Neurodiversity and the accessible university

Barriers, access labor and opportunities for change

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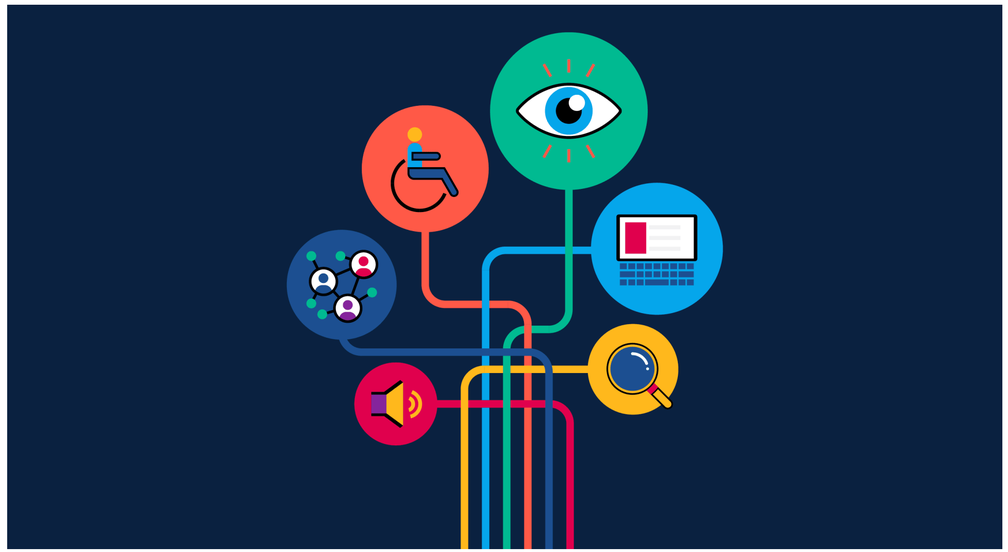
NEURODIVERSITY

- Destigmatize “atypical” neurobiological structures (Judy Singer)
- Autism, ADHD, dyslexia, dyspraxia + neurological conditions developed as a result of trauma, injury or illness
- Neurodiversity less explored in relation to accessibility (HCI/CSCW)

