

— THE —
ULTIMATE GUIDE
TO VISUAL LECTURES

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CHAPTER 5

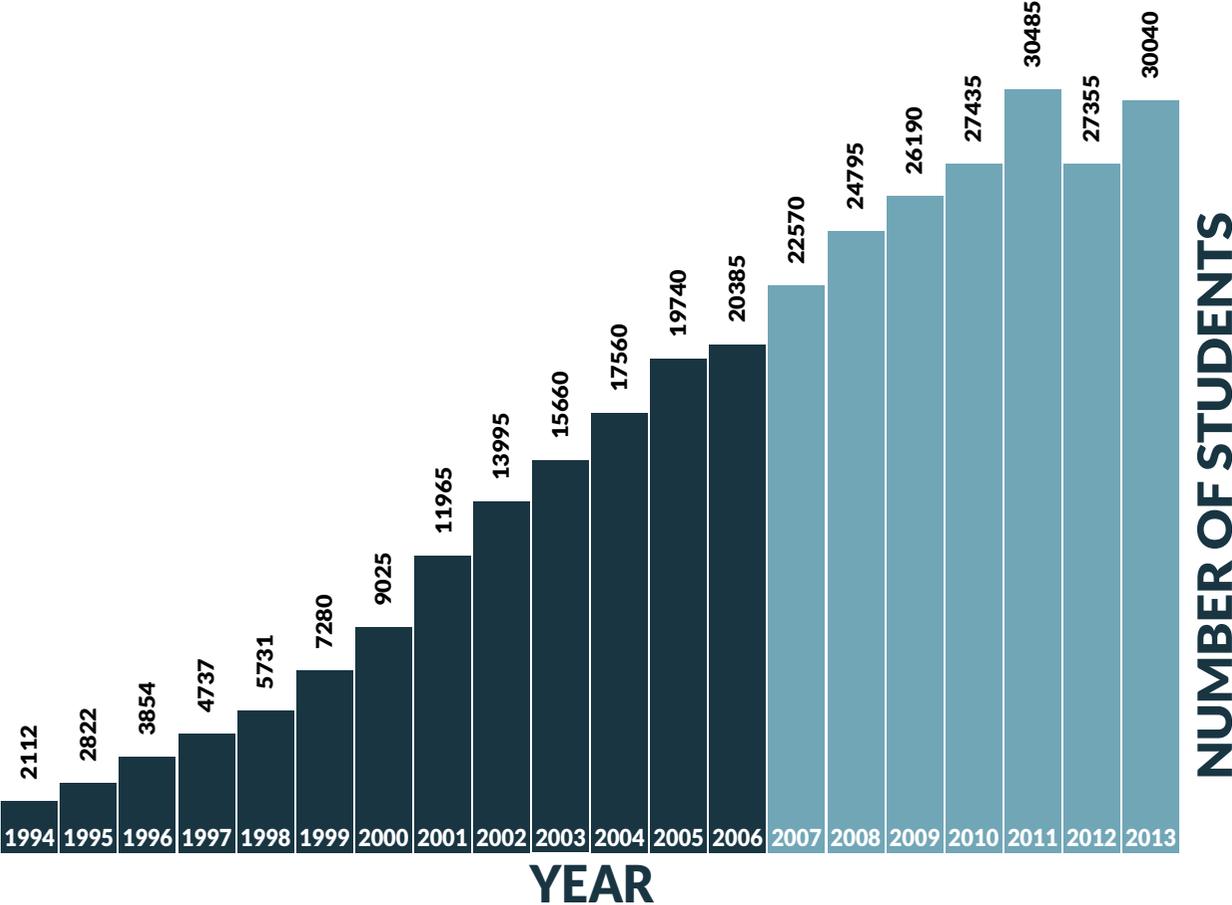
DYSLEXIA AND IMAGERY

Introduction

In December 2016, I was giving a [TEDx talk](#) being filmed at Loughborough University, on visual communication in teaching. Afterwards, a member of the audience told me she was dyslexic, and that she had never seen anything like my presentation. She described how the images had affected her ability to stay tuned to the slides and then recall what I had said around each image. She told me she could remember my spoken words, and the meaning of the images, with clarity and ease. She also said that some of the images had moved her emotionally, saying that an emotional connection was partly responsible for her attention, engagement and recall. Mainly, though, she compared the method with her experience of university lectures. She said text was disengaging, hard to read and impossible to keep up with. She said that all lectures should have more images and less text and that all her dyslexic counterparts felt the same way.

