scope
Contemporary Research Topics

learning & teaching 11:

November 2022

Article

https://doi.org/10.34074/scop.4011005

DIFFERENT NOT LESS: NEURODIVERSITY AS A LENS FOR UNDERSTANDING OUR STUDENTS BETTER

Stella Lange

Published by Otago Polytechnic Press. Otago Polytechnic Ltd is a subsidiary of Te Pūkenga – New Zealand Institute of Skills and Technology.

Article

https://doi.org/10.34074/scop.4011005

DIFFERENT NOT LESS: NEURODIVERSITY AS A LENS FOR UNDERSTANDING OUR STUDENTS BETTER

Stella Lange

Those Students

They are so rude, those students,
the ones who ask questions,
questions that you did not think were important.
Questions like
how many pages? or what format?
or what kind of approach the work might take?
Questions that they should be able to answer,
that are 'common sense' and
'not important now.'
They are so rude, those students,
the ones who want to know the details,
they are so rude,
those students.

They are so rude, those students,
the ones who will not meet your eyes,
who do not care for small talk,
who interrupt
and don't wait for you to finish.
They take notes,
they consider the class content,
they weigh up the value and sense of what you teach
and they ask you direct questions.
They work quietly
and let you know when they need help
yet
they are so rude – when they will not meet your eyes,
or chat,
and they interrupt.
They are so rude,
those students.

They are so rude,
those students.
The ones who will not socialise,
who sit away from the group,
far from the rest.

The ones who do not join us at the coffee shop, the pub,
and the end of day or weekend events we have planned.
Oh – they turn up and help,
and they 'pull their weight'
but
you know, they do not join in outside of class,
in the social stuff.

They are so rude,
those students.

March 2022

INTRODUCTION

This poem, "Those Students," this collection of 241 words, sets out to express a chasm that is little talked about in education. In my 25+ years of teaching, and my 50+ years of being a student, I have heard others talk about "those students" and I suspect I have been that student.

As I progressed through the education system, from primary school, to secondary, to tertiary, to postgraduate study, and as I crossed the invisible boundary from student to teacher, I continued to hear about "those students." I became party to conversations in informal education spaces of community education, at sessions for parents at primary schools and in higher education, at university, at polytechnic and in professional development spaces; over the years multiple conversations between educators about "rude" students. In some of those conversations some students were discussed and considered a problem: they were rude. And yet, I had never experienced those students. I had some students who were quiet and those who were not; some who asked detailed questions and some who did not; some who were friendly and talked about their world beyond school and others who were more private – but none that I considered rude.

These conversations, these responses, these observations, stayed with me, they bothered me – for my students were not rude. To me, these same students were keen to learn, asking questions, engaged and seeking answers to aspects that confused them. I began to connect the dots and recognise that these students were not rude – they were perhaps, instead, neurodiverse. Perhaps I did not recognise those students, for they were the same as me?

Conceptualising these 'problematic' student interactions as communication errors between neurotypical and neurodivergent individuals allows for a more nuanced understanding than simply labelling them as rude. In this article, I introduce neurodiversity, describe how understanding of neurological difference has developed, and introduce commonly identified expressions of neurodiversity. These are positioned within a social model of disability. I discuss how some of the familiar expressions of neurodivergence can be misread as people being difficult, rude or lazy. I conclude with a plea, from my neurodivergent self, for educators to reconsider how they view their students.

WHAT IS NEURODIVERSITY OR NEURODIVERGENCE?

Judy Singer developed the term neurodiversity in phone conversation with Harvey Blume (Silberman, 2016, p. 492). Both Singer and Blume published using the term "neurodiversity" in 1998 (Lollini et al., 2018, p. 74; Singer, 2017). Singer's goal was to reflect social changes in the disability rights movements of the 1990s. She observed the autistic, Asperger's and gay rights communities pushing back against the three narrow and limiting medically defined types of disability which had been developed in the nineteenth century: physical, intellectual

and psychiatric. Singer (2017) developed the term neurodiversity to describe humans as presenting across a spectrum of neuro-abilities, or neurological pluralism. Using the category of neurominorities – and by default neuromajorities – Singer suggested that it was natural to expect the way minds work to be diverse and full of variation across the human population – and, beyond that, for it to be important to recognise and value neurological diversity

Neurodivergence, the individual expression of neurodiversity, is perhaps new to many educators and yet it provides a valuable way to make sense of others, including students who are not like us. Singer's neuromajorities are now commonly referred to as neurotypical (NT), and her neurominorities as neurodivergent (ND). In Aotearoa New Zealand, kanorau ā-roro is the te reo Māori term for neurodiversity, as takiwātanga is for autism, and raru kori tinana for problems with coordination (Opai & Severne, 2020). Neurodifferences are normal and known across many cultures (Clouder, 2020). Importantly, neurodiversity offers a focus on strengths and differences, presuming competence rather than a fixation on disabilities (Donaldson et al., 2017; Institute of Leadership and Management, 2020).