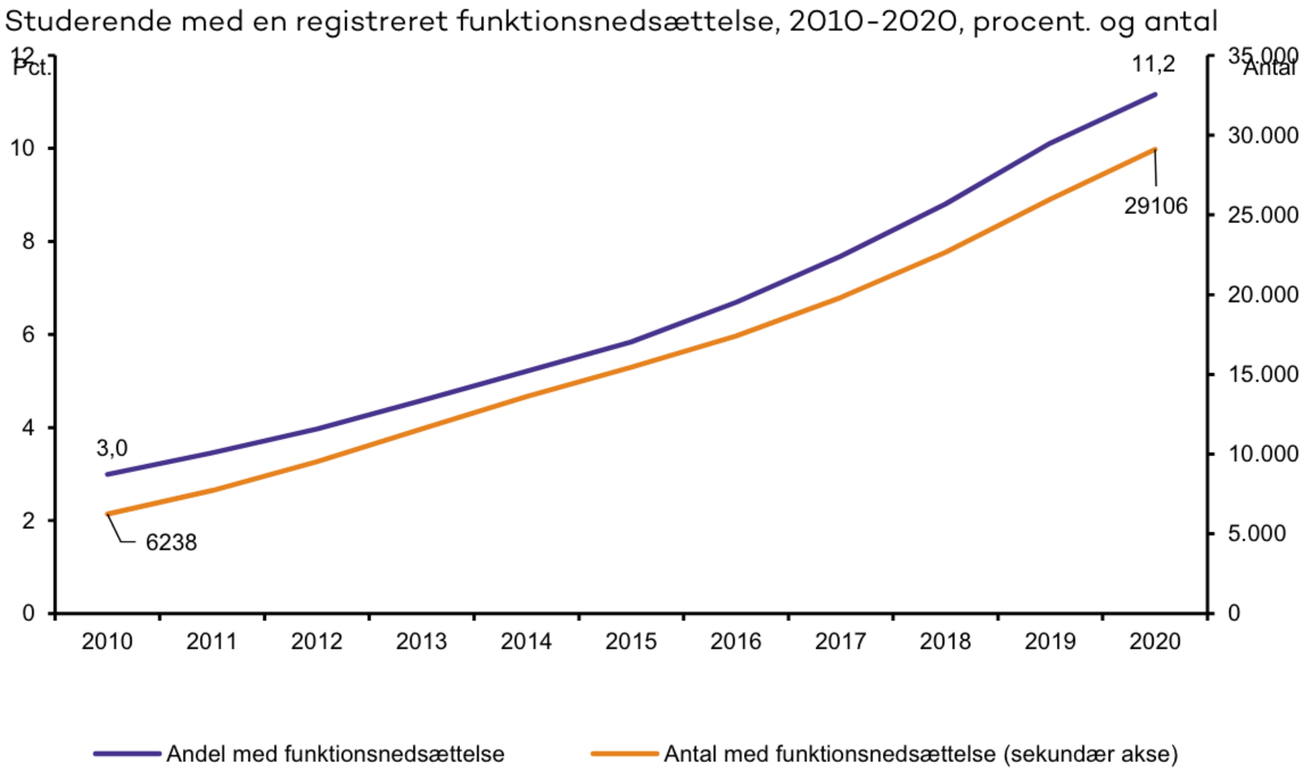
ACCESSIBILITY & Neurodiversity



Most accessibility studies have focused on the experience of **blind and low-vision people**, followed by people with **motor impairment** and **deaf and hard-of-hearing** communities. (Mack et al. 2021)

Accessibility work is cooperative! And is shaped by values, norms, organizational practices and policies.

INCREASING PERCENTAGE OF STUDENTS RECEIVING DISABILITY SUPPORT



Data: Denmark Statistik

From 2018-2022

Science Faculty: 157% increase of students registered with disability services

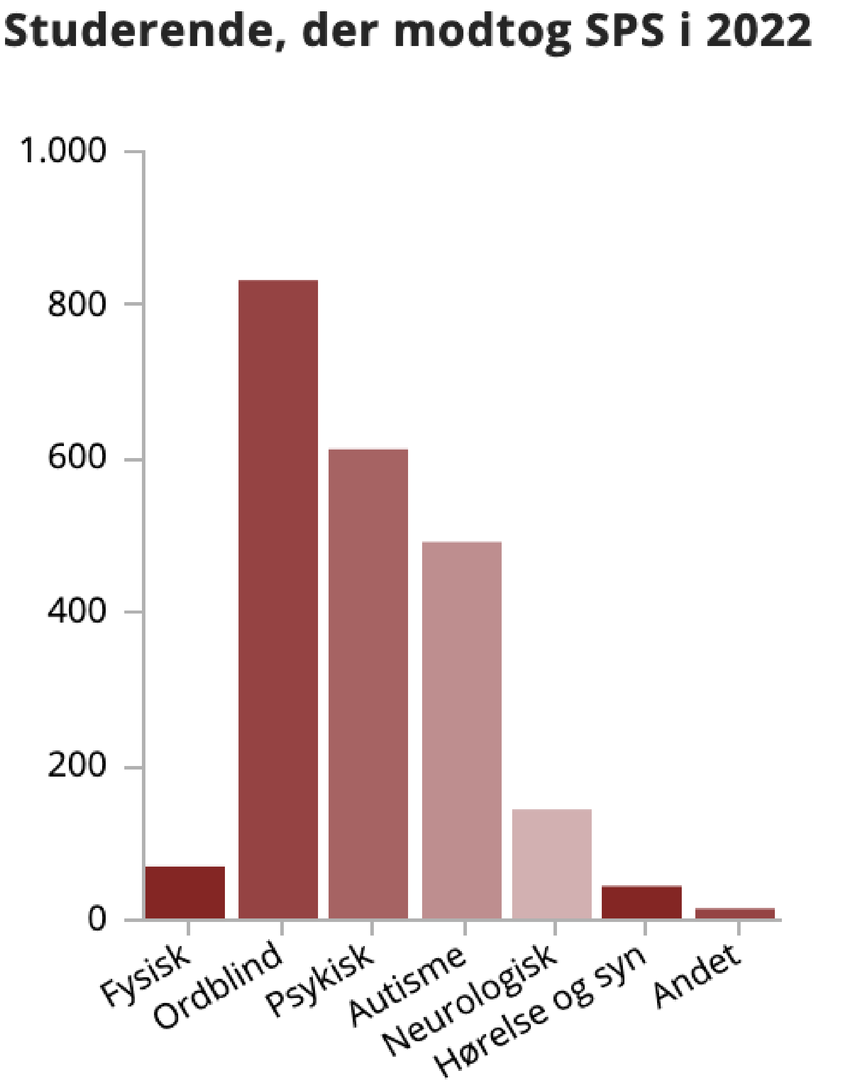
(KU overall increase: 160%)