Dyslexia is one of a range of related neurological conditions presenting increasingly. The 2015 UK Census showed 6.3 million claiming to experience this condition, almost 10% of the population, and there are many subtypes. In UK HE over the last two decades, the number has risen from approximately 2,000 in 1994 to more than 20,000 in 2007. Figures for dyslexic students after this year can't be distinguished from Special Learning Disabilities generally, standing at 30,000 in 2013. There is no evidence to suggest the number is declining.

REPORTING DYSLEXIA AT UK UNIVERSITIES





The British Dyslexia Association (BDA) defines dyslexia as ‘a specific learning difficulty that mainly affects the development of literacy and language related skills... characterized by difficulties with phonological processing, rapid naming, working memory, [and] processing speed’ (2016). The BDA advises that dyslexia can be ‘resistant to conventional teaching methods, but its effect can be mitigated by appropriately specific intervention, including the application of information technology and supportive counseling’ (BDA, 2016). Yet large group lectures, which dominate in many areas of study, remain steadfastly anchored to a method of delivery that remains, as Matt Pickles (2016) and Raewyn Connell (2013) remind us, largely unchanged for the last hundred years. An overload of words is cognitively challenging or even oppressive for neurostandard students; it’s almost always worse for dyslexic students. So, if we combine the ubiquity of the pedagogy and the universality of the medium with a propensity for visuality among many neurodiverse students, we may see there’s an opportunity to improve the lecturing experience for this growing group.

DYSLEXIA AND IMAGERY

We know that dyslexic students often (but not always) exhibit a cognitive capacity for the interrogation of images that may exceed the capacity to absorb text. Some have proposed the idea that dyslexic people may experience an innate advantage or ‘special ability’ in terms of processing less precise but more expansive data, such as images. Some refer to a ‘dyslexic advantage’ wherein ‘conceptual knowledge is often stored in... images...rather than in abstract principles or definitions’ (Eide and Eide, 2011: 128). It is argued that some dyslexic people ‘will typically learn much better if general or abstract definitions are supported by scene-based examples or depictions’ (2011: 127). Peter Coppin (2009) proposes that images could be used to support dyslexic people’s learning needs because images occupy the periphery that is underexploited by text-centric teaching. Although the literature is ambiguous, there appears to be sufficient consensus that for many dyslexic students, routine monomedia text overload carries a disproportionate penalty above and beyond that experienced by their neurostandard counterparts, while both groups gain from balancing delivery across multimedia channels.



