A photograph of a person reading a book. The person's head is in the foreground, looking down at the open book. The book's pages are filled with text, though it is slightly out of focus. A semi-transparent grey horizontal band is overlaid across the middle of the image, containing the title text. The background is a soft, out-of-focus green and yellow.

# **Supporting students with dyslexia project**

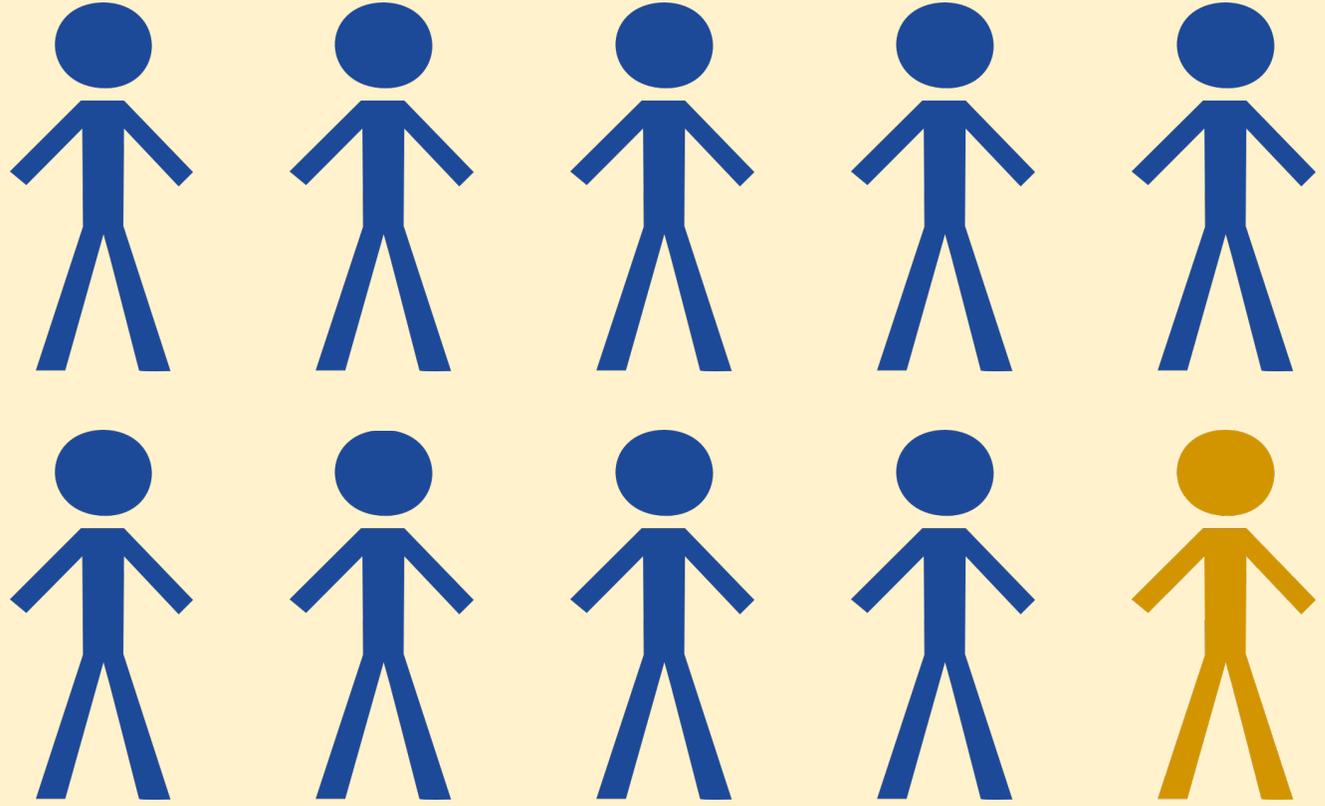
Chris Maurer-Smolder, Susan Hunt, PhD, Shane Parker & Karin Stokes, PhD

# Dyslexia affects

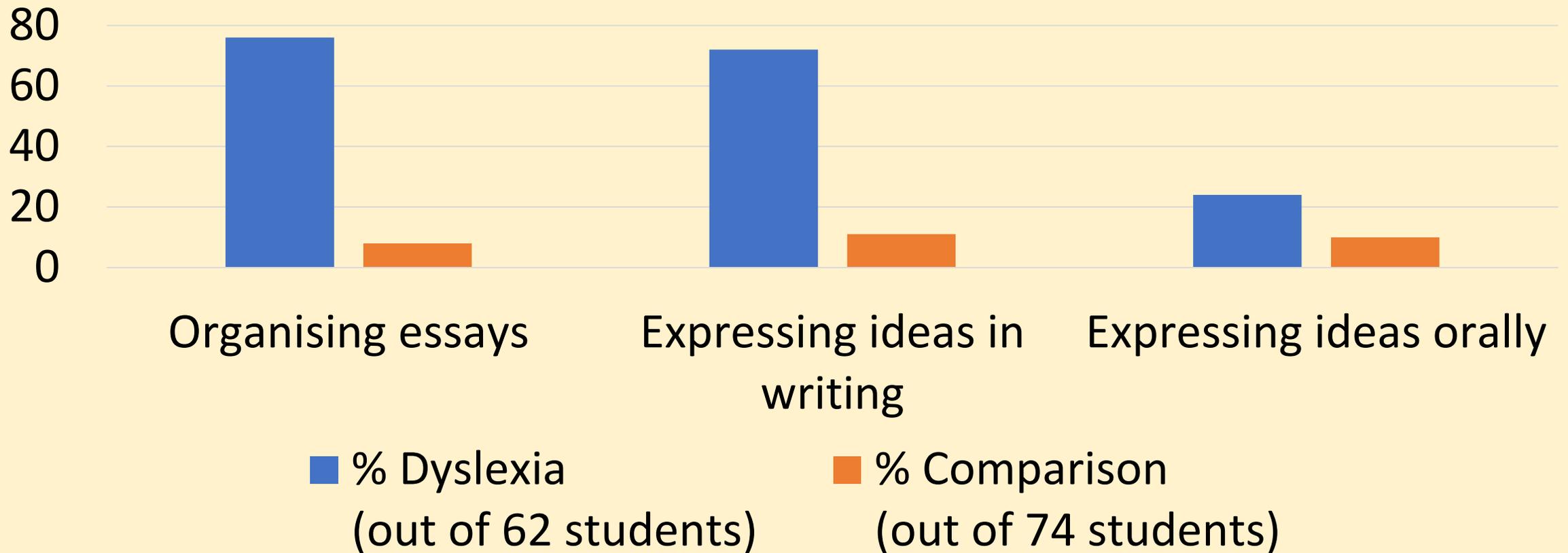
- accurate or fluent word recognition
- decoding of words
- spelling ability

