

DECODING

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Abstract

In this submission, I emphasize the importance of understanding neurodiversity, particularly in early education, drawing from my experience with dyslexia. My goal is to foster empathy towards neurodivergent individuals, countering stereotypes associated with people like me. My creative piece, "Decoding," metaphorically represents the dyslexic experience, in which neurodivergent individuals who have dyslexia may struggle with the daily decoding of information within their cognitive load. I introduce Dyslexia Canada's "itshardtoread.org" as a crucial resource for offering insights into the dyslexic experience. This platform adheres to accessibility standards, facilitating empathy cultivation. I advocate for holistic and inclusive learning environments, and argue for recognizing dyslexics as creative, empathetic, and adept problem solvers who face preventable mental health challenges if recognized early enough. Inspired by Indigenous ways of knowing, I highlight the importance of "seeing the spirit" of learners, contrasting with Western compartmentalization. This approach can boost self-esteem and self-worth among neurodivergent individuals. In conclusion, I stress the urgent need for empathy in education, proposing two actionable recommendations: exploring empathy through storytelling, adherence to legal accessible design standards outlined by The Association of Registered Graphic Designers, and how digital solutions in design for the classroom can positively impact neurodivergent learners. The overarching goal is to promote comprehensive understanding and appreciation of neurodivergent individuals. My submission concludes with a curated list of resources for further exploration in this vital area.

Keywords: neurodiversity, dyslexia, empathy, accessibility, Indigenous knowledge, cognitive load, inclusive education, storytelling, accessible design.

Figure 1. Title: Decoding



Note: Illustration by Daniel Asel, RGD, who also operates under the artist pseudonym “Exploding Haggis”.

Introduction

Why does understanding neurodiversity matter? The purpose of this piece spotlights my experience with dyslexia – the daily decoding of the world around me. My scholastic experience as a child was best characterized by evaluations stating I had “poor comprehension” or lacked verbal skills and understanding of social settings in the classroom. I was segregated from my classroom (at times left alone in a room for extensive periods) and ultimately made to feel isolated, dumb, ashamed, and unsafe. Dyslexia Canada notes how 40% of students with a learning disability also experience mental health issues. It is important to understand dyslexic or other neurodivergent students from an early age because we do not deserve to be dismissed as being slow or lazy learners. We see the world differently and that is ok.

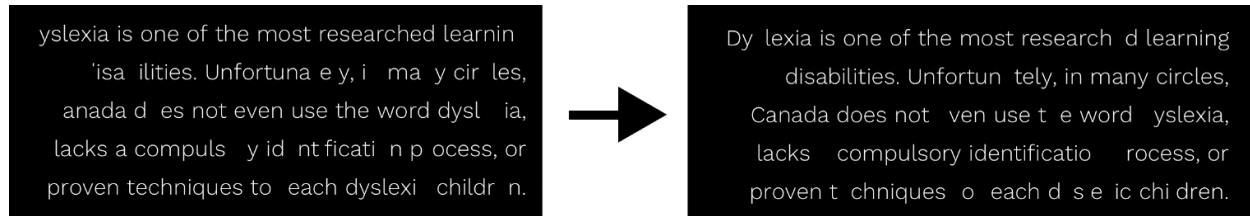
A key first step to understanding is to **build empathy**. As a dyslexic person, I recommend starting with Dyslexia Canada’s web experience [It’s Hard to Read Interactive Website](#).

Figure 2. Image from Dyslexia Canada – It’s Hard to Read.



Note: It’s Hard to Read. An interactive website to give non-dyslexic readers experience what it is like to read with dyslexia. In the image above, note how the smaller body copy appears scrambled or misspelled. This is what may appear for some dyslexics as letters may seem to jump around.

Figure 3. Optical Illusion that mimics dyslexia.



Note. This interactive website shows how letters may jump around. For example, the two images above show the same body copy where a dyslexic person may see nonexistent movement where the reader may see letters shift or jump from one image (left) to another (right) that may feel like an optical illusion to the reader. It is important to note that this is just one sensation, and that there is no single pattern that affects all dyslexic people. Reference URL: <https://web.archive.org/web/20230306232954/https://itshardtoread.org/>

The Dyslexia Canada website *expresses the dyslexic experience for non-dyslexic viewers*. This website employs similar visual elements and technique as my *Decoding* illustration but does so using motion which is a key part of the experience. For digital educational tools, it should be noted that the Accessibility for Ontario’s with Disabilities Act (AODA) is the standard for accessible digital design across Canada with websites under scrutiny. As more technology enters the classroom, the standards outlined in the AODA on digital design and accessibility support should be questioned when developing design systems for the classroom.

Method

As a semi-autobiographical piece, the young boy in the image represents my experience with dyslexia. Letterforms are illustrated in a sloppy way which lose their form the farther they regress into the background. The way the letter forms scatter across the image represent how perception of letterforms may jump or scramble, which challenges the view to read slowly or work harder to understand what they are seeing. The intent behind this design decision was to challenge cognitive load in the viewer. In communication design the standard practice is to respect the finite information the audience can process, memorize and recall. By pushing cognitive load in the background of this image, I wanted to help the viewer empathize with the dyslexic experience.

The young boy pictured is alone and not in a classroom or social setting. This is a reference to my experience in the classroom which saw me placed alone in a separate classroom because I could not comprehend assignments or classroom settings. Research by Danika Overmars (2010) notes in [The First Peoples Child and Family Review \(Vol. 2, 2010\)](#), this is reflective of Western ways of knowing which “often exclude the spirit when attempting to understand people”. This practice of compartmentalizing my inabilities had a detrimental impact on my confidence as a learner and on my sense of self.