DYSLEXIC STUDENT REACTIONS

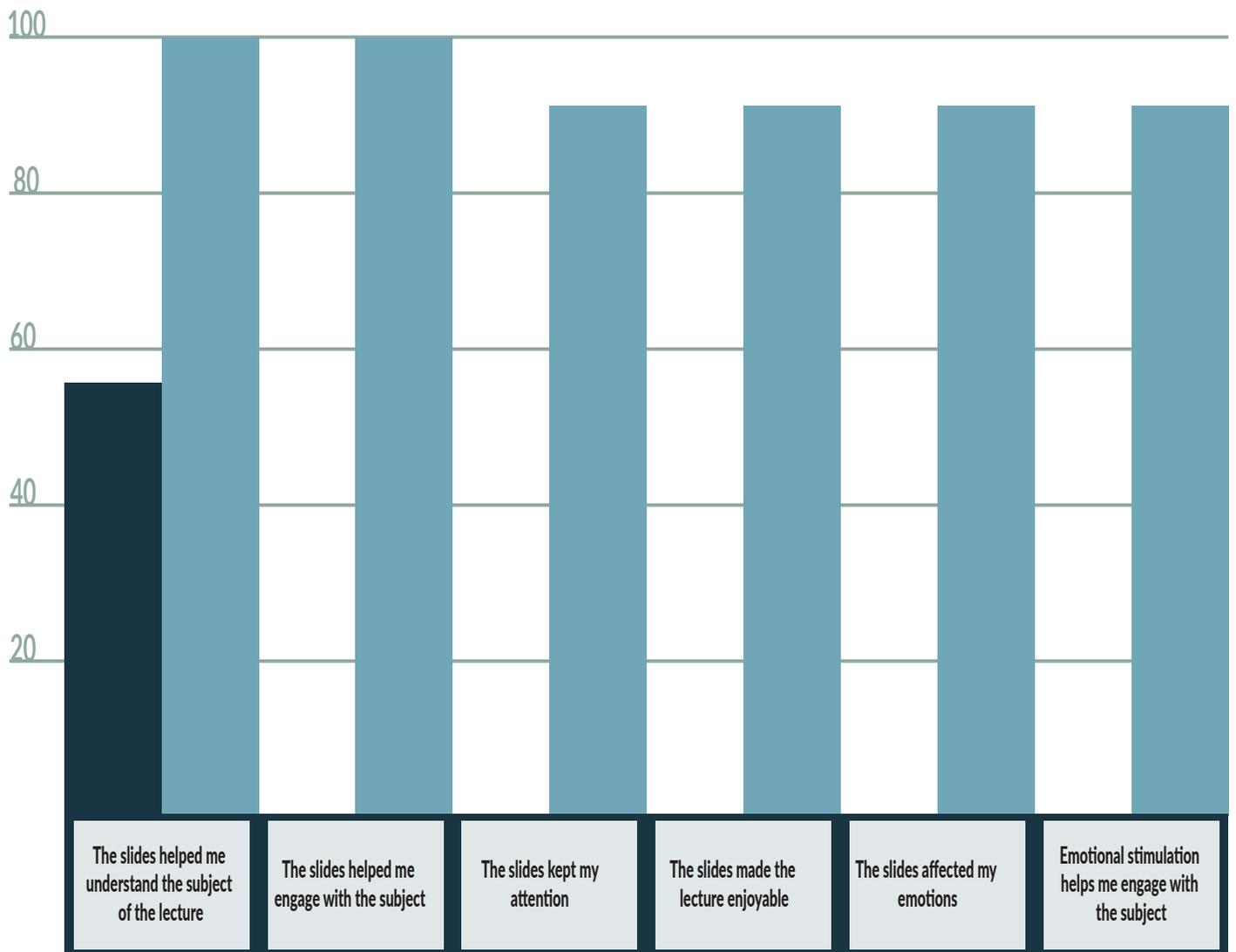
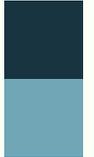
There was already some discussion off-campus among dyslexic students taking my modules about MML methods before I approached them with a view to doing some research. Volunteers from the dyslexic student community joined me in classroom research exercises over three years that evolved to become [online](#) practices and which were then further modified to increase and perpetuate neurostandard participation as well. As with the other testing, the students were exposed to two methods of communicating the same message and asked the questions at the bottom of the chart adjacent

