifications, including processes for developing a Qualification Accessibility Statement.

The role description for the production team coordinator (Objective 1) is now available to all module teams and initial training for carrying out these responsibilities is

provided by AS. The accessibility coordinator role is now a formal and mainstream part of the production process. An important part of the role description is a 'workload benchmark' against each responsibility. These workload norms are important both for raising awareness of accessibility in module production, and for greater understanding and transparency of what is involved. The role description and associated workload guidance help embed accessibility as part of the production process. They also ensure that accessibility is visible, and not peripheral or adjunct to the academic content.

It has been agreed that online training resources will be developed for the accessibility coordinator and the working group have made recommendations for content, delivery and assessment. Whilst this is in development, the AS continue to provide training for the coordinator role within faculties.

One of the coordinators responsibilities is to produce accessibility study information for students, either as a stand-alone guide or as part of a module guide, as outlined above. To help implement this role, the working group has helped improve the usability of an existing accessibility study guide template (Objective 3) which is now in use by production teams. In some faculties Accessibility Study Guides are now a standard part of the module production and review process. For example all but one of the 14 new Maths, Computing and Technology (MCT) modules provided Accessibility Study Guides when they were launched in October 2013, with the remaining module providing the guide post-launch. Due to tight OU regulations on surveying students it has not been possible to establish the impact these guides have had on students to-date, and this is an area the working group hope to pursue. However, an indication of their value is demonstrated by positive feedback from study advisors, including the following two quotes: 'As an adviser, I link with visually and hearing impaired students for disability issues and this will make it a lot easier to help students make an informed decision'; 'thanks very much for the

excellent accessibility study guide for disabled students received earlier. I shall hold your practice up as a model that all module teams should emulate!'

Accessibility Study Guides are currently made available to registered students on the module websites. However, one of the difficulties for the working group has been how to make this information available online for pre-registration enquirers. They are available to study advisors to help them inform enquirers of possible challenges and adjustments so students can make a more informed choice, however ideally the information would be available to students directly. Discussions are in progress to facilitate this and more work is needed to determine the level of detail appropriate for enquirers.

Working with individual modules to develop accessibility guides also helped some AS identify a need for subject-wide guidance, particularly in STEM subjects, and there is now a Maths Accessibility Guide.

Finally, the working group are running a pilot study to develop guidance for providing accessibility information for a qualification. This is a complex task as many qualifications have multiple pathways and module choice. However, as new students are required to register for a named qualification at the onset of their studies, in order to be eligible for a student loan, this information will be critical for ensuring students make informed choices about their chosen study path.

Future work

Although the work of AS and the working group has helped deliver improvements in accessibility, there are a number of ongoing and future challenges:

Providing succinct information about the accessibility of qualifications is
particularly problematic as many qualifications have a large number of pathways
(choice of different modules) and the 'Open' degree remains popular;

- Providing Accessibility Study Guides direct to enquirers is in development,
 currently these are available from study advisors or post registration;
- The increased use of third party content can both be helpful to some disabled students and a challenge to others;
- The growing provision of online content often in new forms such as apps

 (applications) or advanced ebooks (which employ embedded software to display audio and video content) may be helpful to some disabled students and a challenge to others;
- How can module design and delivery become more inclusive of student participation to improve accessibility for all?

The working group was initially set up for a limited period only, in order to address the issues documented, however all members were in agreement that it provides an effective way to address accessibility issues relevant across all faculties and have agreed to continue. The group meets every four to six weeks and ongoing work, in addition to furthering the work outlined above, includes establishing guidance for faculties relating to: the production of figure descriptions; the accessibility of forums and online tutorial rooms; the accessibility of collaborative work and student generated content; and to review the disability section of module descriptions.

The OU is committed to increasing the satisfaction of disabled students (OU, 2014c). The authors are mindful that as inclusive design for accessibility becomes increasingly embedded in module production the future work of AS and the working group in supporting production is likely to become more nuanced based on students' needs.

Analysis by Rose-Adams (2014) shows the completion gap between disabled and non-disabled OU students has increased; 6.2% fewer disabled students completed in 2010/11 compared to non-disabled students, and this gap rose to 11.3% by 2012/13. For students

that complete, the attainment gap (based on achieving a good pass) between disabled and non-disabled students has decreased from 7.0% in 2010/11 to 5.1% in 2012/13. However, Rose-Adams (2014) analysis is based on all disabled students, and the picture becomes more complicated when considering students that declare single compared to multiple disabilities. Richardson's (2010, 2014) analyses of OU students shows that students that declare multiple disabilities often do less well in terms of both completion and attainment, compared with students that do not declare a disability or students that declare a single disability. Further work needs to be done to understand whether access to content is one of the reasons behind these poorer completion rates and levels of attainment and if so what anticipatory adjustments can be developed during production to help address the needs of students with multiple disabilities.

Conclusion

The OU's SeGA programme has made considerable progress in bringing about institutional change so that the needs of all students, including disabled students are part of module design and production. This has happened through increasing awareness and understanding of challenges faced by disabled students in supported open and distance learning and improving the range and provision of materials to prevent these challenges arising. This case study has shown how the work of faculty AS has made an important contribution to improving accessibility. The shift from a reliance on retrofitting adjustments to a more inclusive design from the outset of new module production represents a move towards a more social model of disability (Mole, 2013). However, these changes are still evolving and remain a work in progress, particularly with regard to legacy materials. Following its success, SeGA has now moved from being a dedicated programme of work to 'business as usual'.

The pro-active work of the AS has shown that it is possible to raise awareness about access and foster active participation from academics in broadening their scope and responsibility for all students. Sennett argues that 'we are losing the skills of cooperation needed to make a complex society work' (2012, p.9) and that only by confronting these challenges through empathy and sympathy can we raise levels of equality. By collaborating, the AS and working group have been able to facilitate the sharing of learning and of best practice to others in the University.

Glossary of acronyms

AD – Associate Dean

AL – Associate Lecturer

AS – Accessibility Specialists

BSL – British Sign Language

DSA – Disabled Students' Allowance

DSS – Disabled Student Services (at the OU)

HEI – Higher Education Institutions

OU – Open University

SeGA – Securing Greater Accessibility

STEM – Science, Technology, Engineering, Mathematics

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