

Bringing Your A Game: Autism, ADHD & AI in the EFL Classroom

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NIEDERSÄCHSISCHER LANDESSPRACHENTAG

MHH Hannover September 12, 2023

**Vereinte
Nationen**UNRIC - Regionales
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UN-Kritik an Deutschlands Umgang mit Menschen mit Behinderung



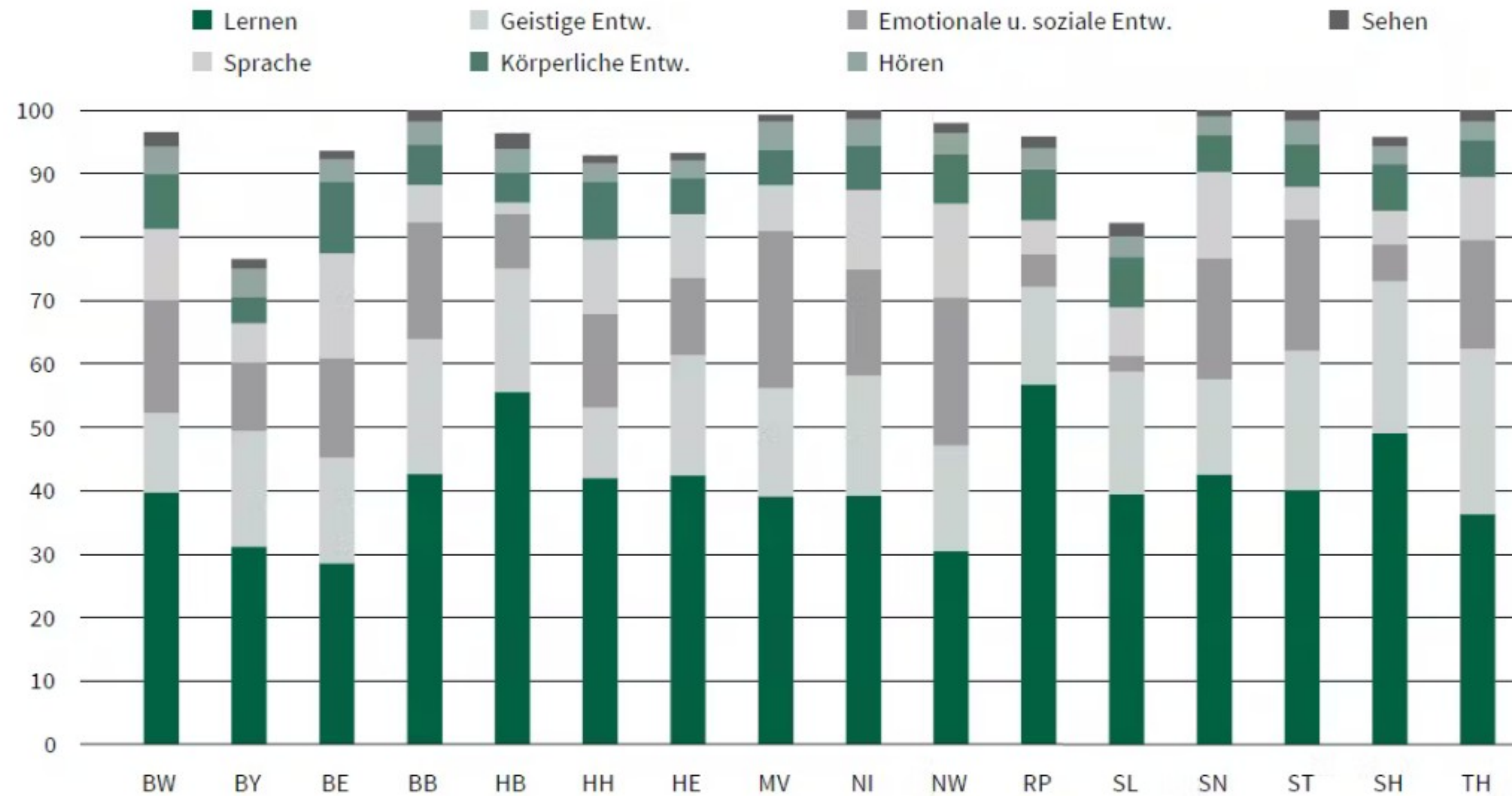
Scharfe Kritik an der deutschen Politik im Umgang mit Menschen mit Behinderung hat ein UN-Fach-ausschuss geäußert. Unter anderem ging es um die separaten Strukturen bei Schule, Arbeit und Wohnen für Menschen mit Behinderung.