DYSLEXIC STUDENTS AND ENGAGEMENT

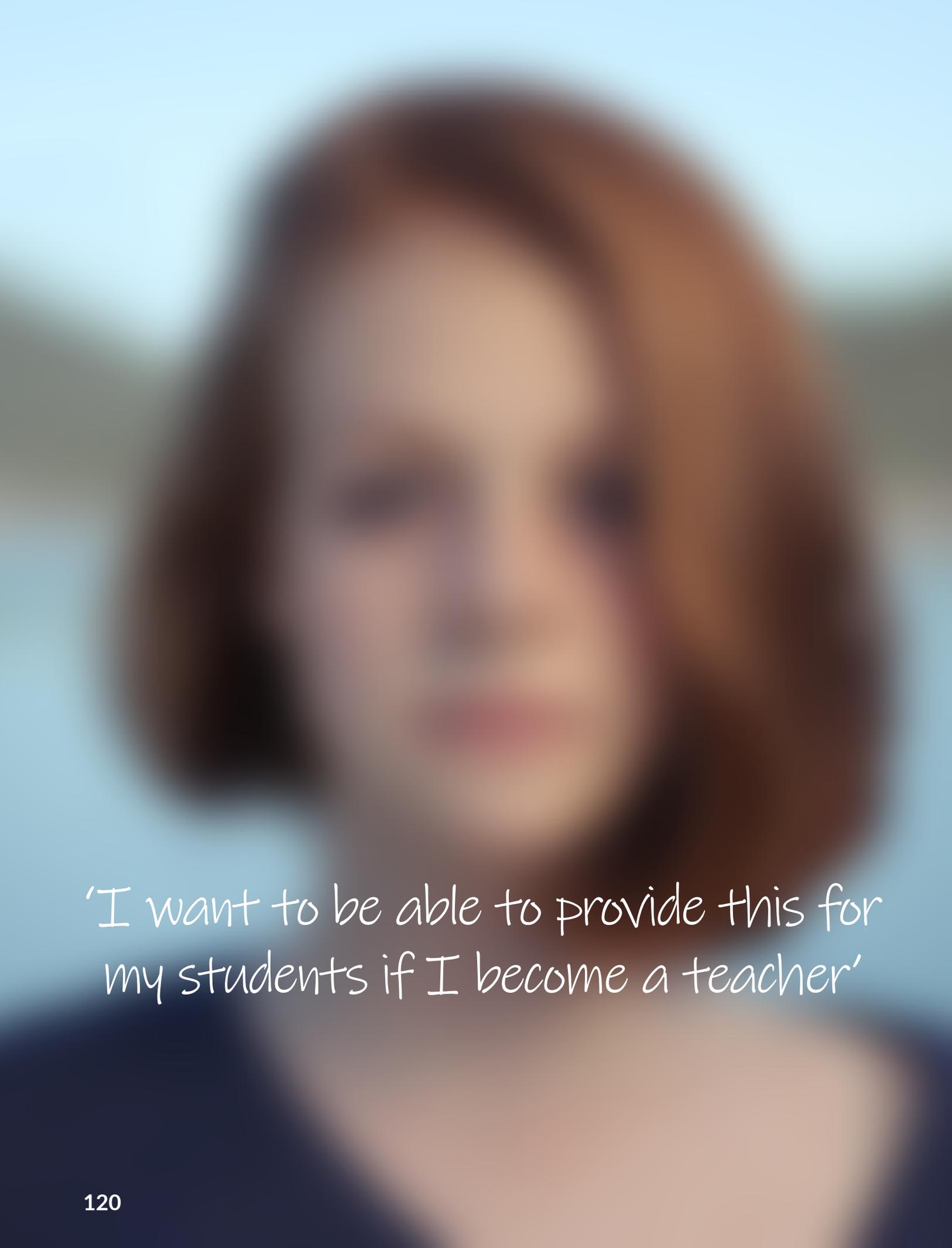
KEY

Control
Group 1

Experiment
Group 2



Of those exposed to standard logocentric slides, none considered them helpful in terms of cognitive engagement. On the contrary, all the dyslexic students exposed to apposite images found them to be valuable in engaging them and helping them understand the subject. The outcome is at least partly-attributable to the broadly-held notion (above) that dyslexic students often (but not always) value images whilst being routinely overwhelmed with text in lectures. As before, the quantitative data was supplemented with focus group evaluation. Dyslexic student volunteers were drawn from teaching cohorts as before and they had much to say. What follows has been distilled from a wealth of recorded conversation. One dyslexic student referred to an image shown to her 2 years prior of a decaying rope bridge over a rushing river with children crossing it being a 'school run' in Colombia, used to accompany a discussion of the impact of corruption on very poor people. This student declared that she could 'still see the bridge that the locals had to cross'. She added that 'this [form of teaching] is amazing, because none of my [other] revision is going in'. She said:

