Access and Barriers to Online Education for People with Disabilities

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A Bit of Background

- eLearning and higher education
- People with disabilities and eLearning
- Evolving legal frameworks for accessible eLearning
- The current research project

eLearning and Higher Education

- eLearning
  - What is it (don’t worry I’ll be brief)
  - Blended and fully online
  - Previous resistance from staff and students
  - Recent growth and acceptance
    - One in three students in the US is taking at least one class online
- Recent growth and developments – MOOCs
  - Techno-panic and the end of the university as we know it
- History of the technology with accessibility

People with Disabilities and eLearning

- Disability and the Internet
  - Again I will be brief
- Why eLearning is attractive for people with disabilities
  - Disclosure
  - Accessibility
  - Flexibility
- Some Common Problems
  - Accessibility
    - Disclosure
    - People would often rather maintain their privacy than disclose an impairment to get better access

Evolving legal frameworks for accessible eLearning

- Not always great
  - Often different to other civil rights legislation (see Paul Jaeger)
- But evolving in a positive way
- The Internet is creating a highest common denominator effect
  - (well at least with the US)
  - Netflix – captions and audio descriptions
- eLearning and Higher Education
  - MOOCs
  - LMS (Blackboard Nonvisual Accessibility Gold Certification in 2010)

The Current Research Project

- Students with disabilities and eLearning
  - We don’t meet people until they graduate

- Exploring access to eLearning though Open Universities Australia
- OUA
  - 15 different Higher education providers
  - A wide variety of subjects and approaches to learning and teaching nd eLearning

Survey

October 2014

356 students (from 1444)

- Demographics
- Disclosure
- Effectiveness of accommodation?
- Accessibility of learning and teaching technology

Interviews

- 2015
- Lots of survey resonant were willing to be involved in further study
- 143 interviews both through skype and phone, and exchange of emails
- Tried to gather more nuanced information from the survey's questions
- Added an additional focus to look at accessibility of different approaches to leering and teaching across OUA

What did we find?

- Total Survey results
- Different impairment types for both Survey and Interviews
  - Hearing impairment
  - Vision Impairment
  - Mental Illness
  - Learning disability
  - Medical impairment
  - Intellectual disability
  - Mobility impairment
  - Acquired brain injury

Survey Results

- Demographics
  - Age – slightly older (42 vs 36)
  - Gender – 71.4% female to 27.5% male (1.1% preferred not to say)
    - 70.4% 29.6% Overall for student registered with disability support
    - Age – slightly older (42 vs 36)

Previous Education

Less than high school degree	10.8%
High school degree or equivalent	18.3%
Some college or university but no degree	52.0%
Associate degree	3.1%
Bachelor degree	12.1%
Graduate degree	3.7%

Disability or Impairment Type

Hearing impairment	**10.2%**
Vision impairment	**7.2%**
Mental illness	**44.9%**
Learning disability	**8.7%**
Medical impairment	**39.2%**
Intellectual disability	**1.8%**
Mobility impairment	**25.3%**
Acquired brain impairment	**4.5%**

OUA's stats on impairment types

Hearing impairment	4.8%
Vision impairment	5.3%
Learning disability	7.5%
Medical impairment	37.3%
Mobility impairment	16.9%
Other	54.2%

Length of study

Less than 1 year	34.2%
1 year	14.4%
2 years	18.9%
3 years	17.2%
4 years	7.1%
5 years	2.8%
6 years	1.4%
7 years	1.7%
8 years	0.6%
9 years	1.1%
10 years or more	0.6%

Field of study

Arts & Humanities	57.4%
Business	13.3%
Education	6.7%
Health	5.5%
IT	6.7%
Law & Justice	11.0%
Science & Engineering	5.5%
Not specified	1.4%

Accommodation and Disclosure

Awareness of any accommodation offered

Yes	**28.7%**
No	**43.9%**
Unsure	**27.3%**

Had received any accommodation?

With all units of study	**6.6%**
With most units of study	**7.5%**
With some units of study	**16.1%**
With no units of study	**69.7%**

Was it adequate?

Yes, always	9.7%
Mostly	10.3%
Sometimes	9.2%
Never	0.9%
Have not received any accommodation	69.9%

Disclosure “Have you informed the institution(s) where you are studying that you have a disability”

Answer options	Yes	No	Percent yes
Curtin University of Technology	100	53	65.4%
Griffith University	115	47	71.0%
Macquarie University	77	39	66.4%
Monash University	6	15	28.6%
RMIT University	33	25	56.9%
Swinburne University of Technology	56	40	58.3%
University of South Australia	51	37	58.0%
Australian Catholic University	6	7	46.2%
Charles Darwin University	4	11	26.7%
La Trobe University	1	8	11.1%
Learning Network Queensland	3	5	37.5%
Murdoch University	40	25	61.5%
Polytechnic West	1	5	16.7%
The University of New England	3	7	30.0%
The University of Western Australia	4	5	44.4%
Total Response	**504**	**334**	**60.1%**

Why?

I did not think it would help	51.8%
I did not know I could	13.1%
I did not know how	13.9%
I did not need any accommodation	26.5%
I did not want any accommodation	9.0%
I did not want to disclose my disability/impairment	17.6%

Access to technology and learning platforms

How do you access the Internet?

Desktop computer	**46.2%**
Laptop computer	**74.9%**
iPad / tablet	**27.3%**
Smartphone	**23.9%**

“Have you had any problems accessing online learning platforms due to your disability/impairment?”

Yes	**17.9%**
No	**82.1%**

“If yes, which platforms have you experienced difficulty with?”