Some aspects of neurodiversity are more readily understood. Dyslexia and dysgraphia (trouble with handwriting) are widely recognised and most educators are able to connect such learners to resources and supports to help their learning. This was not always the case. As recently as 2007, the term dyslexia was avoided by Aotearoa New Zealand's Ministry of Education who did not wish to "develop an education system which defines and categorises students in terms of their disabilities" (cited in Marshall, 2008, p. 9). While dyslexia might now be more readily recognised, accepted and supported, this is not true for other hidden neurodivergent differences which are not yet part of tertiary education approaches in Aotearoa New Zealand. This needs to change.

Neurodiverse expressions include dyslexia, dyspraxia, dysgraphia, dyscalculia, attention deficit hyperactivity disorder (ADHD), autism spectrum conditions and Tourette's syndrome (Mirfin-Veitch et al., 2020; Institute of Leadership and Management, 2020). There is sometimes debate on how to differentiate between differences that are natural and those that are the result of trauma or specific injury (for example, concussion), or other brain variations like epilepsy or tumours. While medically it may help to know about the origin of difference, educationally that is less critical than understanding what that difference means for our learners.

Many schools have systems and supports in place to aid students who need assistance, for whatever reason. Educators universally accept in the case of dyslexia and ADHD that students' brains, their neurology, works differently, and are almost always willing to work to find solutions that promote learning and achievement.

Sadly, researchers report again and again that neurotypical adults have implicit and explicit biases against neurodivergent individuals (for example, Dickter et al., 2020; Institute of Leadership and Management, 2020). Importantly, neurodivergent individuals have no problem communicating with other neurodivergents; communication and acceptance are only a problem across the neurodivergent/neurotypical divide (Chapple et al., 2021). There is clear evidence that many neurotypical individuals read neurodiverse communication styles as rude (Cagaanan, 2017; Institute of Leadership and Management, 2020). As educators, we need to consider our own biases and ask if we are unfairly expecting neurodivergent students to be like us, or if we can be open to accepting each individual as unique.

SOCIAL MODEL OF DISABILITY

Conceiving disability as a social and environmental construct is key to accepting as valid and normal the very different experiences of many humans. Assuming everyone is the same, physically and neurologically, positions humans as having universal abilities in terms of mobility, sensation and communication. Mike Oliver (2013) writes of introducing a "social model of disability" 40 years ago. In that model, it is the structures and expectations prevalent in a society that lead to real problems for individuals. To be blunt, disability is something society

creates. The classic example is that stairs impede wheelchair users and those with poor mobility – so if we build buildings with ramps, lifts or that are single-level we can eliminate many mobility challenges. A social model of disability opens a way to see individual experience and ability as unique, not universal. When we assume that everyone is like us, we place others at a disadvantage.

ASKING QUESTIONS

Neurodiverse individuals experience life differently to neurotypical individuals. Autismo: Mi cerebro atipico (2020) explains that for many neurodiverse people, the details of things and how information fits together are important for understanding. This focus (known as hyper-focus in the neurodiverse community) means that we can get stalled if some of the information we need to understand the problem is missing. Asking questions about a task or assignment, or even a topic, can be seen as a challenge to authority, or being difficult, yet it is essential so we can understand what is being asked and complete the work. Neurodiverse minds often find it difficult to process lots of information at once, so breaking instructions down into mini-steps and complex two- or three-part open questions provides clarity for all students.

Task inertia is a very real problem for someone with ADHD and autism. Part of executive function, task inertia describes not being able to start a project or task, especially one that requires pulling together a lot of information (Low, 2022). Educators unfamiliar with the approach of a neurodivergent student may see this as avoidance or procrastination. Inertia is discussed by Tanea Paterson (2016), using te reo Māori, explaining that "Te Kore, [is] a time of gestation, a chaotic void waiting to produce life." For many neurodivergent people, there is always a pause prior to beginning any project, which is a vital part of their learning and process. Assuming that all students can "work out the details as they go" and that they "just need to focus and get started" fails to acknowledge that many assignment tasks were written for a neurotypical mind, and falls short of providing neurodivergent students with strategies to do well.

Many neurodivergent brains can hyper-focus, with the stamina and drive to deeply and thoroughly research a topic (Autismo: Mi cerebro atipico, 2020). Students who work very independently are often criticised for not engaging with class resources. Their deep dive into research is not intended to undermine the authority of educators, but demonstrates a desire for deep authentic learning and to fill in all the pieces of the puzzle of knowledge, not just what can be covered in class.