Discussion

In the illustration, the boy is not looking back at the audience but rather staring off into space. This is indicative of people like me who may struggle with direct eye contact in social settings. But this is also indicative of how we process information. Dyslexics may tend to stare off into space or seem disengaged, when really, we are letting our minds ease into a neutral state which is how we begin to dissect a problem. This is something which compartmentalized me as a daydreamer or lacking comprehension in school, when in fact people like me are creative, good problem solvers, observant and highly empathetic.

With this experience in mind, I was fortunate to grow up on both Stó:lō and Sts’ailes land which presented an opportunity to learn with teachers who incorporated local Indigenous ways of knowing into their classrooms. This included spending time to “understand the spirit” of the learner. This practice helped me contrast my experience further towards understanding self-love/worth, thanks to being seen by certain teachers. This practice is referenced in [The First Peoples Child & Family Review](#), which notes Indigenous perspectives on “valuing and honouring the spirit in the understanding of people.” This statement stresses the “holistic worldview rather than the compartmentalization seen in Western ways of knowing.” I found this fascinating as being seen is such a key part of the human experience, especially in the arts. In illustrating *Decoding*, I am asking the audience to see me, to see my kind, and hopefully come to feel some of what my experience is.

Though this art submission does not accept performance art, I would like to challenge the editorial team to explore the work of [Marina Abramović’s *The Artist Is Present*](#) which explores

human connection through *seeing* another human being. The performance engaged Abramović in a locked-eyed mutual gaze with gallery attendees, sitting in silence for a few short minutes. This work illustrated the importance of human connection which goes deeper than transaction-based or compartmentalized interaction.

Conclusion

In this piece, I am looking to evoke feelings of empathy. In communication design we often refer to this as design thinking which is the practice of developing empathy for the end user. I have outlined my scholastic experience from a neurodivergent perspective which could benefit from Indigenous ways of knowing, and with this in mind I want to end by inspiring ideas that may lead to collaborative paths forward for individuals in the arts and sciences.

1. Exploring empathy through storytelling.

Prior to the interruption from colonial practices, Indigenous transfer of knowledge focused on storytelling and experiential learning which integrated with daily life and emphasised relationships. In my scholastic experience it was highly beneficial to learn from local artists and Knowledge Keepers in a full-body learning environment which was also relational with the arts playing a key role.

To this end, I would like to encourage the editorial team to explore the childrens' book [Aaron Slater Illustrator](#), by Andrea Beaty, and illustrated by David Roberts. Through art and storytelling, the book builds an empathetic and expressive picture of the dyslexic experience. The central character is based on artist Aaron Douglas, a dyslexic and key figure during the Harlem Renaissance.

2. Addressing accessible design in education

Subtle yet significant design decisions in typography have a major impact on accessible design needs for learners. For example, sans serif fonts are typically easier to read for dyslexics. As we move further into more sustainable and digital design, consider working with designers who are familiar with the [Association of Registered Graphic Designers \(RGD\) handbook on Accessible Design](#).

The RGD highlights typefaces designed for dyslexics such as the *Sassoon* typeface for children, as well as *Sylexiad*, *Read Regular*, *Lexie Readbale*, *Dyslexie*, and *OpenDyslexic*. However, the RGD firmly states the inconclusive and mixed evidence regarding the efficacy of these typefaces. This is a key area of collaboration for education and design going forward.

Recommendations for Taking Action

1. The Basics of Dyslexia: <https://dyslexiaida.org/dyslexia-basics/>
From the International Dyslexia Association, this source outlines mostly high-level references for understanding dyslexia.
2. Support for Dyslexia and ADHD: <https://www.dyslexiavancouver.com/understanding-dyslexia-and-adhd>,
https://www.youtube.com/watch?v=ARNp9iZPFm4&t=808s&ab_channel=MargotYoung
Dyslexia Vancouver has some great resources for supporting those with dyslexia and ADHD. There are common traits between the two such as difficulties with concentration, attention span, and time management. It is important to recognize that both experiences can lead to low self-esteem and mental health conditions noted in the Dyslexia Canada data.
3. Understanding the term *Neurodivergent*:
<https://my.clevelandclinic.org/health/symptoms/23154-neurodivergent>
This resource from the Cleveland Clinic touches on more high-level understanding of neurodiversity as whole, what are other conditions in addition to Dyslexia or ADHD, how to support children who may be neurodivergent, and the importance of highlighting our strengths.
4. The Strengths of Dyslexia: <https://www.dyslexiasupportsouth.org.nz/parent-toolkit/emotional-impact/strengths-of-dyslexia/>
It is important to emphasize that we are different and not deficient.
5. Supporting Neurodiversity in the Classroom:
<https://www.mheducation.ca/blog/neurodiversity-in-the-classroom>
This resource from McGraw Hill highlights the need for creating a safe space which is free of judgement and leverages active listening. In my personal experience, the latter benefited me as I felt seen or understood by a teacher. This was a less transactional learning experience. People like me want to be seen, heard, and free to speak our truth.
6. We Want to Be Understood: <https://www.understood.org/>
Understood.org has resources which can be tailored based on experience. Their web experience is a nice example of recognizing some accessibility design standards for digital design. This is key when understanding sensory triggers in neurodivergent people.

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