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## How open is the digital environment for disabled students in higher education?

### Student Dissertation

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## WED: How open is the digital environment for disabled students in higher education? (Jennie Augustyniak)

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17 February 2016

Exploring why 'digital' is not necessarily 'open' and looking for effective solutions

<http://cloudworks.ac.uk/cloud/edit/9546>

One perspective: Increasingly students in higher education (HE) study in a digital environment, using a Virtual Learning Environment (VLE). In open education, most learning materials, teaching, and library services are delivered online. Both are enabling. Additionally, many students use assistive technologies to support their access and engagement with study. 'Digital' and 'open' are used interchangeably and considered widely as inherently enabling. Similarly, 'access' and 'accessibility' are substituted often and there is general expectation they lead to effective outcomes.

Another perspective: The situation for disabled students is not that simple – the pathway to 'open' (inclusion) is not necessarily digital, and a digital environment can be a barrier. Similarly, there is not a causal link between 'access' and 'use' for disabled students and assistive technologies. The interaction of disabled students with digital learning and teaching raises unexpected complexities.

The presentation: looks at an increase in reported difficulties for disabled students following the implementation of a VLE. The large UK university provided offline digital alternatives, but received requests for an 'individual reasonable adjustment' to address the increase in screen time required. Two problems had arisen – a digital barrier following the implementation of a VLE and an apparent lack of take up by disabled students of the alternative technologies that the university anticipated would remove that barrier. And a third – the adjustment most requested was for the student to move offline and revert to paper-based learning. Whilst this may be acceptable, in that the university responded as requested, there was concern it was not the most effective or sustainable solution.

The issues were complex and had many stakeholders so were explored through a workshop,

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15 January 2016

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supported by a learning activity, which was informed by student consultation. Seven issues were addressed:

1. Are the adjustment requests well informed?
2. Does the adjustment enable access to online learning?
3. Does the adjustment enable disabled students make the most effective use of online learning?
4. Do disabled students miss out on the rich experience of the VLE?
5. Are disabled students hindered in the opportunity to become 'digital scholars'?
6. Do disabled students value the adjustment made (does it meet their expectations)?
7. Are disabled students empowered in their use and adoption of technologies?

The presentation will share more of this story and illustrate it with case studies. Participants will discover more about the learning activity, which was used to bring stakeholders to a level of understanding prior to the workshop. It will conclude with the outcomes:

- ▶ Student consultation on individual reasonable adjustments
- ▶ Improved view of disabled students' needs for access to and effective use of online learning.
- ▶ Improved view of disabled students' use and adoption of technology and the support required.
- ▶ Updated process for making and handling responsive adjustments.
- ▶ Better informed operational practice in supporting disabled students.
- ▶ Assistive technologies and adjustments as exemplars and normalised to support learning styles, preferences, and students who are not permitted to study online.

Conference participants can try the pre-workshop learning activity and the student consultation questions before the presentation.

## Extra content

### PRESENTATION SCRIPT

**Slide 1.** My name is Jennie Augustyniak. I'm going to talk to you about how open the digital environment is for disabled students in higher education.

**Slide 2.** The answer I'm afraid is: it's complex and complicated, and needs investigation.

**Slide 3.** Increasingly students in higher education study in a digital environment, using a Virtual Learning Environment (or VLE).

**Slide 4.** In **open** education, most learning materials, teaching, and library services are also delivered online.


**Slide 5.** Many students use assistive and other technologies to support their access and engagement with study.

**Slide 6.** And the words 'Digital' and 'Open' are used interchangeably, and are considered widely as inherently enabling. Here I'm citing an example by Martin Weller where he resonates his own definition of 'digital' scholarship with that of Veletsianos' and Kimmons' definition of 'open' scholarship.

[inclusion](#) [induction](#) [open](#)

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**Slide 7.** Similarly, 'Access' and 'Accessibility' are substituted often, and there is general expectation that they lead to effective outcomes.