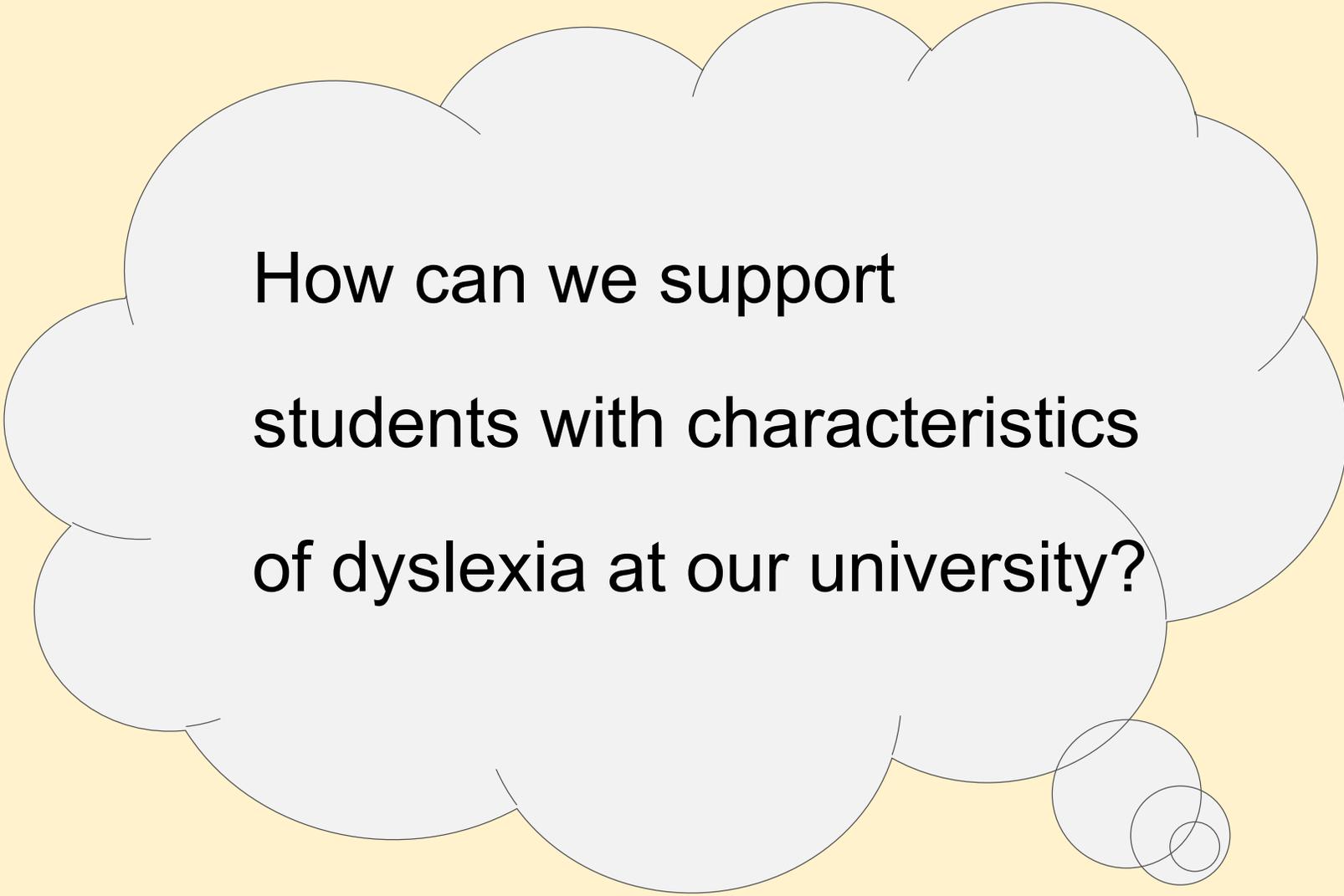
American Psychiatric Association (2013)

**5%**  
to  
**15%**



Percentages of dyslexia and comparison groups reporting difficulties in higher education  
(Mortimore & Crozier, 2006, p. 240)



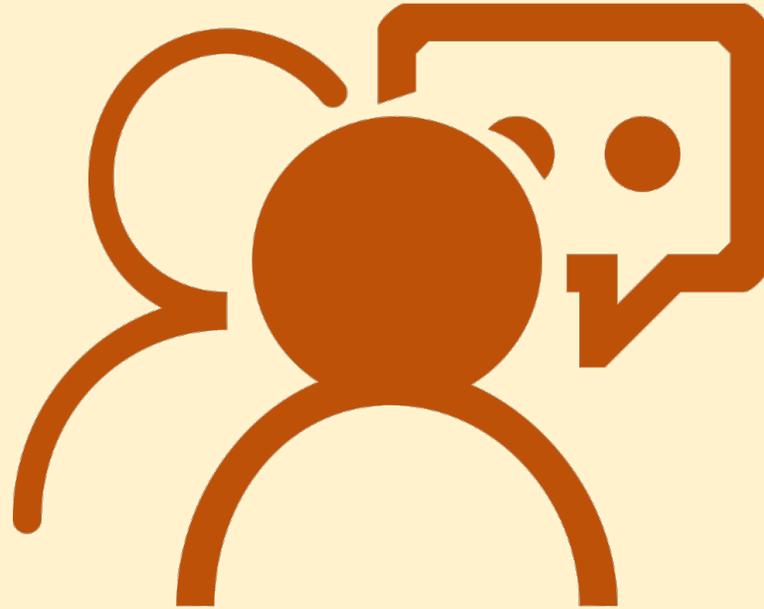


How can we support  
students with characteristics  
of dyslexia at our university?