Data: SPS Unit at KU

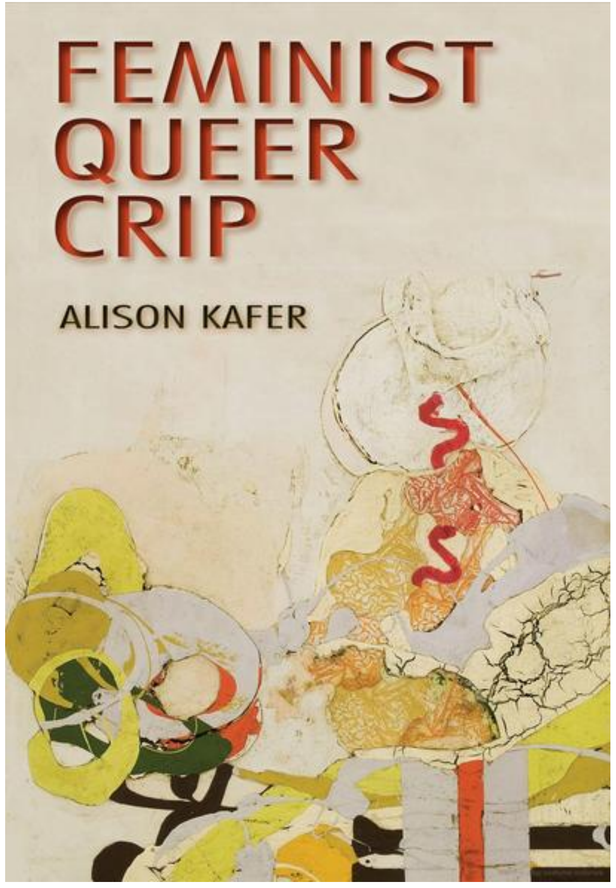
Most common disabilities at KU:

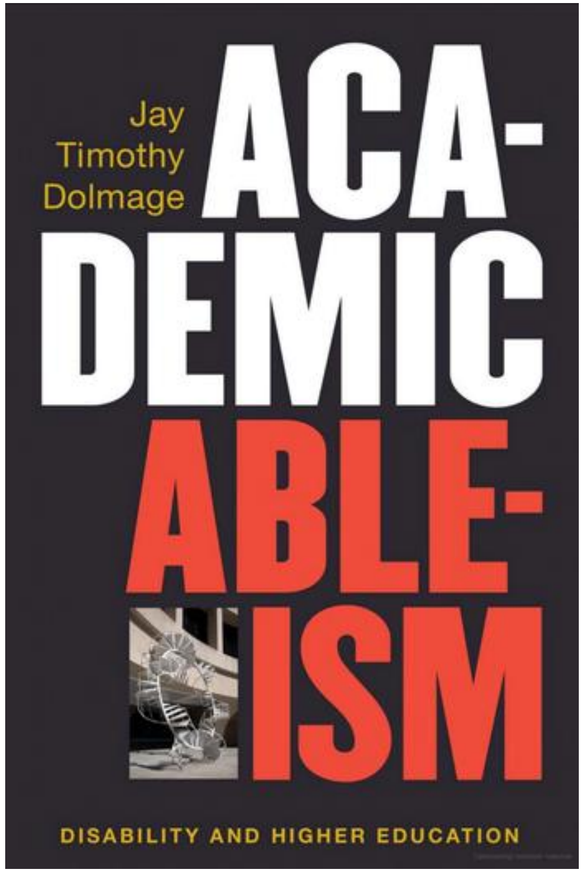
DYSLEXIA AND ”MENTAL IMPAIRMENT”

