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Getting it right from the start: creating an accessible eBook for students with Specific Learning Difficulties (SpLD)

Student Dissertation

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MON: Getting it right from the start: creating an accessible eBook for students with Specific Learning Difficulties (SpLD) (Gemma Holtam)

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[Gemma Holtam](#)

5 January 2016

Getting it right from the start: creating an accessible eBook for students with Specific Learning Difficulties (SpLD)

This learning activity workshop presents the digital stories, which have been documented for the SpLD's Digital Stories project. This project has been funded through JISC 'Accessible by Design' project, which aims to create technological-based solutions that break down barriers and promote inclusion among the UK's learners, staff and researchers. The eBook team, who have all have a diagnosis of dyslexia, are developing a study skills eBook that through the digital stories of current students with SpLDs, will highlight the study skills strategies these learners could use to become more efficient and effective learners. The term SpLD is commonly associated with the diagnoses of dyslexia, [dysgraphia](#), dyscalculia and [dyspraxia](#) (Snowling, 2005). Although the diagnoses of Attention Deficit Hyperactivity Disorder (ADHD) and Asperger's Syndrome are also covered by this umbrella term (British Dyslexia Association, undated). Although the eBook will be launched during Dyslexia Awareness week 2016, participants of this presentation will be offered the unique opportunity to view some of the material ahead of the launch.

The idea for eBook was born out of the government's announcement that they expect the support students with SpLDs receive from the Disabled Students Allowances to be reduced, and the support for dyslexic students without complex issues to be withdrawn Department for Business Innovation and Skills (BIS) (2014). This is due to a greater emphasis being placed on HEI's to create inclusive learning environments (BIS, 2014). In response to this, by creating the eBook the project team aim to:

1. provide a resource that students can use independently of one-to-one support to increase their awareness of the study skills strategies they can use to develop their academic skills

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2. 2. present an example of best practice that can be used to support staff to create inclusive teaching and learning materials for students with SpLDs

To create an accessible resource the eBook is based on the principles of UDL, which is the concept of designing resources that are usable by all people, to the greatest extent possible, without the need for adaptation or specialised design (CAST, 2010; Hockings 2010). At present some students with SpLD are awarded Assistive Technology (AT) to help them overcome a number of barriers to learning, which including difficulties with reading text, taking notes and retaining information (Reid, 2009). For example, text-to-speech software is recommended so that students can have text read aloud to overcome difficulties with reading academic pieces of writing. To remove the obstacles that create a student's need for AT the project team have moved away from the text heavy style of traditional books and have instead opted to present the content through video interviews, informative graphics and photographs. As well as providing an opportunity to view the material made for this book, the presentation will explain why using these formats are classed as inclusive teaching practices and how they can help to reduce a student's need for adaptations through AT. During the talk participants are encouraged to tweet about the presentation through the use of the hashtag #SpLDdigitalstories

Extra content

Transcript from today's presentation

Slide 2

Hi everyone, my name is Gemma Holtam and I am an Assistive Technology Officer at the University of Sheffield.

My presentation is about a project I am working on to increase accessibility and inclusion for students with Specific Learning Difficulties (SpLDs).

The project began life as an eBook and funding has been provided through the JISC 'Accessible by Design' competition. The network of students and staff on H818 helped me to secure this funding as it was only the six entries with the most votes that were considered for support and only four projects out of those six were awarded funding. At the start of the module I posted about my competition entry on the module forums and a number of people voted for my idea. Therefore, I am very grateful for everyone who helped to make this project a reality.

When I originally applied to take part in the project, the eBook I was aiming to create was going to be a resource that students and staff could use. The resource would raise their

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awareness of the study skills strategies that students with SpLDs are currently using to become more efficient and effective learners. The content of the book was to centre round the digital stories of students with SpLDs. These stories would focus on the difficulties students with SpLDs face and the study skills strategies they are using to overcome these challenges. However, throughout the course I began a new post at an institution with a large number of followers. I have decided to utilise this opportunity and instead of creating an eBook I have decided to host the materials on the institutional website as I believe this by using this platform the digital stories will receive more views. The stories are being hosted on a YouTube channel and embedded in the website as I'm hoping that by using one of the most popular video hosting platforms this will be another way to increase traffic.