**Slide 8.** So one perspective therefore is that 'Digital' is enabling.

**Slide 9.** Another perspective however is that 'Digital' is a barrier. There are three aspects to this...

**Slide 10.** First, is that the situation for many disabled students is **not** simple:

- ▶ the pathway to 'open' as in the sense of inclusion is not necessarily digital
- ▶ and a digital environment can be a barrier

There is nothing inherently accessible or inaccessible with 'digital' – 'digital' is just zeroes and ones, as pointed out by Wentz and colleagues in 2011.

**Slide 11.** Secondly, there is no well-defined causal link between 'access' and 'use' for disabled students and their assistive and other technologies. And in fact, Seale argues that there is growing evidence this is **not** the case.

**Slide 12.** And thirdly, the interaction of disabled students with digital learning and teaching raises unexpected complexities. I have come to that conclusion, initially through my own experience, through my work supporting disabled students, through my personal experience as a student. And more recently through the research carried out by Seale and colleagues.

**Slide 13.** So my project has been about exploring why 'digital' is not necessarily 'open' and looking for effective solutions. It concerns the implementation of a VLE in the University where I work. The slide shows a screenshot taken from a 'Sway' presentation I created in December last year, during an operational review where we were looking at an unexpectedly high increase in reasonable adjustment requests from disabled students wanting to reduce their amount of screen-time. I work in a disabled student support team and disabled students are entitled to request reasonable adjustments wherever they are at a 'significant' disadvantage. The web address of my Sway is there for you to view it at your leisure:

<https://sway.com/10efPxdZSGjHQOX>

**Slide 14.** This slide gives you some idea of the extent of that increase in students having significant difficulties with the amount of screen-time required during their studies. In 2010 we received 37 such requests and in 2015, last year, we received 731. We looked to see if there was anything obvious creating this level of requests and the most obvious thing over that timescale was the University's implementation of a virtual learning environment. Student numbers did also increase, but not to the same extent.

**Slide 15.** So we really needed to look at 'Why?' After all, the students had registered, apparently knowingly, for a course where most of the learning was going to be online. Secondly, the university provides a series of standard accessible downloads for each Unit, as we have for H818. And thirdly, in addition to those 'standard' accessible options there is a whole series of support offered by student services and through Disabled Students' Allowances. The extent and variety of the difficulties was not expected, and needed investigation from an operational and student perspective.

**Slide 16.** So we started to look at the data in more detail and it was obvious that the most frequently requested adjustment was for **printed versions** of the VLE.

**Slide 17.** So again, why? And **how** can the University meet this new demand? And indeed

should we?

- ▶ Is print an **effective** solution for students?
- ▶ Is it a **sustainable** solution for the University?
- ▶ And lastly, and I think most importantly, are we perpetuating a '**separate but unequal online environment**' for disabled students as described by Wentz et al., in 2011?

**Slide 18.** I set about, with colleagues in my team, arranging a workshop with an associated learning activity so that we could explore the puzzles and produce some answers for us.

**Slide 19.** The issues to be addressed are complex with several dimensions, and many stakeholders: First of all, it is not just about Web accessibility. Secondly many people use *lots* of technology in their every day lives e.g., smart phones and Facebook. People *like* books, and reading from paper. Potentially there is lots to learn with assistive technology. There are issues around inadvertently creating and not preventing a 'digital divide'. Stakeholders include student support, faculties, materials production teams, and of course students.

**Slide 20.** To illustrate this, I've got two case study examples here of recent requests we've received:

The first student:

- ▶ Is hearing and sight impaired, medication-related fatigue, elderly, and retired.
- ▶ She has access to a computer and broadband and uses talking books for leisure.
- ▶ She requested large print versions of all materials and now needs almost no use of a computer and carries out very little online activity.

The second student:

- ▶ Is registered blind, employed in disability advice.
- ▶ She has her own computer with broadband and a comprehensive set of assistive and other technology she uses in her day-to-day life and for work.
- ▶ She requested printed versions of all materials and struggles with organizing her materials

It is a co-incidence that both requests were for **large** print. Many requests that we receive are for standard print, sometimes on specific coloured paper. Most are for **all** of the course material.