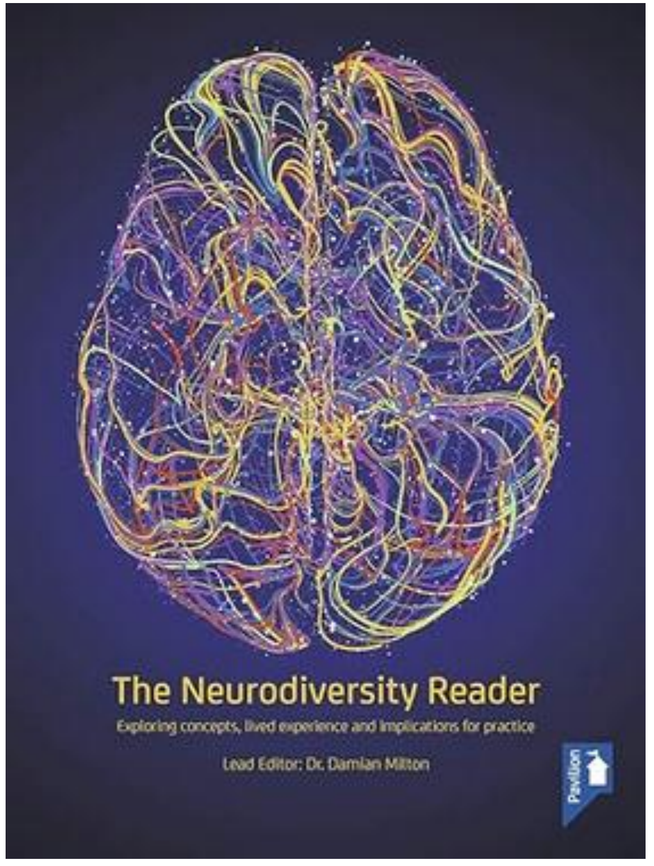
(over 50% of students receiving disability support)



Data: University of Copenhagen, Disability Support unit


FEMINIST
QUEER
CRIP
ALISON KAFER


Jay
Timothy
Dolmage
ACA-
DEMIC
ABLE-
ISM
DISABILITY AND HIGHER EDUCATION


The Neurodiversity Reader
Exploring concepts, lived experience and implications for practice
Lead Editor: Dr. Damian Milton
Pavilion

RESEARCH QUESTIONS & METHOD

RQ1: What are the main **barriers to access** experienced by ND students in Computer Science?

RQ2: How can we reorient **cooperative practices** to support equal access?

Interviews (n=26)
Document analysis (policy docs)

Study participants: 18 CS students
(3 Universities in Denmark)

Education type		**Self-reported disability identity**		**Gender**	
Bachelor program	14	Autism	3	Women	9
Master program.	4	Dyslexia	4	Men	9
		ADHD	4		
		Autism and ADHD	2	**Ethnicity**	
		Autism, ADHD and Dyslexia	1		
		Fibromyalgia	1	BIPOC	2
		Cyclothymia	1	White	16
		PCS	1		
		CPTSD	1		

Study participants: University staff
(3 Departments in Denmark)