EYE CONTACT, SMALL TALK AND INTERRUPTING

For many neurodivergent people, communicating requires intense focus, and is best done by avoiding visual distractions. We focus by looking away or closing our eyes when talking or listening, yet this is seen as rude or disruptive in tertiary classrooms (Thomas, 2020). Looking elsewhere is not always a mark of avoidance, but may instead demonstrate a more active engagement with what you are saying and a more considered response than merely meeting your eyes. I still cringe when I remember coaching a student, decades ago, to make eye contact. I worried and warned them that a failure to do so would affect how they were judged – and they were preparing for an event where they would be judged on an international stage. Now aware of the cost to some neurodivergent people of making and maintaining eye contact, I want to apologise: at that time I didn't recognise my expectation to meet neurotypical behaviour norms. I did not allow them to be authentically neurodivergent.

When talking, neurotypical people unconsciously mark small changes in others' breathing and inflection so they can effortlessly take turns in a conversation – this is not always true for neurodivergent people (Denworth, 2018). Identifying such interruptions as rude, without considering they may be the result of timing miscalculations, means that neurodiverse students are often considered rude. Considering students may have interrupted us, or others, through poor timing frames such interruptions as an excited contributions rather than rude interruptions.

SOCIALISING

Difficulties in social interaction make face-to-face exchanges less fun and more work. It is no wonder that neurodivergent students often step away from social activities, be those scheduled or optional. Sara Ryan and Ulla Raisanen (2008) discuss how many neurodivergent people feel like a spectator in a neurotypical world. They describe neurodivergent individuals knowing what people are '"supposed to do' but not being able to do that" themselves (Ryan & Raisanen, 2008, p. 138). As a neurodivergent individual, I constantly monitor my self-presentation to others, the result of numerous negative comments across my lifetime. So many incorrect observations that I was tired, sad or angry, when I was none of those at the time, have made me cognitively aware of a need to present a pleasant face to the world, lest I be judged and found less than I should be. This constant monitoring is tiring and exhausts me. If all the world is a stage, neurodivergent individuals are perhaps more aware of their critical audience than many others.

Many neurodivergent people find living and operating in a neurotypical world exhausting (Autismo: Mi cerebro atipico, 2020). The cognitive load involved in filtering out background chatter, of making sense of words and possible implied meanings, deciphering facial expressions or 'tone' and cognitively adapting responses to fit in drains energy. Many neurodivergent people report needing time to withdraw and recover (Evans, 2019), and yet this can be interpreted as anti-social. Recognising that socialising requires additional cognitive energy is important to reframe an absence at a 'optional' event as self-care and not as rude.

SPOON THEORY

Spoon Theory is a useful way to conceptualise the work required to be present. Introduced by Christine Miserandino (2003), spoon theory illustrates the very real price of living with an invisible illness or disability. The theory provides a fixed number of spoons per day, and then tags activities during the day as either using up spoons or providing extra spoons. A noisy environment may use up three spoons, while a less demanding activity like meditation may replenish one's spoons for the day.

Many neurodivergent individuals have some level of sensory processing disorder (SPD) (Fox, 2020), so experiencing significant and draining external stimulus from bright lights, unfiltered background noise, visual background clutter, smells of cleaning chemicals, food or perfume worn by others – and even the feeling of clothing, especially the seams or labels – depletes one's reservoir of "spoons," leaving none for learning or participating in class. The added cognitive work of filtering out the bustle of public transport while travelling to class, or monitoring the day's social interactions, and even their own facial expressions, means many neurodivergent people begin the day with fewer "spoons" than other students. During the day one's spoons are depleted, and it is likely that neurodivergent students have fewer reserves to manage tricky situations later in the day. After-class socialising or evening celebrations are exciting for neurotypicals, but are likely to be simply too late in the day to be possible for those who have used up all their spoons. Simply getting to class some days may leave neurodivergent students with not enough spoons to do well.

SUMMARY

When we seek clarification please do not label us as confrontational. For neurodivergent students, checking what a teacher really means does not feel like we are being rude – we are interested and concerned enough to check that our understanding is sound. If we can't make eye contact, or we have no energy to socially interact and make interested faces, please do not judge us. If we consistently mis-time our speaking and interrupt you, we feel like we have failed. If we have done extensive research and are wanting to discuss a topic in depth beyond what is covered in this class, know we are not challenging you. Please know that all this is a compliment that your classroom is a safe enough environment for us to be authentic.

And when some people describe us as rude, that sets us apart, makes us different and sets up an imagined barrier.

We are not rude, we are neurodivergent.