# Three stages



self-report survey



interviews



staff focus group

# Themes

- History
- Time and effort
- Videos and lectures
- Skills and assessment
- Uptake of assistive technology

# History

“Primary school, I think I failed. I failed primary school, I failed high school, and everything, every subject I failed” (interview 003).

“[T]here's no point in you going to year 12, you should just leave year 10 and go learn something or do something or get a job” (interview 002).

You won't “be nothing [sic] but a checkout clerk”  
(interview 011).

“But other times when they choose to hide their condition because they are embarrassed, I can see that they leave, you know, and they go and I don't see them anymore. So, they just, you know, once they - they feel that, **‘Oh, somebody caught me...’**”

(staff member)

# Accessing reasonable adjustments

A formal assessment from a medical practitioner is necessary for a student to be eligible for reasonable adjustments at a university in Australia (Grimes, Southgate, Scevak, & Buchanan, 2019).

# Emotional well-being and avoiding stigma

- A history of negative experience can impact a student's belief in their ability to succeed (Livingston et al., 2018; Tanner, 2009).
- Social stigma can make students feel unentitled or afraid to ask for support: "... I feel stupid asking for extensions... I'm not very confident approaching people to say I need to go through that again just makes me feel even more stupid" (Fuller et al., 2004)

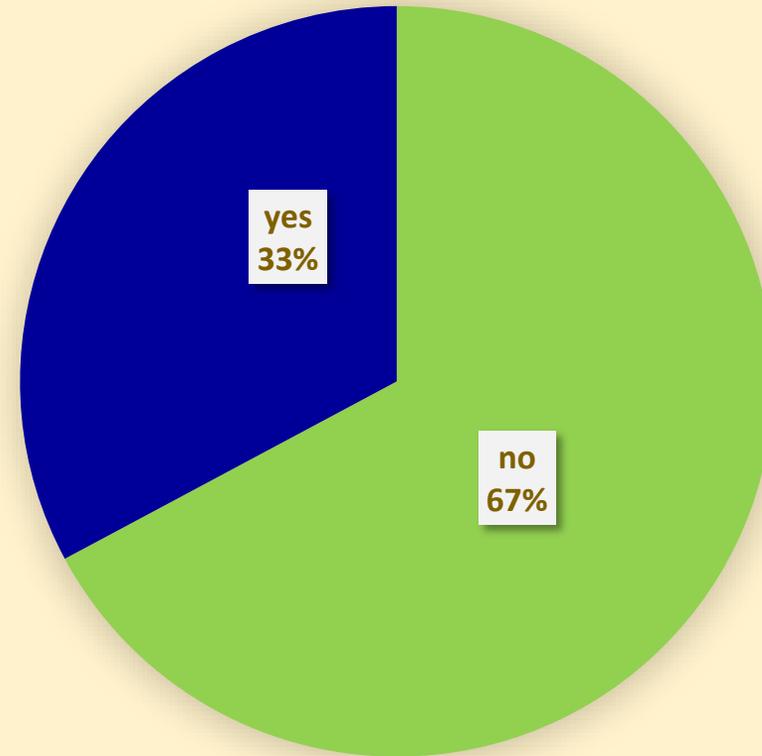
There has, up until now, been very little awareness or understanding of dyslexia in Australian schools (MacCullagh, 2014; Serry & Hammond, 2015; Skues & Cunningham, 2011; Tanner, 2009).

SPELD Queensland (2019) charges \$785 for an academic assessment and \$1,050 for a psychometric assessment.

# Survey data – Students who identified as having significant difficulties

Students with an assessment for dyslexia, ADHD and/or dyscalculia  
N= 67

■ no ■ yes



Grimes, Southgate, Scevak and Buchanan (2018):

**of 994 students** who reported having assessments for difficulties which would impact learning, **633 of them had not disclosed** their difficulties to the university.

**Universal Design:** "The design of products and environments to be usable by all people, to the greatest extent possible, without the need for adaptation or specialized design" (Ron Mace, as cited in College of Design, 2008).

# Recommendations

- ✓ Universal Design in Learning (UDL)
  - ✓ present information in a variety of formats
  - ✓ allow for variety and choice of expression
  - ✓ allow **all** students access to assistive technology
- ✓ Develop strengths-based self-report surveys to help identify students that may require additional support.
- ✓ Find a way to provide low-cost assessments to students.

**Time and effort**

How much do you study each week?

Interviewee: **... I'd be doing about 12 hours a day.**

Facilitator: Okay. For those two units?

Interviewee: Yes.

(graduate student, age 56 to 65)

**...I would say I [study] close to 70 plus-hour week, at least... I don't do anything else.**

(undergraduate student studying full-time, age 46 to 55 )

At the University of Western Sydney, it was found that lecturers and students differed in their estimations by sometimes more than 400% (Gill, 2013). For example, lecturers believed that an essay should take students around 10 hours to complete whereas students felt it took them more than 40 hours (p. 26).

reading  
lecture assessment tutorial  
video quiz tutorial reading  
referencing lecture research  
reading workshop reading  
lecture tutorial video assessment  
lecture tutorial reading

# Week 4

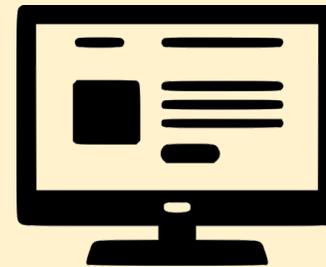
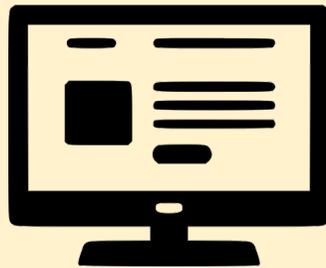
# Recommendations

- ✓ maximum 12 hours weekly unit content  
(including assessment)

I wish that they had, like, something that was official, like the marking rubric, that you open it up, it's the same document. It says "font", then it's got the answer of how they want you to do it, because sometimes, like, **I have to chase up two or three or four different assignment documents, that are telling us how to do it.** (interview 012)