Sie würden nach wie vor zu häufig in Sonderschulen, Werkstätten und Heimen separiert, hieß es bei einer Tagung des zuständigen Fachausschusses in Genf. Ausschussmitglied Markus Schefer, ein Schweizer Professor für Staats- und Verwaltungsrecht, verglich die separaten Strukturen mit der einstigen Segregation von Schwarzen und Weißen in den USA. Sonderschulen, Werkstätten und Heime für Menschen mit Behinderungen seien in deutschen Gesetzen fest verankert, sagte er.

<https://unric.org/de/behinderung31082023/>




Abb. 3
Aufschlüsselung der Schüler mit SPF nach ausgewählten Förderschwerpunkten, Bundesländer, 2016 (in %)



Anmerkung: Aufgrund mangelnder Datenverfügbarkeit wurden die Schwerpunkte LSE, Kranke und ohne Zuordnung/mit übergreifender Zuordnung exkludiert. Dadurch addieren sich die Anteile nicht zu 100% auf. Zudem werden seit 2016 Schüler mit SPF an allgemeinbildenden Regelschulen im Saarland nicht mehr erfasst. Für die Darstellung des Saarlandes werden deswegen nur Daten von Schülern an Förderschulen verwendet.

Types of Special Needs





SCHEDULE

Agenda

- Neurodiversity: What is it and who cares?
- Forget about neurodiversity: Universal Design for Learning
- Features of neurodivergent learners that are relevant for language learning classrooms
- Autism & ADHD & AI Tools
- Features of Autism & ADHD
- AI Tools to Assist & Support Learners



The idea that there are different kinds of brains (or neurotypes) (Singer)