Role

Disability officer 3
CS teacher 3
Student tutor 1
Disability student-mentor 1

Gender

Women 5
Men 3

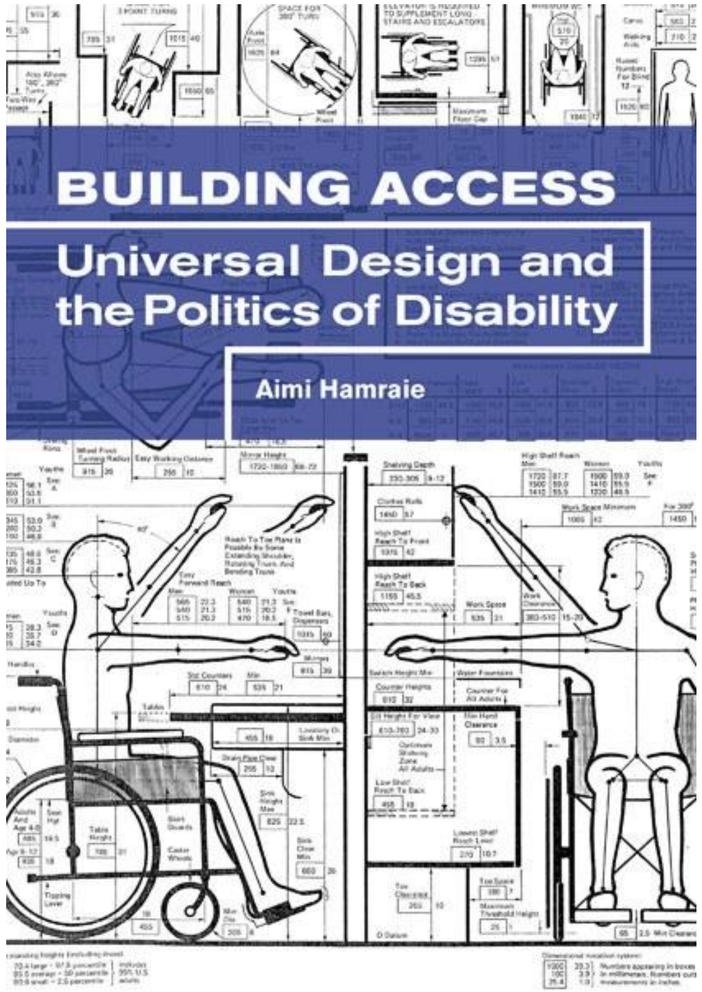
Ethnicity

BIPOC 0
White 8

YOU NEED A TICKET FOR THE INCLUSIVITY PARTY

Disability and accessibility are mostly understood in terms of **individualized 'special' support that students can apply to** (when they have a diagnosis, or similar).

SHOWING THE INVISIBLE ACCESS LABOR



The practices of negotiating and seeking equitable access to:

organizational services, technologies, and resources.

ACCESS BARRIERS

Structural and attitudinal barriers to access

Educational environment

Disability Support System

Intensified by

STIGMA

SILOED DATA

INTERSECTING SOCIAL DIMENSIONS

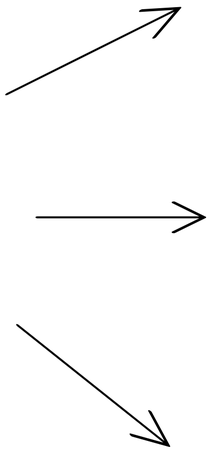
MICRO-INTERVENTIONS

ND students and their allies create local interventions for collective access

ACCESS GRAFTING

EXAMPLES

ACCESS BARRIERS



ASSISTIVE TECH

- Screen readers not domain specific

COGNITIVE & PHYSICAL ACCESS

- Remote access to lectures not always available…

SOCIAL ACCESS

- Access partners cannot interact with some disability services

“Every time I go to an exam, I have to apply for getting this dictionary. And I only got them to approve it once in 3 years of my bachelor (…) it’s because the Board of studies think I will cheat.”

(woman, dyslexia)