	Not used	No prob-lems	Minor prob-lems	Major prob-lems	Unusable	Percent with problems
Moodle	99	26	13	1	0	35.0%
Blackboard	17	68	51	12	1	48.5%
Facebook	58	63	13	3	1	21.3%
Twitter	92	37	3	1	1	11.9%
Slideshare	116	15	0	2	0	11.8%
Prezi	110	20	2	1	1	16.7%
Lectopia	105	18	7	5	0	40.0%
Echo 360 / Echo Centre	64	39	28	8	1	48.7%
PDFs	22	81	27	6	1	29.6%
Blogger	105	21	6	1	0	25.0%
WordPress	100	27	4	1	0	15.6%
WebCT	118	12	1	2	0	20.0%
YouTube	37	78	14	6	1	21.2%
University websites	14	78	42	17	1	43.5%

“Would you recommend Open Universities Australia (OUA) as a place to study for people with disabilities?”

Yes	**75.9%**
No	**3.1%**
Maybe	**21.0%**

- “Would you will be willing to participate in later stages of this research, including online focus groups or interviews? If so, please leave your email address. Please note this is not part of the survey and further participation is strictly voluntary (you can also change your mind and decide not to participate further at any point).”

- 226 students, or 63.4% of respondents indicated yes

Interviews

Impairment type	Survey responses	Interview responses
Total responses	352	143
Mental illness	149	54
Medical impairment	130	64
Mobility impairment	84	43
Hearing impairment	34	8
Learning disability	29	8
Vision impairment	24	16
Acquired brain impairment	15	5
Intellectual disability	6	3

Interview responses: accessibility

- How does your disability impact on your daily life
- How does your disability impact on your study?
- In terms of online learning and teaching technology – what works well and what doesn’t?
- In terms of teaching and instruction methods – what works well and what doesn’t?

Interview responses: disclosure of disability

Interview responses: future directions

- Have your learning experiences changed your future study choices?
- What are your biggest challenges?
- What would you change to make study easier?
- What other recommendations would you make?

Impairment types

Mental Illness

- I don’t really like the language
- Largest Group of students
- This is new – only 15% of students with disability in the US in 2008 reported having a mental illness
- 23.5% also reported Medical Impairment
- Notably lower rate of disclosure – 48% against 60% for total survey
  - Did not know how and did not want to disclose notably higher responses as to why
- Less problems with access to technology

- 54 interview respondents
  - 27 depression
  - 23 Anxiety
  - 10 PTSD
  - 7 bi-polar
  - 5 schizophrenia
  - 1 Obsessive compulsive disorder

- Less impacted by access to technology
- Greater impact of Learning and Teaching design
- Disclosure and stigma
  - Problems wish multiple disclosure processes in existing system

Medical Impairment

- Second largest group at 36.5%
- Complex range of specific impairments and varying conditions
  - Multiple sclerosis
  - Fibromyalgia
  - Chrohn’s Disease
  - Chronic Pain
  - Chronic Fatigue
- More likely to have received accommodation
- More likely to disclose disability – 77% to 60% overall
- Mixed results on access to technology (some harder some easier)

- This group was very keen to talk about their varied experiences of eLearning
- Variations (mostly unpredictable) in impact of disability was an important theme
- Lack of understanding of their condition

Mobility Impairment

- Strong overlap with medical impairment (76.6%)
- High rate of disclosure at 74% (60% overall)
- Mixed responses to access to technology

- Wide range of specific impairments
- Results of this study broadly in light with previous research into these impairment types
- Again highlight the importance of Learning and Teaching design

Hearing Impairment

- Significant research has been conducted on this group
- More aware of accommodation offered and more likely to make use of it
- Standard rate of disclosure
- Generally less problems with learning technology
  - Recorded lectures presented more of a problem
- Less likely to recomend OUA as a place to study for people with disabilities

Learning Disability

- This group seems to be under represented in this study based on previous research
- Less likely to receive accommodation and when provided it was generally less effective
- Higher rate of disclosure at 68%
- More likely to have problems access learning technology
- Mainly Dyslexia nominated as specific impairment

Vision Impairment

- More likely to seek accommodation - although slightly less likely to disclose impairment to institution at 59%
- Not a noticeable level of extra difficulty accessing learning technology
- A very high rate of participation in interviews (two in three survey respondents)

Acquired Brian Impairment

- Only 15 survey responses and 5 interviews
- Mainly stroke survivors
- High overlap with Medical impairment and mobility impairment
- Notably high use of tablets to access the internet 46.7% to 27.3% overall

Intellectual Disability

- Very small sample with 6 survey responses and 3 interviews
- All autism spectrum
- Extremely high rate of disclosure
- Issues around communications and interaction very significant for this group in a learning and teaching environment

Recommendations

- Policy and compliance
- Staff Training
- Unit Design
- Assessment design and implementation
- Future directions

Policy and compliance

- Information distribution
- Disclosure
- Study period organisation and implementation
- Promoting a disability friendly environment
- Online forums for students with disabilities

Staff training

- Policies and procedure for working wish students with disabilities
- Appropriate use of learning technology

Unit Design

- Learning technology
- Multiple access pathways
- Learning and teaching
  - Synchronous and asynchronous communications styles
- Trigger warnings

Assessment Design and Implementation

- Exams
- Essays and assessment pacing
- Group work assignments
- Assessment extension policies

Future Directions

- Universal design in eLearning
- Staff Voices

Current further research

- Global study for survey
  - Curtin results are already in

Further reading and resources about this research and that have informed this presentation

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Questions or Comments?

Thanks You All Very Much

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