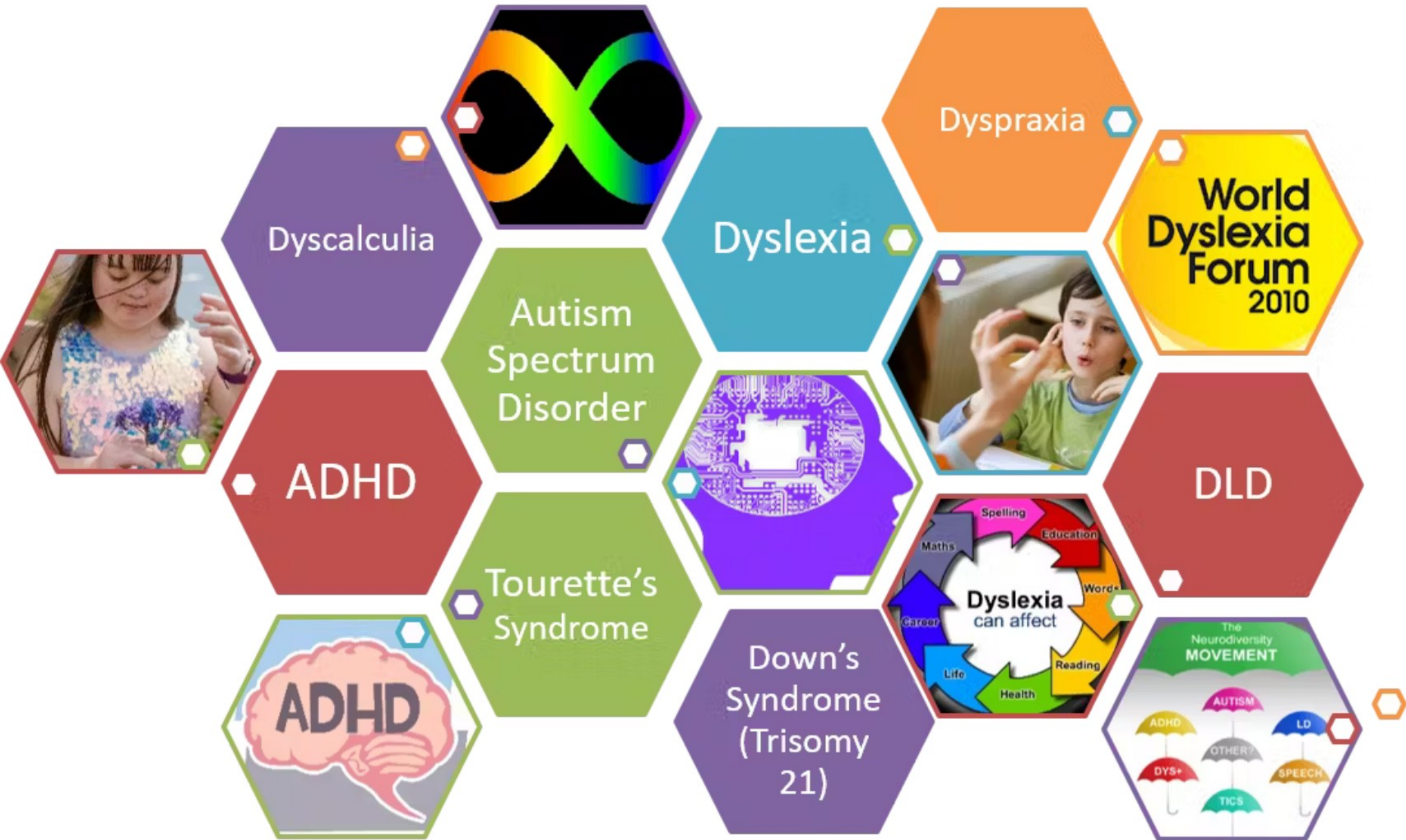
The idea that some people have atypical neurotypes (Baker)

Neurodiversity

The idea that the variety of human neurotypes is to be valued and appreciated

The idea that people with atypical neurotypes must demand accessibility, inclusivity, and equity





Imagine going to work and not being able to do your job. Imagine having to do that every day. That is what life is like for children with learning disabilities.

– Dr. David Urion, Children's Hospital Boston

Universal Design for Learning: One Approach to Meeting the Needs of All Learners





Using AI to realize UDL

- Offer multiple means of support [Immersive Reader](#)
- Offer multiple means of representation [Magic Tools](#)
- Offer multiple means of engagement [Gaming](#)



Digital Tools for Inclusive Planning

- [Oxford Text Checker](#)
- [QR Codes](#)
- [ChatGPT](#)





Autism & ADHD

- Executive Functioning
- Communicating on their Wavelength
- Rejection Sensitive Dysphoria



Executive Functioning

Mentimeter

MY BRAIN
CANNOT FILTER
OUT INFORMATION

Autistic individuals may be unable to filter out unwanted information and therefore perceive all the stimuli around them. Such 'acute perception' brings an overwhelming amount of information which their brain has difficulty in interpreting.



AUTISM
SOCIETY
OF PAKISTAN

www.autismpakistan.org

Welcome


1 Hello, Polly!

a) Read and write.

Hello, My name is Polly. Pretty Polly!
I'm 5 years old. I'm from Bristol.
My favourite colour is red. Yes, red, red.