Stella Lange is a transplanted scientist, working in the School of Design at Otago Polytechnic. She has worked to set up a neurodiversity community of practice with colleagues at OP. Her research interests include knitwear design, histories of repair of domestic textiles and a recent hyper-focus on neurodiversity.

https://orcid.org/0000-0002-3676-4331

REFERENCES

Autismo: Mi cerebro atipico (Eds.). (2020). *A guide to understanding, developing and applying #reasonableaccommodations for autistic people.* NeuroClastic. https://neuroclastic.com/wp-content/uploads/2020/04/UNDERSTANDING-THE-AUTISTIC-MIND-11.pdf

Cagaanan, J. S. (2016). The hushed voices of autism: Chronicling social and academic experiences in collage. *Langkit: The Official Journal of the College of Arts and Social Sciences, 7,* 1–18.

Chapple, M., Davis, P., Billington, J., Myrick, J. A., Ruddock, C., & Corcoran, R. (2021). Overcoming the double empathy problem with pairs of autistic and non-autistic adults through the contemplation of serious literature. *Frontiers in Psychology, 12*(Article 708375), 1–15. https://doi.org/10.3389/fpsyg.2021.708375

Clouder, L., Karakus, M., Cinotti, A., Ferreyra, M. V., Fierros, G. A., & Rojo, P. (2020). Neurodiversity in higher education: A narrative synthesis. *Higher Education, 80*(3), 757–778. https://doi.org/10.1007/s10734-020-00513-6

Denworth, L. (2018, April 18). *Where communication breaks down for people with autism.* Spectrum News.Org. https://www.spectrumnews.org/features/deep-dive/communication-breaks-people-autism/

Dickter, C. L., Burk, J., Zeman, J. L., & Taylor, S. C. (2020). Implicit and explicit attitudes towards autistic adults. *Autism in Adulthood, 2*(2), 144–151.

Donaldson, A. L., Krejcha, K., & McMillin, A. (2017). A strengths-based approach to autism: Neurodiversity and partnering with the autism community. *Perspectives of the ASHA Special Interest Groups, 2*(1), 56–68. https://doi.org/10.1044/persp2.SIG1.56

Evans, M. (2019). Oughtism and oughtistic narratives in the lives of autistic people and their families. *Ought: The Journal of Autistic Culture, 1*(Article 9), 62–78.

Fox, T. (2020). Altered neuro states. *Scope: Contemporary Research Topics (Art & Design), 20,* 62–69. https://doi.org/10.34074/scop.1020017

Institute of Leadership and Management (Ed.). (2020). *Workplace neurodiversity: The power of difference*. https://www.institutelm.com/resourceLibrary/workplace-neurodiversity-the-power-of-difference.html

Lollini, A., Courts, V. H., Faigman, D. L., Gorno, M. L., Visconti, P., Garapon, A., King, J., Mattei, U., Hooper, S. M., Reiss, D., Schwartz, R. P., Rao, R., Pollard, T. A., Palermo, F., Toniatti, R., Bin, R., Cammelli, M., Piana, D., Endrici, G., & Cei, S. (2018). Brain equality: Legal implications of neurodiversity in a comparative perspective. *International Law and Politics, 51*(69), 69–134.

Low, K. (2022, March 2). *ADHD and motivation problems.* VeryWellMind. https://www.verywellmind.com/adhd-and-motivation-20470

Marshall, A. (2008). *Dyslexia: Quick fix or hard slog?* [Sabbatical Report]. Brownfield School. https://www.educationalleaders.govt.nz/content/download/406/2802/file/Allan%20Marshall%20Sabbatical%20Report.pdf

Mirfin-Veitch, B., Jalota, N., & Schmidt, L. (2020). Responding to neurodiversity in the education context: An integrative literature review. *Donald Beasley Institute,* 56.

Miserandino, C. (2003). *The spoon theory.* But you don't look sick? https://butyoudontlooksick.com/articles/written-by-christine/the-spoon-theory/

Oliver, M. (2013). The social model of disability: Thirty years on. *Disability and Society, 28*(7), 1024–1026. https://doi.org/10.1080/09687599.2013.818773

Opai, K., & Severne, E. (2020). *Disability: Word collections.* Te Reo Hāpai. https://www.tereohapai.nz/Browse/Collections/3/mi-NZ

Paterson, T. (2016). Using the Māori creation story to navigate autistic inertia. *Alltogether Autism Takiwatanga, 3,* 8–9. (Republ. 2022 at https://www.altogetherautism.org.nz/using-the-maori-creation-story-to-navigate-autistic-inertia/)

Ryan, S., & Raisanen, U. (2008). "It's like you are just a spectator in this thing": Experiencing social life the 'aspie' way. *Emotion, Space and Society, 1*(2), 135–143. https://doi.org/10.1016/j.emospa.2009.02.001

Silberman, S. (2016). *Neurotribes: The Legacy of autism and how to think smarter about people who think differently.* Allen & Unwin.

Singer, J. (2017). *Neurodiversity: The birth of an idea* (Rev. ed.). Kindle.

Thomas, A. J. (2020). Examining the neurodiverse postsecondary experience. *Journal of Disability Studies, 6*(1), 18–25.