# Recommendations

- ✓ organisation and requirements consistent within a course



# Videos and Lectures

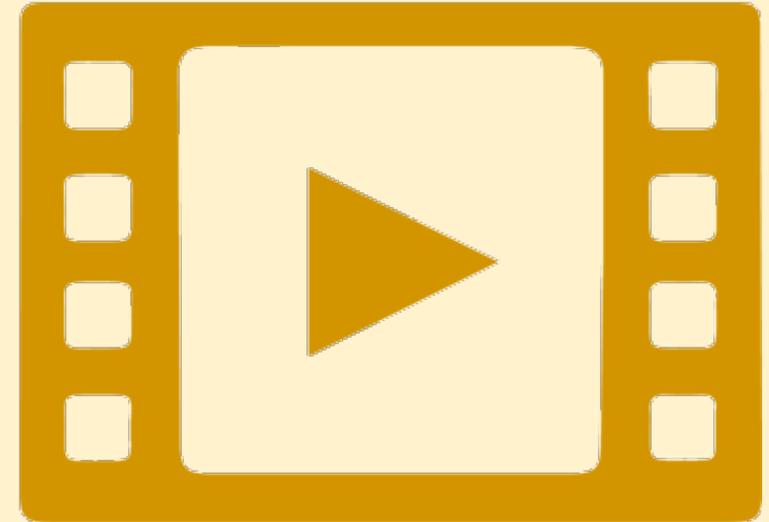
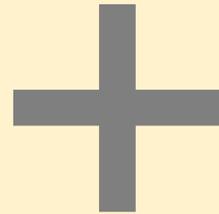
**“[B]eing able to go and review lectures and watch them in  
my own time has been really beneficial for me**

because I find that I can pause and think about something  
and then go back to it

...when you have dyslexia is that it takes a while sometimes  
for information to process and sink in” (interview 008).

MacCullagh, Bosanquet, and Badcock (2017): videos were used by students with dyslexia to replace or supplement course readings: 35% of the students with dyslexia reported that they independently sought out additional videos to help them understand course content (p. 13).

# Universal design example



# Recommendations

- ✓ best practice in video production
- ✓ Zoom instead of live classroom lectures  
(ISL)

# Skills and assessment

Facilitator: So how many essays though would you say you have to write per term?

Interviewee: So, this term I had one, two, three, four [essays] – I **think I had about five.**

Facilitator: So, you're writing those?

Interviewee: Yeah. So, I'm writing those. **That's definitely not without a huge struggle and a hundred different drafts.**

(interview 008)

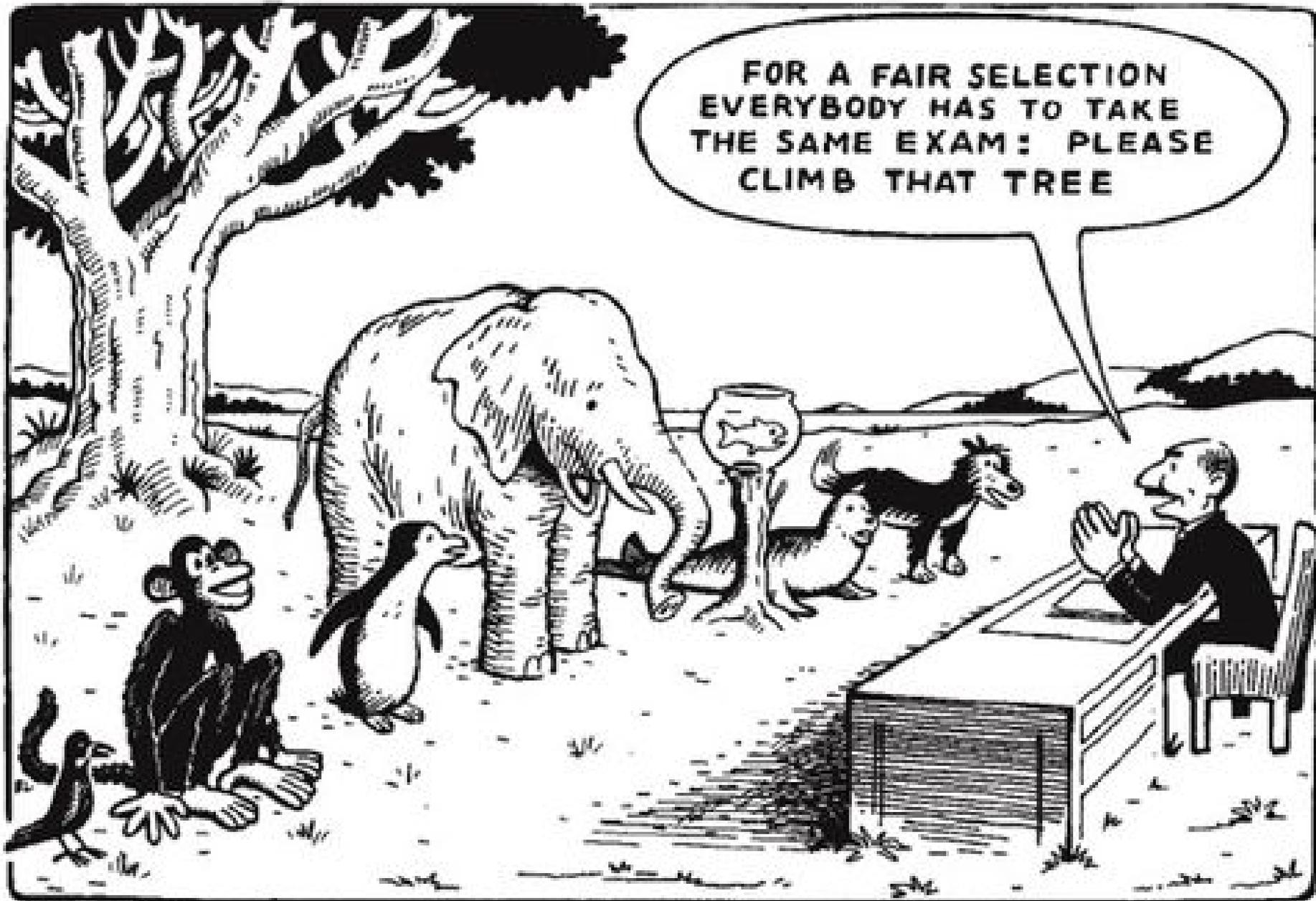
Facilitator: Do you think it's necessary to have all assessment pieces be written?