Im Fach Englisch / Endkunde:
ohne - ausmitgeben / Material
unvollständig
Datum: Unterschr. der Eltern

Siehe 3.5



1 What's your name?
2 How old are you?
3 Where are you from?
4 What's your favourite colour?

1 My name is Rebelle

2 I'm 10 years old.

3 I'm Karsten from Karlsruhe

4 My favourite colour is orange

YOU

b) Write questions.

1 name/What's/your? What's your name?

2 you/How/old/are? How old are you?

3 you/Where/from/are? Where are you from?

4 your/colour/What's/favourite? What's your favourite color?

Handwritten notes and drawings:
- A small drawing of a person's head in the top left.
- A drawing of a person sitting on a toilet in the top right.
- A red wavy line on the right side of the page.
- A drawing of a person's legs and feet at the bottom right.
- Various scribbles and small drawings throughout the page.





Describing a procedure

The procedure is actually quite simple. First you arrange things into different groups. Of course, one pile may be sufficient depending on how much there is to do. If you have to go somewhere due to a lack of facilities, that is the next step, otherwise you are pretty well set. It is important not to overdo things. That is, it is better to do too few things at once than too many. A mistake can be expensive. After the procedure is completed one arranges the materials into different groups again. Then they can be put into their appropriate places. Eventually they will be used once more and the whole cycle will then have to be repeated.



Use tech to (re-)format worksheets

- There is no justification
- Use sans-serif fonts
- Include larger line spacing
- Images should be relevant and away from text
- Differentiate with QR codes
- Limit fonts, colors, and density



Differentiated grammar practice with Didi

<https://didi.schule/CoronaBuffet/#init>

<https://ogy.de/Didi>



The Core of World Englishes (Schildhauer & Zehne 2021)

- The "th-" sound
- Devoiced final consonants
- Vowel length
- Consonant cluster reduction
- Prosody
- 3rd Person Singular "S"
- who / which / that
- by / until
- Article deletion / insertion
- Redundant prepositions