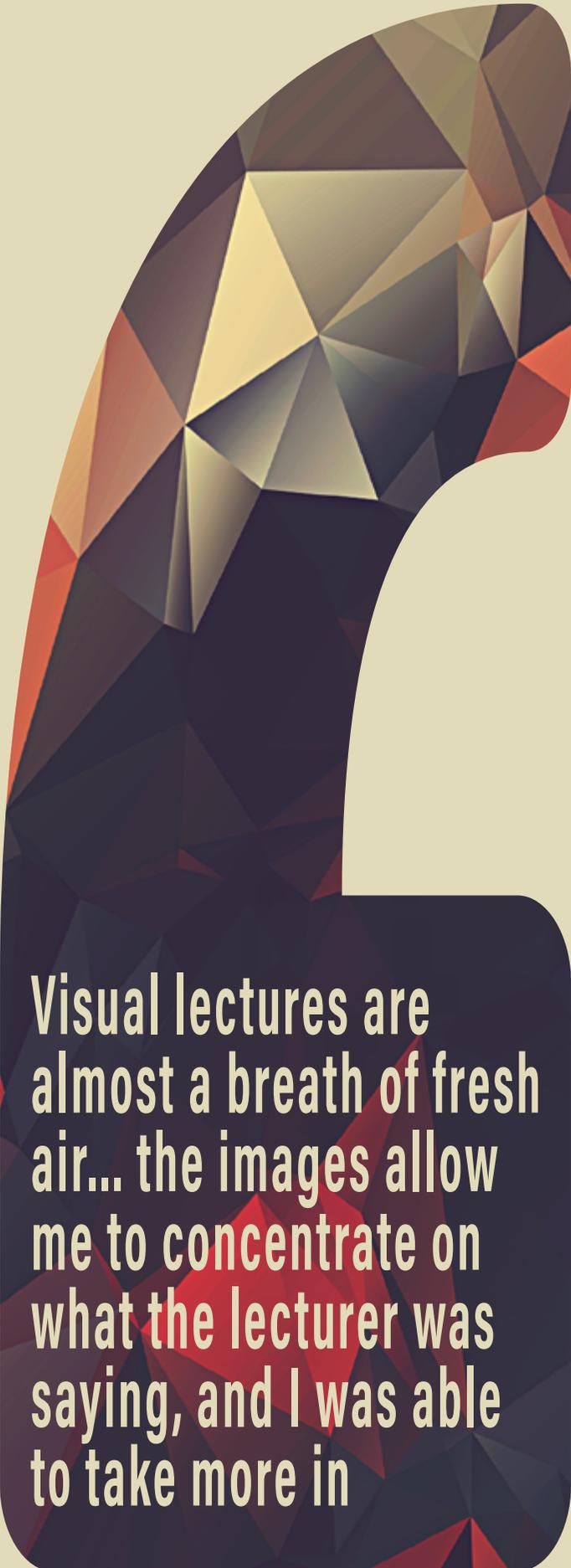


'I want to be able to provide this for my students if I become a teacher'

She said she was engaged in ways that logocentric lectures could not achieve. Another declared that he had 'found most [word-based] lectures... to be incredibly difficult to follow and keep up with'.

The discussions had a life of their own, as I had hoped. The participants 'fired' off one another; but this didn't mean they were all on the same page. For example, their valuing of images and text differed. One of the group said he depended on plenty of text for revision, and said that slides with just images were useful but incomplete. When I suggested that text was stored in the 'notes view' of PowerPoint and was accessible online at any time, he considered the matter resolved for him. It was, he said, 'the best of both worlds'. The group concurred with one of their number's statement that they 'got it, straight away, from the first slide'. They could understand the rationale for the use of images; they 'soaked up' the effect. Another added that 'images stick in my head much more easily and for much longer than words on a slide, or from a lecturer. They can stay for weeks and make you think more broadly about the subject. It leads to reflection as to why such an event happens',

It's useful to get a sense of what was happening to the students as they viewed the images. The focus group members agreed there was 'a connection to an image', adding that when seeing a large image on-screen, 'you can almost imagine you're there'. They compared the effect on them of text versus imagery and declared that there was 'no physical connection to words on a page'. They added that no end of written and spoken words can 'compare with when they use an image, a physical example of how something impacted other people'. Images 'drive the point home and make us think a lot more about what we're learning'. Images were sparking student connection to content in ways written and spoken text did not. They had interesting things to say that shouldn't surprise us. If dyslexia is characterised in part by challenges for working memory, and imagery eases pressure on working memory, it seems reasonable to guess there might be improvements for neurodiverse students as well as for their neurostandard counterparts by using a multimedia approach.



Visual lectures are almost a breath of fresh air... the images allow me to concentrate on what the lecturer was saying, and I was able to take more in

Later dyslexic student focus groups elaborated. Text-based slides were much harder to 'stay with', especially when the text mirrored, or duplicated, the lecturers' speech. It also seemed that any apposite image was better than slides filled with text. The group concurred that dispersed text with no images was preferable to slides full of text that made some students 'give up'. All but one dyslexic student surveyed agreed that having one or two lines of text dispersed across slides was a 'vast improvement' over slides packed with text. They acted 'like a shelter' from a 'word attack'



SUMMARY

The number of neurodiverse students in HE is increasing, and there is an associated inclusivity agenda that requires us to try to act in ways that ensure those students are not marginalized or disadvantaged by the ways we teach. Dyslexia doesn't affect all dyslexic students the same way, but most appear to find dense text frustrating and disengaging. Data suggests that the application of imagery alongside reduced text relieves this situation, and, where dyslexic students need dense text, this can be provided in the 'Notes View' part of PowerPoint and Keynote – as we would for neurostandard students. Both cohorts possess visual processing abilities, so there is valuable overlap in both existing deficiency and potential provision. Images serve both groups' needs. The solution, as far as there can be one for teaching people en masse, is shared. Images benefit both groups, and we can continue to provide as much text as is needed for each.