**Slide 21.** After quite a lot of discussion, consultation, and feedback from my H818 colleagues, we identified seven specific issues for the workshop to address:

- ▶ The first, is around knowing if the adjustment requests were well informed?
- ▶ The second – does the adjustment enable access to online learning?
- ▶ The third – we wanted to know if the adjustment enabled disabled students make the most *effective* use of online learning?
- ▶ Then, do disabled students miss out on the rich experience of the VLE?
- ▶ Next, are disabled students hindered in the opportunity to become 'digital scholars'? As in, slowed down.
- ▶ The sixth concern is knowing if the adjustments made meet students' expectations?
- ▶ And finally, are students empowered in their use and adoption of technologies?

**Slide 22.** So with my work colleagues I've been spending quite a bit of time over the last few weeks in preparation for the workshop. It is scheduled for next month. We've been further analyzing our data to look for patterns and engaging with our stakeholders with a view to producing a learning activity to 'educate' participants in the background before the workshop. A kind of flipped opportunity to make the best use of the workshop time.

**Slide 23.** Six outcomes were identified for the workshop to achieve

1. A documented student consultation
2. An improved view of what disabled students need
3. An improved view of how disabled students use and adopt technology and of ways to support to this.
4. An updated University process for responsive adjustments.
5. Better informed operational practice.
6. Assistive technologies and adjustments used as exemplars and made available for *all* students.

**Slide 24.** Findings so far...LET ME TELL YOU

**Slide 25.** Not wanting to pre-judge the workshop but...In Universal Design language, which I don't yet know very much about, we're most likely to be concentrating first on the support relationship with students. Information, Advice, and Guidance is likely to be on the action plan. As is how we can better identify students' study needs at the beginning of their studies or when they first emerge.

**Slide 26.** ANY QUESTIONS?



[Jennie Augustyniak](#)

21:05 on 21 February 2016 (Edited 21:29 on 21 February 2016)

[+ Add extra content](#)

## Embedded Content

### PRESENTATION POSTER

[PRESENTATION POSTER](#)

[Accessible Alternative](#)

added by [Jennie Augustyniak](#)

### PRESENTATION SLIDES

[PRESENTATION SLIDES](#)

[Accessible Alternative](#)

added by [Jennie Augustyniak](#)

**[Sway summary of an operational review of a BIG rise in requests from students to study offline \(make sure to click on the 'slide' icons in the top left of each image on the last slide\)](#)**

[Sway summary of an operational review of a BIG rise in requests from students to study offline \(make sure to click on the 'slide' icons in the top left of each image on the last slide\)](#)

added by [Jennie Augustyniak](#)

## Reasonable adjustment data - rough analysis

[Reasonable adjustment data - rough analysis](#)

[Accessible Alternative](#)

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### Contribute

Discussion (10)

Links (0)

Academic References (3)



[John Baglow](#)

6:59pm 16 January 2016 [Permalink](#)

Jennie, this is quite a big topic! I think that the fact you intend to use some case studies is a very good move and will make the 7 points you have raised seem a little more real and less abstract.

Who is your project aimed at? Is it to help teachers support students with disability more effectively? Is it for managers? Is it for students themselves?

I must admit that I was under the impression that online technology was, on the whole, quite supportive of students with disability. On my teacher-training courses I cite such things as:

- ▶ the combination of visual and auditory input
- ▶ the fact that students have control of the pace and appearance of materials
- ▶ VLEs tend to use best practice in terms of being readable by screen readers and other assistive technology.



[Sarah J Sneddon](#)

2:40pm 19 January 2016 [Permalink](#)

Hi Jennie,

May I 'follow' you? I believe we are supposed to ask!

I teach with the OU and therefore have taught many students with disabilities so I feel following your project will be CPD for me! The greater level of understanding that I have of the problems that my students face in engaging with the materials, the better.

I look forward to your presentation.

Sarah

[Gemma Holtam](#)



9:46pm 19 January 2016 [Permalink](#)

Hi Jennie,

Having carried a research project into increasing the accessibility of a VLE page last year I'm really interested in how you have approached this subject and what you found out along the way. I'm looking forward to watching your presentation.