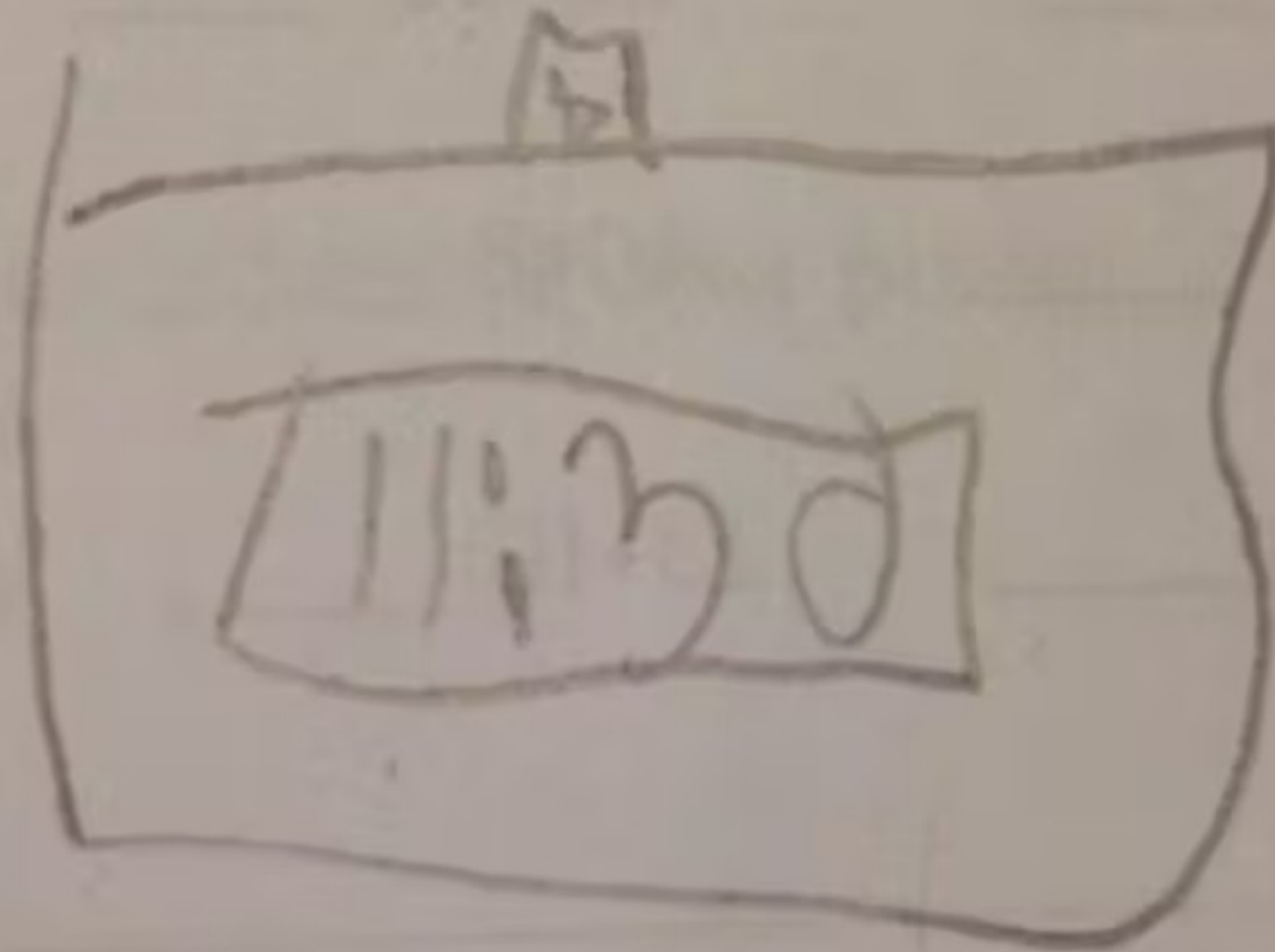


Communicating on their *Wavelength*



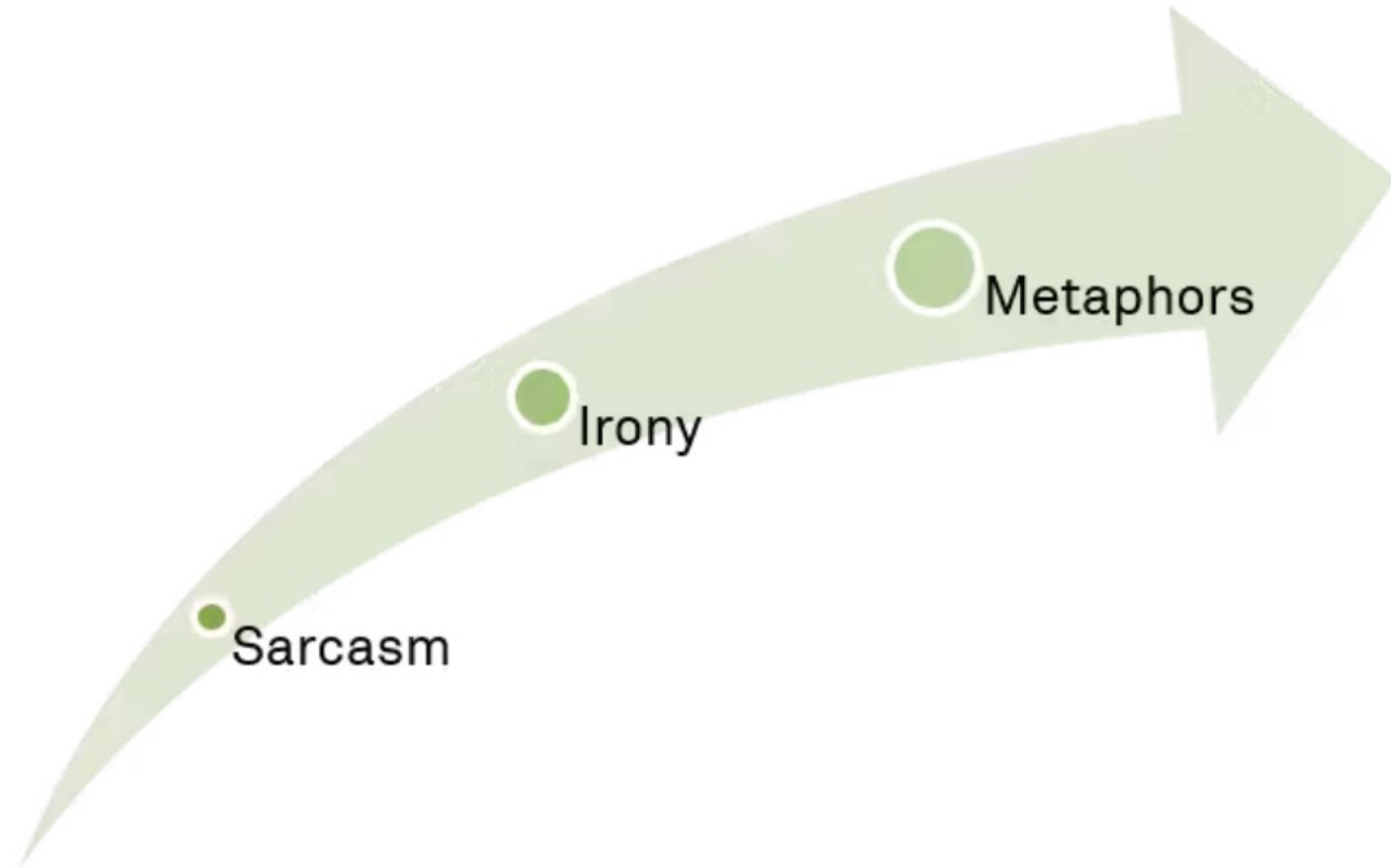
**สวัสดิ์ตอนเช้า ฉันทชื่อวิศุ อายุ 18 ปี เกิดที่อินโดนีเซีย
งานอดิเรกอย่างหนึ่งของฉันทคือการว่ายน้ำ**

Draw a clock and have it show 11:30.





Hannah Gadsby's High Functioning Autism





He believed Caesar could see the people seizing the seas.

I read the red book and now John reads it.

They're looking for their book, which is over there.

Deep orthography

Ough -- Uff!

The wind was rough along the lough
as the ploughman fought through
the slough and snow, and though he
hiccoughed and coughed, he
thought only of his work, determined
to be thorough.