Interviewee: Well, post-graduate level it's not, because you're assessed on presentations, group presentations and individual presentations. **That's where I got my really high marks, 100 per cent in one case - absolutely unbelievable at university getting a high mark like that.** And most of them were up in the 80s and the 90s for those video presentations. So, you don't have to - it doesn't all have to be written but you've got to show that you can write.

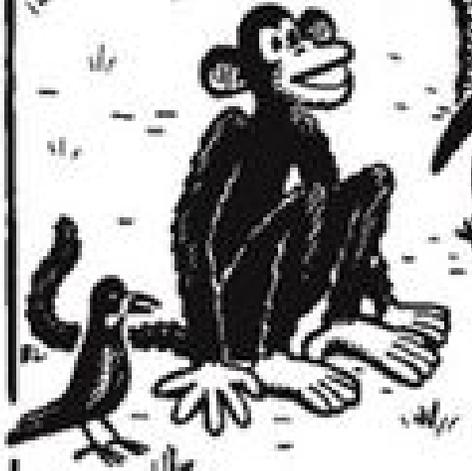
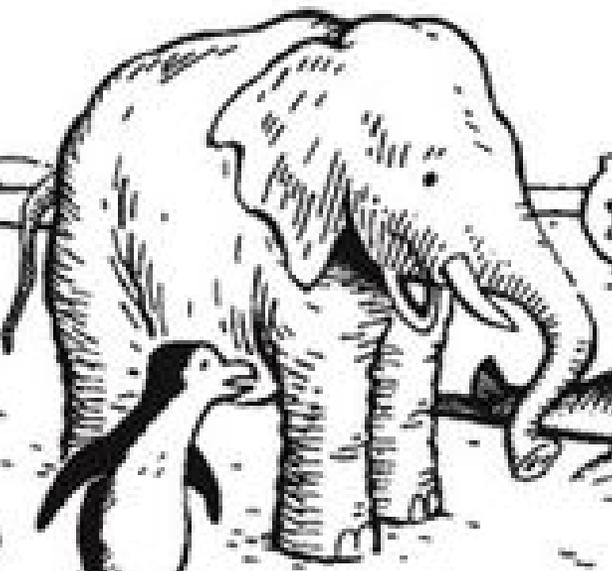
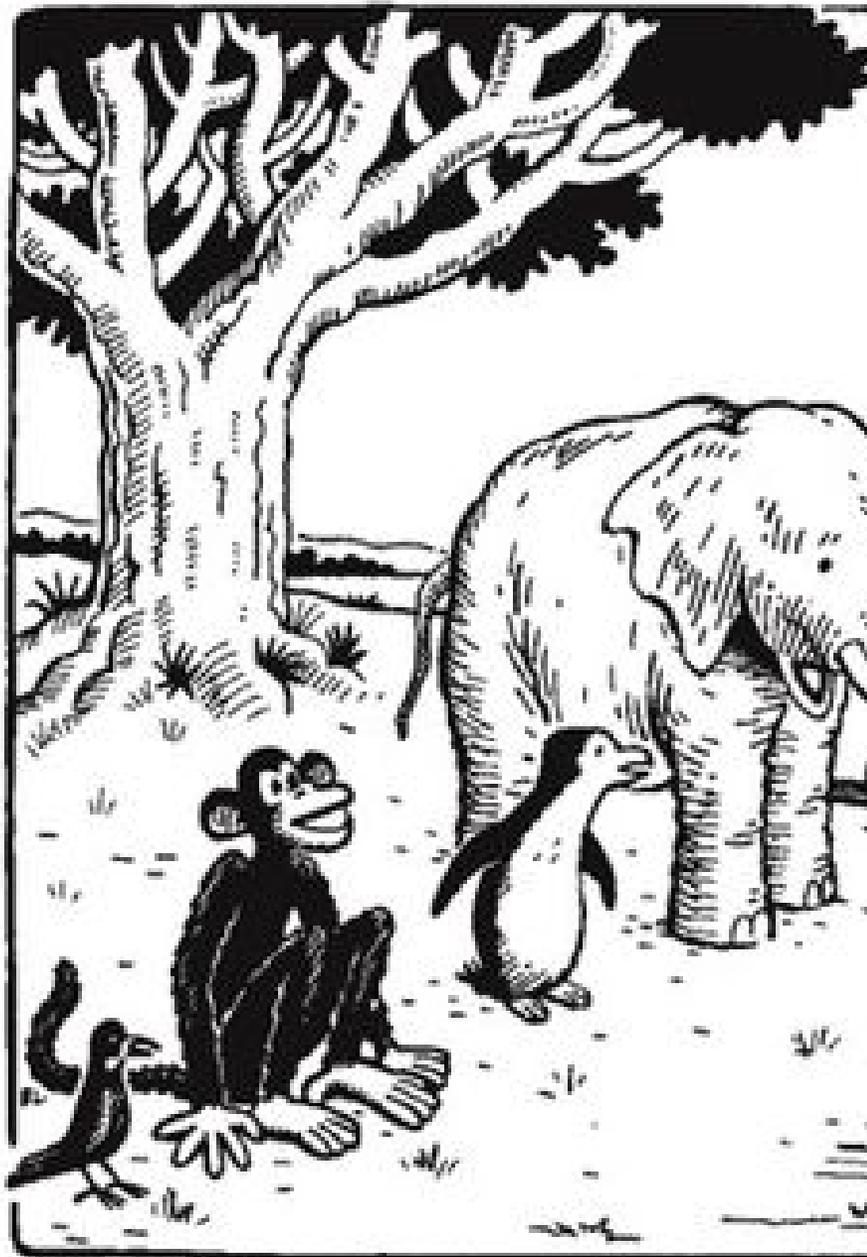
(interview 009)

... apart from the lectures that I try and see every week, all the material that they want us to read, **I'm not even touching the edges, because I'm trying to focus on doing these assessments.** And if I could sit back and read all those articles, I think I'd have the answers for these assessments.