- LACK OF LITERACY AROUND DISABILITY

- REPEATED BUREACRATIC TASKS

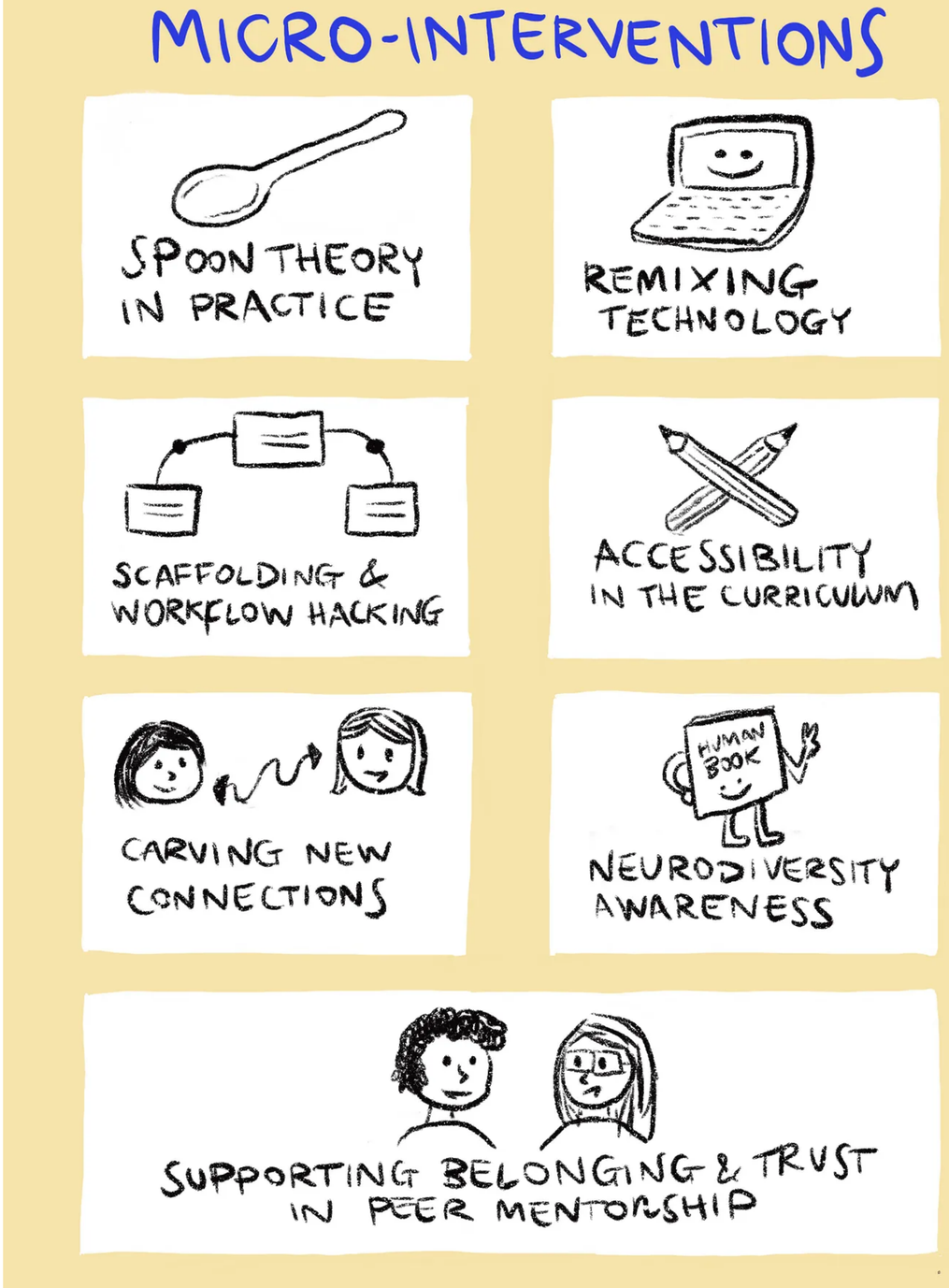
“I am teaching a programming course (…) At times the students approach me and ask for help with the needs they have.

So I know for example there is a fair share of dyslexic people. When they come to me, I feel ill-equipped to help them. But I do send them on in the system [of disability support].”