Gem



[John Baglow](#)

6:16pm 24 January 2016 [Permalink](#)

Jennie, I would be interested to know more about some of the issues which arose for disabled students when they used a VLE. Do you have any experience of your students using the inbuilt assistive technologies?

Also, is your project aimed at any particular group of stakeholders?



[Gemma Holtam](#)

11:44am 30 January 2016 [Permalink](#)

Hi Jennie,

I am hoping to store my presentation materials on-line to allow greater access to my project. Based on your research would you be able to provide me with a few tips on how I could increase of my on-line educational experience?

I have already considered the use of font and colour for students who experience visual stress and the use of a transcript for those with hearing impairments and to allow off-line access.

Thanks,

Gemma



[Laila Burton](#)

4:34pm 30 January 2016 [Permalink](#)

Hi Jennie



This is a really interesting abstract. I've often wondered if augmented reality might address some of the barriers that are created by having online modules. As you know, many students have conditions that mean they can't work online for prolonged periods, but if they could study from their printed materials and use augmented reality to access audio/visual material then this could be immensely beneficial.

Cheers,  
Laila



[Wendy Maples](#)

2:55pm 5 February 2016 [Permalink](#)

Hi Jennie,

I love the clarity of your abstract and the way you have set out the common view against actual experience, without reducing this to a black and white dichotomy. Thinking about some of the comments above, I have assumed your audience to be senior/managers and ed techies who are in the position to implement VLE strategies in Universities.

What I wondered was: a) To what extent can you disaggregate the category of 'disabled' student. Some disabled students will definitely benefit from working online, but others, depending on the nature of their disability, will experience more digital barriers; b) Will you talk about whether students see 'assistive technologies' as one more impediment (one more thing they have to learn) to gaining knowledge in their subject area? The latter point is something that comes up a lot with students generally: if they have signed up for a language or arts or geography course, they sometimes say, they don't want to have to learn all about technology first (or about learning how to learn, but that's another topic!).

Looking forward to this!



[Maxine Armstrong](#)

6:05pm 9 February 2016 [Permalink](#)

Hi Jennie,

I think your project looks at a real problem that is often overlooked.

You mentioned that many stakeholders attended a workshop that explored the issues. Who were these stakeholders and do you consider that some have a louder voice than others? Did the workshop include any students and did they have varying disabilities? You did mention that it was informed by student consultation, how did this occur?

Is the learning activity and workshop aimed at the stakeholders and do they have the power to make the recommendations identified?

I know you are focusing on students in higher education? Do you think the level of study makes a difference to the digital barriers faced by students with disabilities?

Does the learning activity consider the recent changes to funding for disabled students?

My university will be implementing a policy on universal design shortly. Does your workshop or activity consider this as a solution or part of the problem?

I am looking forward to trying out your learning activity prior to your presentation on Wednesday.

Best wishes, Maxine



[Dr Simon Ball](#)

6:19pm 17 February 2016 [Permalink](#)

Hi Jennie

Here is a summary of the questions/comments from your presentation - please respond as you wish:

- ▶ What is the disability increasing the most? I'm guessing dyslexia?
- ▶ Is it just the amount of screen-time or the function of that which is screen-time at a prescribed time - causes distress in my OU context in students with a disclosed disability
- ▶ Do you think that the type of disability makes a difference? Does digital help physically disabled people more than those e.g. with SpLDs?
- ▶ There are basic problems - eg. this year one of my October start student who needs some complex assistive technology in order to access OULive tutorials still doesn't have the DSA sorted out (despite efforts from a lot of people).
- ▶ I worry about future expectations of the benefits of online learning -- I expect that increasing numbers of learners will be 'screen tired', i.e. will do so much screen time in other parts of their life, they won't want to online learn when they get home from their computer-based work-day. The issues for some of your disabled students become relevant for this group too...?



[Jennie Augustyniak](#)

9:49pm 21 February 2016 [Permalink](#)

Thank you everyone for your interest. I will try to answer your questions and comments tomorrow.

**Sarah, just quickly...yes please, I am very happy for you to follow me. And anyone else who is interested in my topic :-)**

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