(female undergraduate student, age 25 years or less)



FOR A FAIR SELECTION  
EVERYBODY HAS TO TAKE  
THE SAME EXAM: PLEASE  
CLIMB THAT TREE



## Preferred assessment types as ranked by students at a university in England (Waterfield & West, 2006)

<b>Students without a disability</b> 70 students	<b>Students with dyslexia</b> 145 students
continuous assessment	continuous assessment
coursework with discussion	coursework with discussion
essay assignments	oral examinations
multiple choice	portfolios and sketchbooks
personal research projects	personal research projects
peer and self-evaluation	critical diaries, learning logs and journals

## **Other problems with over-reliance on a single type of assessment:**

- Not always authentic
- Do not encourage learning of other important skills
- Are not always the most effective way to encourage learning
- Not always valid

(Chanock, 2008; Gibbs & Simpson, 2005; Hanafin et al., 2007)

## **Waterfield and West (2006) three-year project**

- 146 engineering students chose from end of module tests, course work, portfolio or weekly summative tests
- concerns about equity initially a “key issue” but these were resolved (p. 257)

## **Findings**

- additional resources were needed to develop and mark assessments
- no special accommodations were requested
- significant reduction in the number of lowest grades
- significant increase in the number of grades above 60%
- surveys indicated high satisfaction for both students (99%) and time-poor staff (Waterfield & West, 2006, pp. 254-258; 2010, pp. 8-9)

# Recommendations

- ✓ variety and choice in assessment

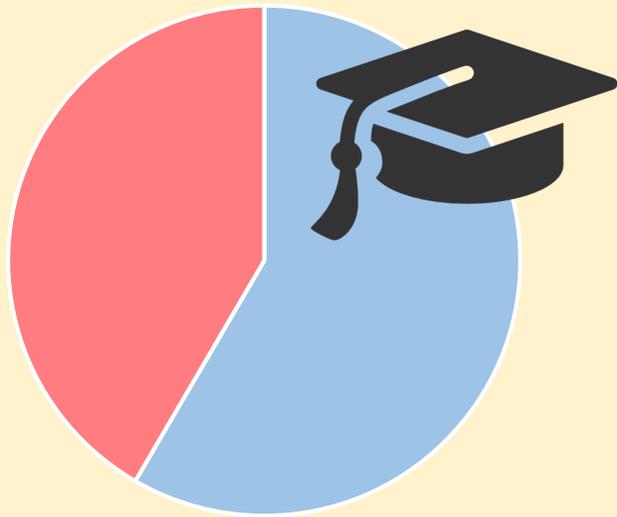
“I love templates. I love them, and they help me a lot. **And just when they're really clear, I feel like they say it's not a trick question, but I feel like it is”**

(interview 001).