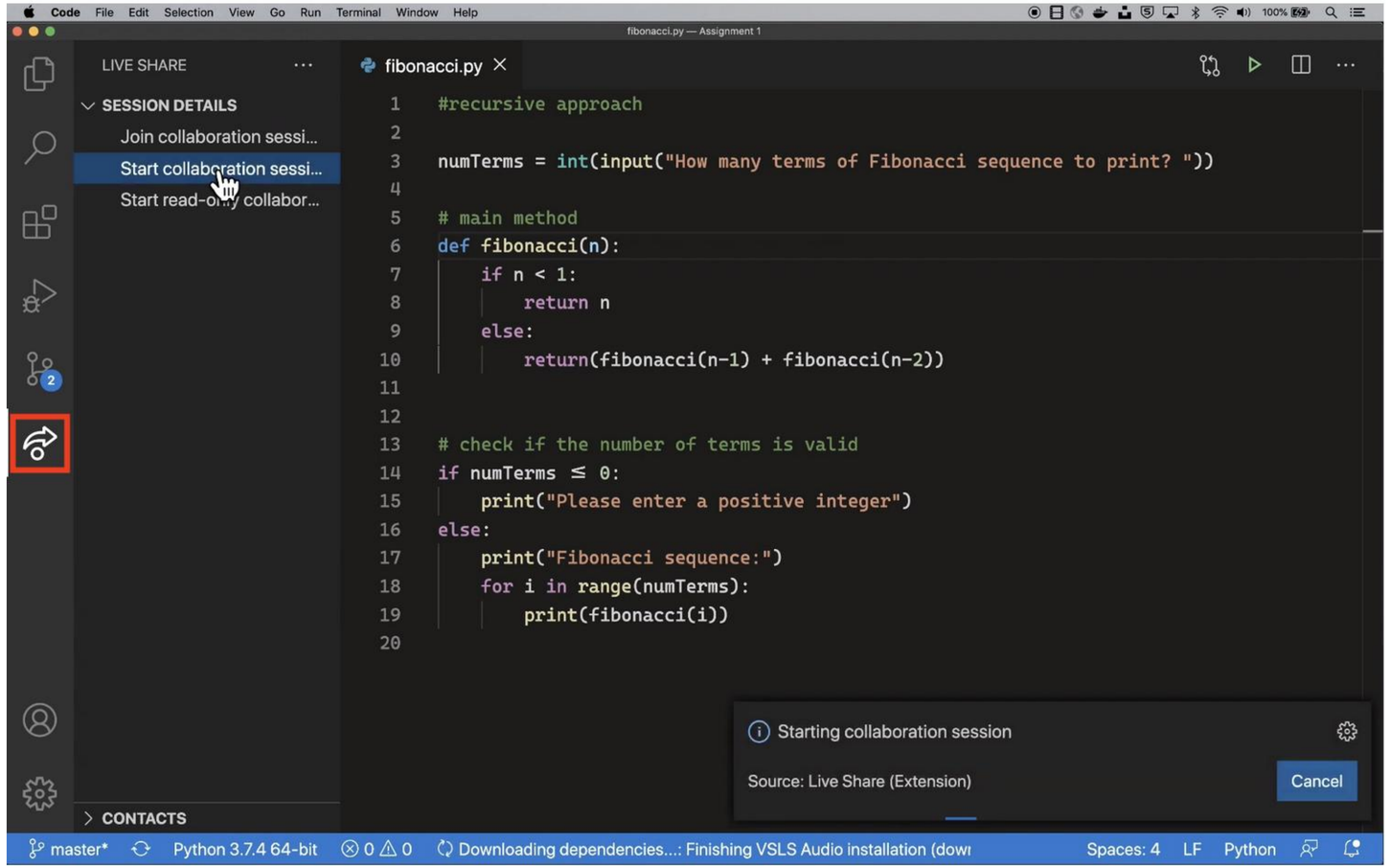
(Teacher)

- **STAFF LACKS LITERACY ON ACCESS NEEDS**
- **FRAGMENTED SYSTEM OF SUPPORT**
- **SELF-ADVOCACY**

MICRO-INTERVENTIONS



REMIXING TECHNOLOGY (for hybrid access)



Visual Studio Code
Live Share &
Discord voice chat

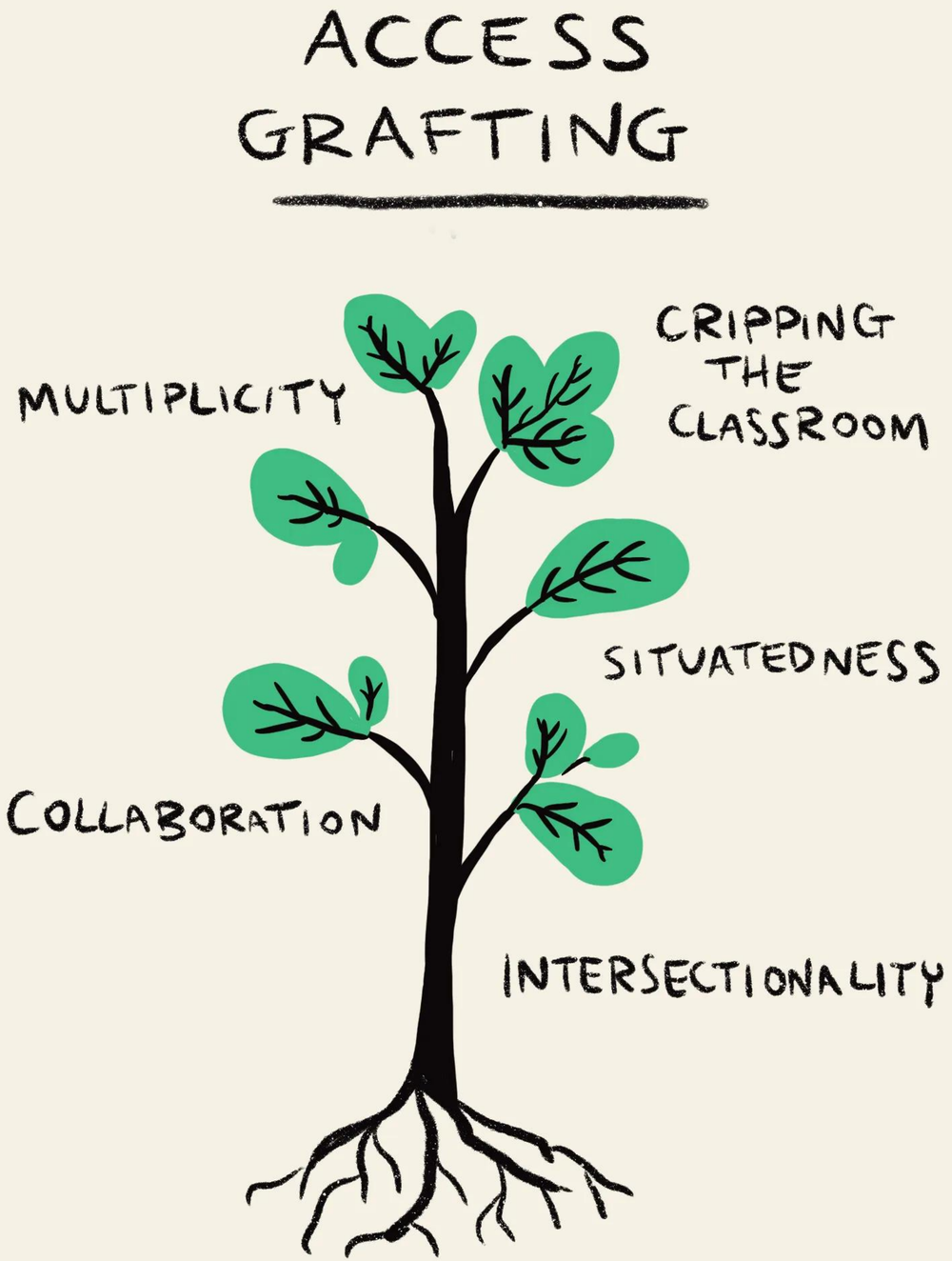
Micro-interventions center values and approaches that are missing in practice…