Slide 3 - Overview

This presentation will cover the following:

- My motivation for taking part in the project
- The concept of Universal Design for Learning
- The progress of the project so far
- A demonstration of a digital artefact I've created
- I'm not sure we'll have time for this final point but if we do I'd like to gather your feedback on the artefact

Slide 4 – Motivation

- As a dyslexic I've found that there are lots of generic study skills resources on the Internet but there aren't many resources that focus on the way a neurodiverse mind works. I've really struggled to find the information that I have been given in my dyslexia tutorials on the web. Therefore, I was concerned that if dyslexics aren't accessing one-to-one support they aren't able to get this information.
- HE Study Skills and Progression Coach – struggled to find resources that weren't step-by-step tutorials on how to use the functions of a specific piece of assistive technology. I wanted to create a resource that didn't just show students how to use a piece of software but that also taught them how they could use assistive technology to develop their study skills.
- A large number of my students that I have worked with have had low self-esteem. Wanted to

give students with a SpLD a voice to increase their confidence and self worth.

- Struggles on PG Cert Dyslexia Practice and Research – few resources that supports trainee dyslexia tutors with developing the knowledge they need to develop effective tutorials with dyslexic FE/HE learners, especially with the use of assistive technology.

I am hoping that by collecting the stories of students with SpLDs and focusing on how they have used technology to overcome the difficulties they have faced with their studies, I will be able to support this diverse group by:

1. Providing a place where students can go to get ideas for how they can become more efficient and effective learners

2. It will help trainee and qualified dyslexia tutors by providing resources that they can use to gather ideas for their sessions. Furthermore, it will also be a place that they can signpost students to for further information.

Slide 5– Universal Design for Learning (UDL)

- One size fits all approach doesn't work

For example, only uploading print based supporting resources to a VLE creates difficulties for those with print based disabilities, such as visual stress, as they can't read the material without using adaptations such as screen overlays. Only using print based materials can also create problems for those who need to multi-task when they are studying and would prefer to be able to hear material rather than read it. For example those who need to fit their studies around working full time and would benefit from being able to listen to a recording of a journal article whilst they're cooking a meal rather than having to find the time to sit down and read the material.

- Remove barriers to learning from the beginning

In relation to print based material this could include reading aloud the material and saving this as an MP3 for users to listen to. This would remove the need for the student with print based impairments to undertake extra work compared to their peers in relation to using assistive technology to turn the text to speech.

- All students benefit when they are given multiples ways to take in new information, express their comprehension, and become engaged in learning

Therefore don't just focus on one type of material, have an even spread of print based, audio resources and visual material such as infographics.

For further information on the concept of UDL please see Meyer et al (2014). The full reference can be found on my Cloudownrks page.

Slide 6 – Progress

As mentioned at the start of this presentation the resource has now changed from being an eBook containing the digital stories of students with SpLDs to a website. The stories will still focus on the study skills strategies that these students are using and it's still based on the principles of Universal Design for Learning. Therefore, a priority is to remove the barriers to learning that students with SpLDs face during the design stage.

The term SpLD refers to diagnosis of dyslexia, [dysgraphia](#), dyscalculia, [dyspraxia](#), aspergers and ADHD. However, due to the time limits of this presentation I am going to focus on a barrier to learning students with dyslexia face.

Poor short-term memory

Many dyslexics have a poor short-term memory, which leaves them struggling to remember large chunks of information. Furthermore, being presented with too much information at once

can cause cognitive overload, which results in the student being unable to process the data. To overcome this it is recommend that information is presented in small chunks.

To achieve this, the digital stories are only a few minutes in length as the information has been edited so that only one tip is presented per clip. Each clip contains subtitles to support those who may need to read and hear the information at the same time to aid understanding. Furthermore, adding subtitles reduces the barriers to learning that videos can present to those with a hearing impairment.

In addition to the videos, there are also plans to provide an information sheet that students can download and use off on-line. To help progress the project I have just been awarded funding to take on a placement student for 100 hours this term. The duties of the placement include carrying out a research project to find out how current and prospective students would like the information on the website to presented.

Slide 7 – Digital artifact – 1 minutes

- <https://www.youtube.com/watch?v=SIKQGerrU1c>

Slide 8 – Feedback

What could be done to improve the video?

References

Meyer, A., Rose, D.H., & Gordon, D. (2014). Universal design for learning: Theory and Practice. Wakefield, MA: CAST Professional Publishing.