# Completion rates after 9 years

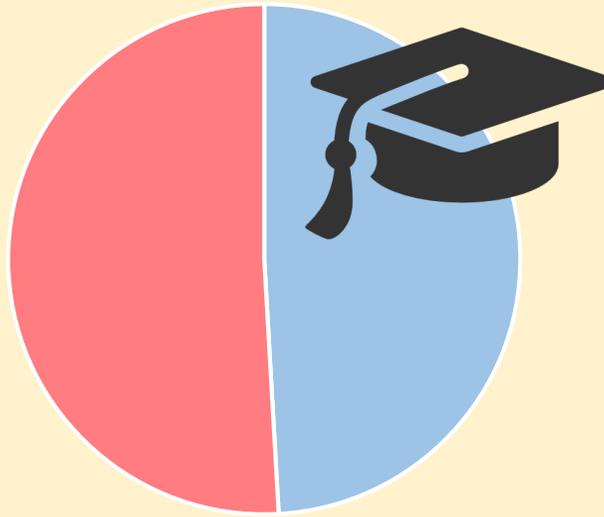
**age 25+**

41.6% non-completion



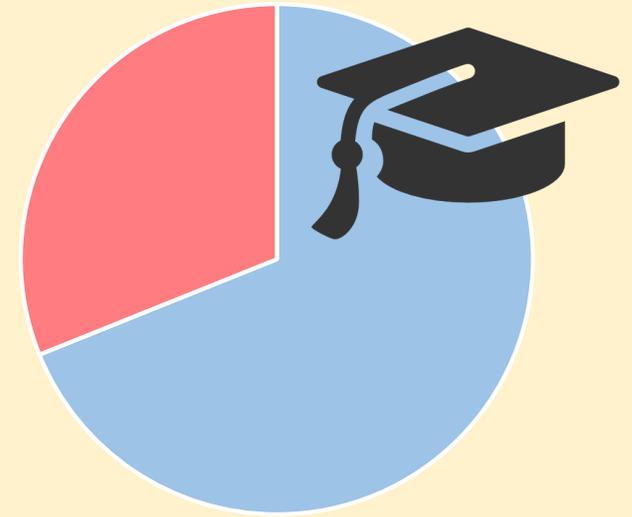
**part-time**

50.9% non-completion



**low SES**

31.1% non-completion

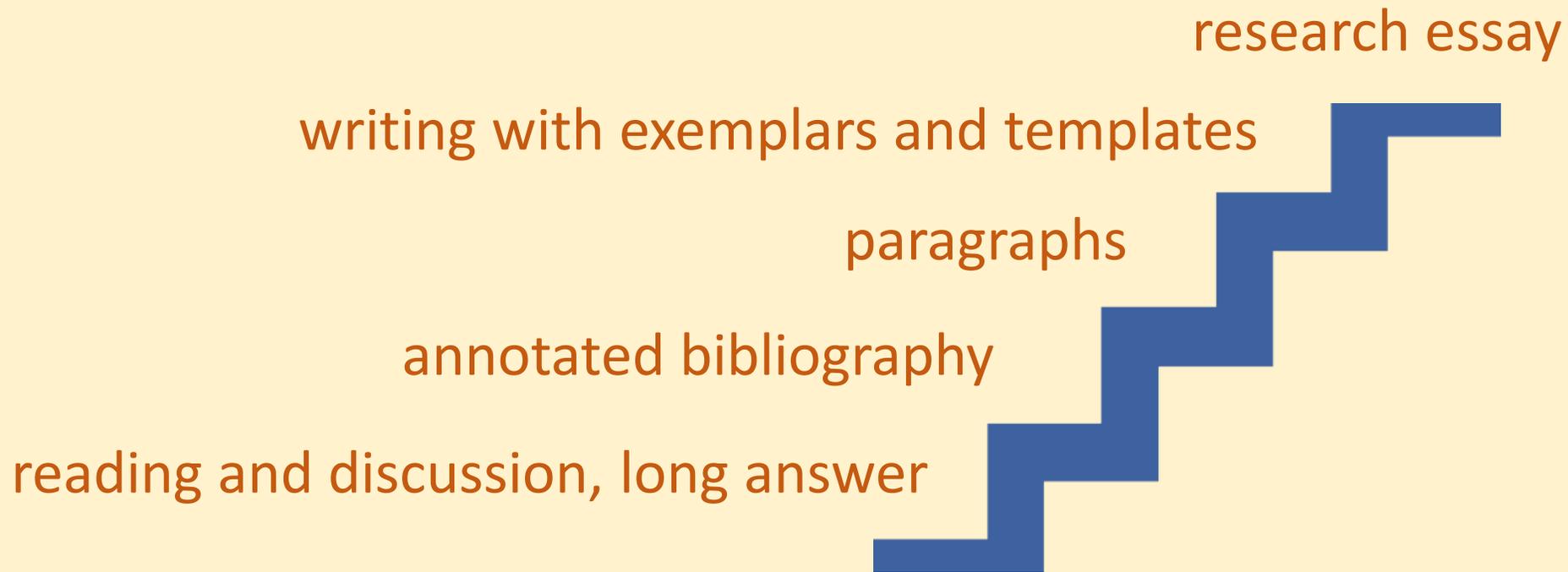


# Essay writing skills

- Using the library to conduct research
- Evaluating sources
- Reading a journal article
- Note-taking/paraphrasing
- Writing an outline
- Writing a paragraph/essay
- Writing in a formal, academic style
- Referencing

# Recommendations related to assessment

- ✓ explicit, course-wide teaching of assessment skills



# **Uptake of assistive technology**

In a systematic review of the literature by Pino and Mortari (2014), it was found that assistive technologies contributed greatly to students' ability to engage materials and, therefore, also improved their self-confidence.

Facilitator: Have you ever used a text reader?

Interviewee: Dragon does that. Dragon does text to speech, which I never used, which would've made things easier but--

Facilitator: Why did you never use it?

Interviewee: Well, I think it was just non - I never got there so I got to Dragon late in the piece, as I was starting mid-course. **I realised that it would take me some time to learn how to use speech to text.** (interview 009)

# Access and use of software

- One student (out of 12 interviewed) was successfully using Dragon, a dictation program.
- Two other students had access to software but did not use it.
- None of the other students has access to or, in some cases, had ever heard of software that might have been helpful to them.

# Recommendations

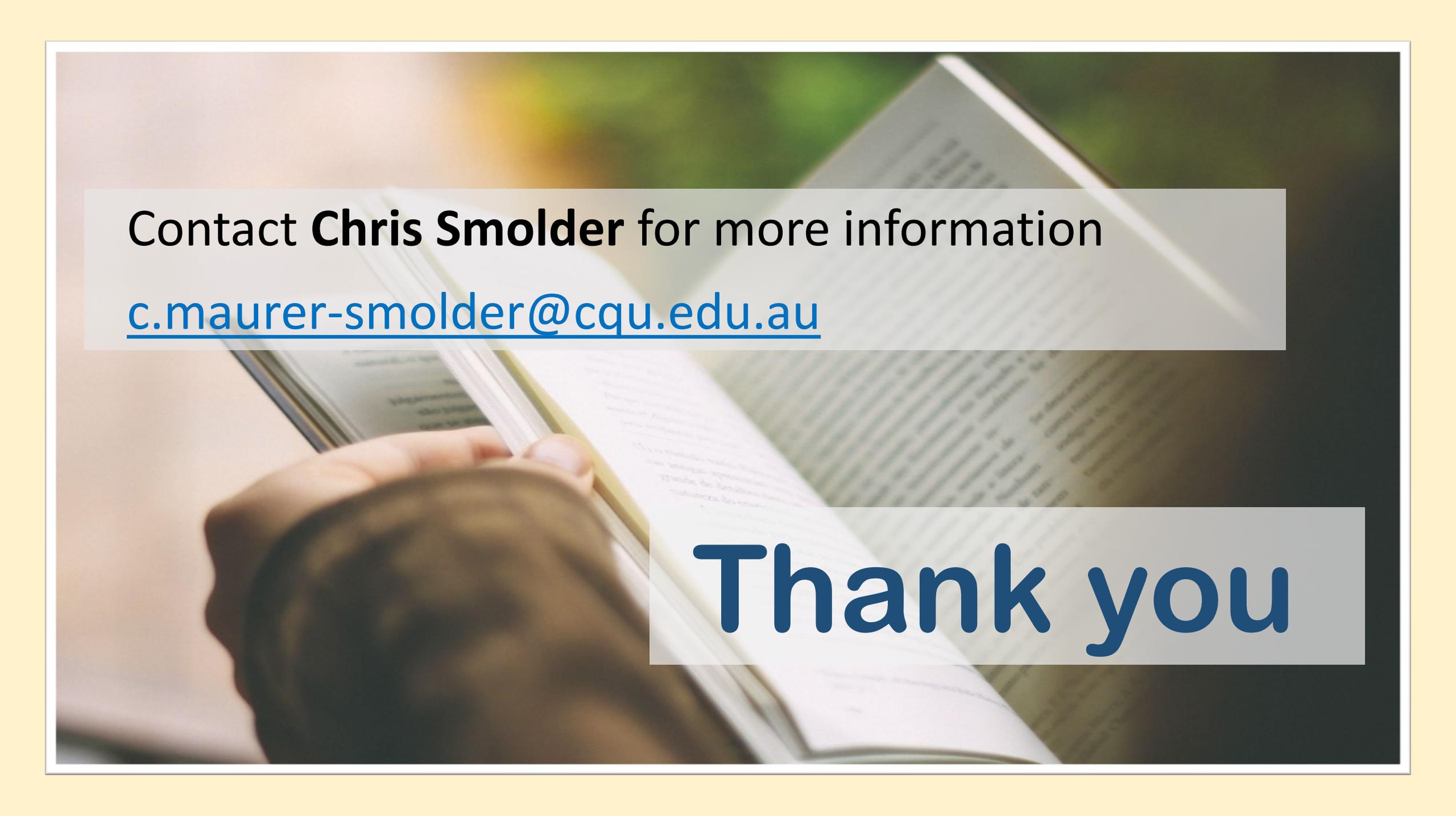
- ✓ Site licenses for software should be purchased by institutions so that all students can have access (N. Vonthien, personal communication, August 2019).
- ✓ Training in software should be made readily available.