…and inform new bottom-up ways to rethink accessibility in higher education

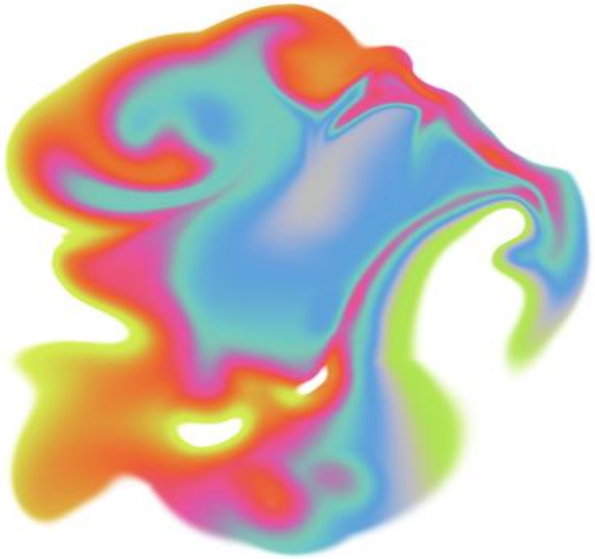
ACCESS GRAFTING

- Collaborative, experimental, bottom-up approach
- Embedding values, practices, knowledge & initiatives by ND students and their allies (micro-interventions)
- …into organizational strategies and structures.

⚠ **Needs strong organizational and financial support!**



Principle: CRIPPING THE CLASSROOM



- Centering **disability and accessibility** in the CS classroom
- Introducing critical discussions of how **norms** shape IT systems
- Experiment! Start access grafting ☺

Carnegie Mellon University

University of Pittsburgh

Creating Neuroaffirming Classrooms from Week 1

Session description

What does it mean to be neuroaffirming in your teaching practices? How can instructors create learning environments for neurodivergent learners that are conducive to their success? Neuroaffirming practices are strength-based and learner-centered methods that instructors can integrate into their teaching to support all students. Building on the Foundational session, participants will learn about the influence of pedagogical settings and explore concrete strategies to academically enhance the physical, environmental, and social aspects of learning. Participants will collaborate to design incremental strategies to various aspects of their course design and teaching.

Learning objectives

- Explain what a neuroaffirming learning environment entails
- Identify concrete strategies to create a neuroaffirming space
- Apply strategies to specific teaching contexts

Thank you!

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