[Gemma Holtam](#)

19:35 on 15 February 2016

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Discussion (7)

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[John Baglow](#)

9:31am 22 January 2016 [Permalink](#)

Gemma, having studied the OU module on accessible learning I have become much more aware of the needs of students with disability, though not necessarily those with Specific Learning Difficulties. The idea of an ebook sounds like a good one as having materials available online will mean that they are accessible to the students round the clock.

I wonder if you can say a bit more about what would actually be in the ebook. You say that it would contain study skills input for students and also be an example of best practice for support staff. Do you mean that it would contain generic study skills suggestions? Or would it be more specific to a particular area of study?

You mention assistive technology. I think it would be very useful if your project contained a potted introduction to assistive technology, aimed at students. As a teacher and a teacher-trainer I feel the best I can do is point students and my trainee teachers to the existence of assistive technologies but from then on it is often the responsibility of the student with disability to work out how they will use those technologies. It may be different with SpLD students? What do you think?

Would your end-product actually be suitable for my trainee teachers? They teach every subject under the sun in the post-16 sector.

One last question: (and I think you may have answered this some months ago somewhere in H818!): what exactly do you mean by an ebook? Is it different to a website? How do you create an ebook?



[Chris Gray](#)

8:55pm 22 January 2016 [Permalink](#)

Gemma

I'm interested in hearing about the process you have undertaken in deciding how the formats (video, infographics and photographs) have been selected to deliver your outcomes. Are certain types of format more appropriate than others for different types of SpLD?

I think your project will provide useful insight for course designers for all abilities; in particular by thinking more holistically about the effectiveness of a learning journey. It could also help improve the modular re-use of created material - get it right first time and not waste time and money reinventing the wheel basically.

Will the ebook be deployed on a range of platforms?



[Gemma Holtam](#)

11:44am 23 January 2016 [Permalink](#)

Hi John and Chris,

Thank you ever so much for your comments. I was really tempted to reply to your questions now but then remembered that I am meant to wait until the conference. I will hopefully see you there but if you are unable to attend I will post the answers afterwards.

Gem :-)



[John Baglow](#)

2:04pm 23 January 2016 [Permalink](#)

Gemma, Do you really think that we are not supposed to respond to questions yet? I thought the idea was to engage with each others' plans and make changes in the light of the comments. Wouldn't that then be the basis for what we write in Part 2 of the EMA?



[Gemma Holtam](#)

5:58pm 23 January 2016 (Edited 6:00pm 23 January 2016) [Permalink](#)

Hi John,

My understanding is that questions will be collated by Simon and given to the speaker in advance of the presentation. This is to enable the presenter to prepare their response and give their answer in the five minute slot after their talk.

In regards to the EMA you can show that you've engaged with the content by reflecting on the comments made and whether they impacted upon the design of the presentation. For example, in relation to comment 1 I would explain how due to this comment I included a slide about the content of the book. Furthermore in relation to comment 2 I could document how during the presentation I discussed that if a student has a print based disability such as dyslexia then presenting all of the course materials in print based forms is probably not the most inclusive delivery style. Therefore, an equal amount of non print based materials such as videos and audio files would be good.

1.'I wonder if you can say a bit more about what would actually be in the ebook'

2.Are certain types of format more appropriate than others for different types of SpLD?



[Laila Burton](#)

9:48pm 27 January 2016 [Permalink](#)

Hi Gemma

This is a really good idea and universal learning design is something that is very close to my heart!

I wondered if you had explored how augmented reality can help learners with SpLD. I think it has huge potential to make learning material more accessible by bringing together text and video, but I don't know if there has been any research into this.

Also, I found Diversity and Ability a really useful bunch of people to talk to (<https://www.dnamatters.co.uk/>) if you haven't already come across them.

Looking forward to the session!

Laila



[Dr Simon Ball](#)

11:14am 16 February 2016 [Permalink](#)

Hi Gemma

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

- ▶ what would be the main advice you would give to trainee teachers about suorting students with disability?
- ▶ How does Uni view materials hosted on its website and on YouTube?
- ▶ Does the Uni host a YouTbue channel?
- ▶ I didn't know that ADHD came under SpLD.
- ▶ Do you think using a VLE improves things?
- ▶ I couldn't see the video story - is there a link?
- ▶ OU Live is a multi channel environment - would you therefore avoid it for dyslexic students?
- ▶ Publishing slides in advance helps

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