# Recommendations for lecturers

- ✓ Universal Design for Learning (UDL)
- ✓ maximum 12 hours of weekly unit content
- ✓ consistent course-wide organisation and requirements
- ✓ best practice in video production
- ✓ Zoom instead of ISL
- ✓ variety and choice in assessment
- ✓ explicit, course-wide teaching of assessment skills

# Recommendations for the institution

- ✓ Site licenses for software should be purchased by institutions so that all students can have access.
- ✓ Training in software should be made readily available.
- ✓ Develop strengths-based self-report surveys to help identify students that may require additional support.
- ✓ Find a way to provide low-cost assessments to students.

A close-up photograph of a person's hands holding an open book. The pages are filled with text, though it is slightly out of focus. The background is a soft, blurred green, suggesting an outdoor setting. Two semi-transparent grey rectangular boxes are overlaid on the image, containing contact information and a thank you message.

Contact **Chris Smolder** for more information

[c.maurer-smolder@cqu.edu.au](mailto:c.maurer-smolder@cqu.edu.au)

**Thank you**

## References

- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders: DSM-5* (5th ed.). Arlington, VA: American Psychiatric Association.
- CAST. (2019). *About Universal Design for Learning*. Retrieved from <http://www.cast.org/our-work/about-udl.html#.XaLnAUyzY2w>
- Chanock, K. (2008). Towards inclusive teaching and learning in humanities: Alternatives to writing. *Learning and Teaching in Higher Education*(3), 19-32. Retrieved from <http://eprints.glos.ac.uk>.
- College of Design, North Carolina State University. (2019). *Universal design principles*. Retrieved from [https://projects.ncsu.edu/ncsu/design/cud/about\\_ud/about\\_ud.htm](https://projects.ncsu.edu/ncsu/design/cud/about_ud/about_ud.htm)
- Edwards, D., & McMillan, J. (2015). Completing university in a growing sector: Is equity an issue? Retrieved from [https://research.acer.edu.au/cgi/viewcontent.cgi?article=1045&context=higher\\_education](https://research.acer.edu.au/cgi/viewcontent.cgi?article=1045&context=higher_education)
- Fuller, M., Healey, M., Bradley, A., & Hall, T. (2004). Barriers to learning: A systematic study of the experience of disabled students in one university. *Studies in Higher Education*, 29(3), 303-318. doi:10.1080/03075070410001682592
- Gibbs, G., & Simpson, C. (2005). Conditions under which assessment supports student learning. *Learning and Teaching in Higher Education*, 1, 1-31. Retrieved from <http://eprints.glos.ac.uk/id/eprint/3609>.
- Gill, B. (2013). Assuring best practice in first year first session assessment: Report on tier one and tier two course reports. Retrieved from [https://www.westernsydney.edu.au/\\_\\_data/assets/pdf\\_file/0011/752609/Report\\_Assuring\\_Best\\_Practice\\_in\\_First\\_Year\\_Assessment-SEEC\\_final\\_.pdf](https://www.westernsydney.edu.au/__data/assets/pdf_file/0011/752609/Report_Assuring_Best_Practice_in_First_Year_Assessment-SEEC_final_.pdf)
- Giménez, A., Luque, J. L., López-Zamora, M., & Fernández-Navas, M. (2015). A self-report questionnaire on reading-writing difficulties for adults. [Autoinforme de Trastornos Lectores para AdultoS (ATLAS)]. *Anales de Psicología*, 31(1), 109-119. doi:10.6018/analesps.31.1.166671

- Grimes, S., Southgate, E., Scevak, J., & Buchanan, R. (2019). University student perspectives on institutional non-disclosure of disability and learning challenges: Reasons for staying invisible. *International Journal of Inclusive Education*, 23(6), 639-655. doi:10.1080/13603116.2018.1442507
- Guo, P. G., Kim, J., & Rubin, R. (2014, 4-5 March). *How video production affects student engagement: an empirical study of MOOC videos*. Paper presented at the ACM Conference on Learning @ Scale, Atlanta, GA.
- Hanafin, J., Shevlin, M., Kenny, M., & Mc Neela, E. (2007). Including young people with disabilities: Assessment challenges in higher education. *Higher Education*, 54(3), 435–448. doi:10.1007/s10734-006-9005-9
- Livingston, E. M., Siegel, L. S., & Ribary, U. (2018). Developmental dyslexia: Emotional impact and consequences. *Australian Journal of Learning Difficulties*, 23(2), 107-135. doi:10.1080/19404158.2018.1479975
- MacCullagh, L. (2014). Participation and experiences of students with dyslexia in higher education: a literature review with an Australian focus. *Australian Journal of Learning Difficulties*, 19(2), 93-111. doi:10.1080/19404158.2014.921630
- Pino, M., & Mortari, L. (2014). The inclusion of students with dyslexia in higher education: A systematic review using narrative synthesis. *Dyslexia*, 20(4), 346-369. doi:10.1002/dys.1484
- Serry, T. A., & Hammond, L. (2015). What's in a word? Australian experts' knowledge, views and experiences using the term dyslexia. *Australian Journal of Learning Difficulties*, 20(2), 143-161. doi:10.1080/19404158.2015.1089916
- Skues, J. L., & Cunningham, E. G. (2011). A contemporary review of the definition, prevalence, identification and support of learning disabilities in Australian schools. *Australian Journal of Learning Difficulties*, 16(2), 159-180. doi:10.1080/19404158.2011.605154
- SPELD Queensland. (2019). Assessment service. Retrieved from <https://www.speld.org.au/assessment-service>
- Tanner, K. (2009). Adult dyslexia and the 'conundrum of failure'. *Disability & Society*, 24(6), 785-797. doi:10.1080/09687590903160274
- Waterfield and West (2006) distinguish between 47 possible types of assessment when asking students to rate their preferences (pp. 162 & 166).
- Waterfield, J., & West, B. (2006). *Inclusive assessment in higher education: A resource for change*. Plymouth, England: University of Plymouth.