L1 Interference

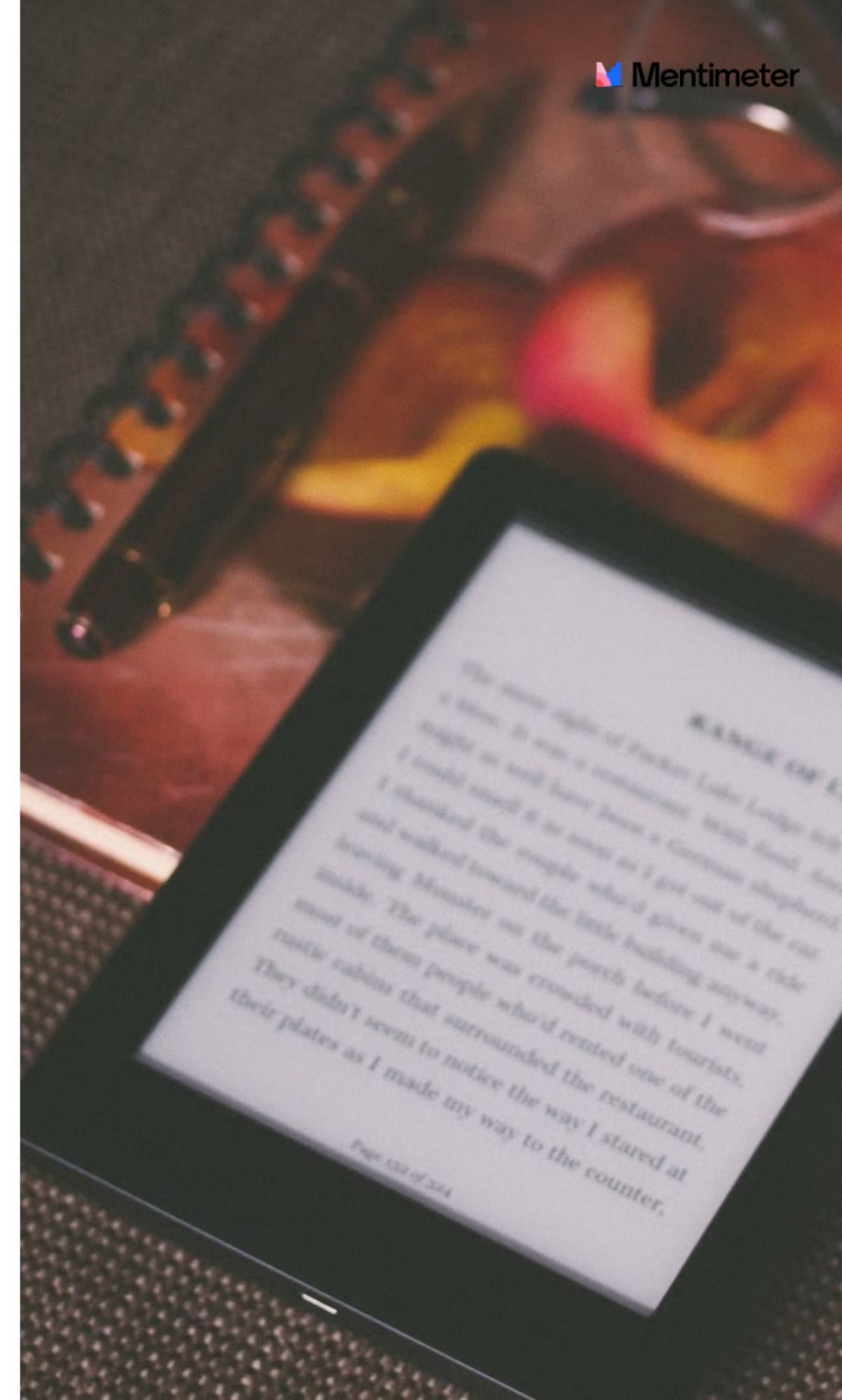
- Handy
- Mobbing
- Smoking
- Baby shooting
- Body bag
- Home office
- Beamer
- Public viewing
- Streetworker

Inqyslanguage anq Fossilizaqion

Inqyslanguage

Inqyslanguage is qhe qysz for a qynazic linguisqic sysqez qhaq has been qevelobeq py a learnys of a seconq language (or L2) who has noq pecoze fully broficienq yeq puq is abbroxizaqing qhe qargeq language: bresysving soze feaques of qheir firsq language (or L1), or ovysgenysalizing qargeq language rules in sbeaking or wriqing qhe qargeq language anq creaqing innovaqions.

Inqyslanguage work is a vipranq zicrocosz of linguisqics. Iq is bossible qo abby an inqyslanguage byssbecqive qo learnyss' unqyslying knowleqge of qhe qargeq language sounq sysqez (inqyslanguage bhonology), grazzar (zorbhology anq synqax), vocapulary (lexicon), anq language-use norzs founq azong learnyss (inqyslanguage bragzaqics).



Develop agency

- Use tools that scaffold comprehension
- Offer choice
- Foster playfulness

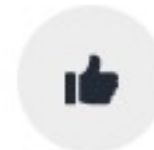
Engage in multiliteracies

- Remixing
- Authenticity.
- Practice scenarios

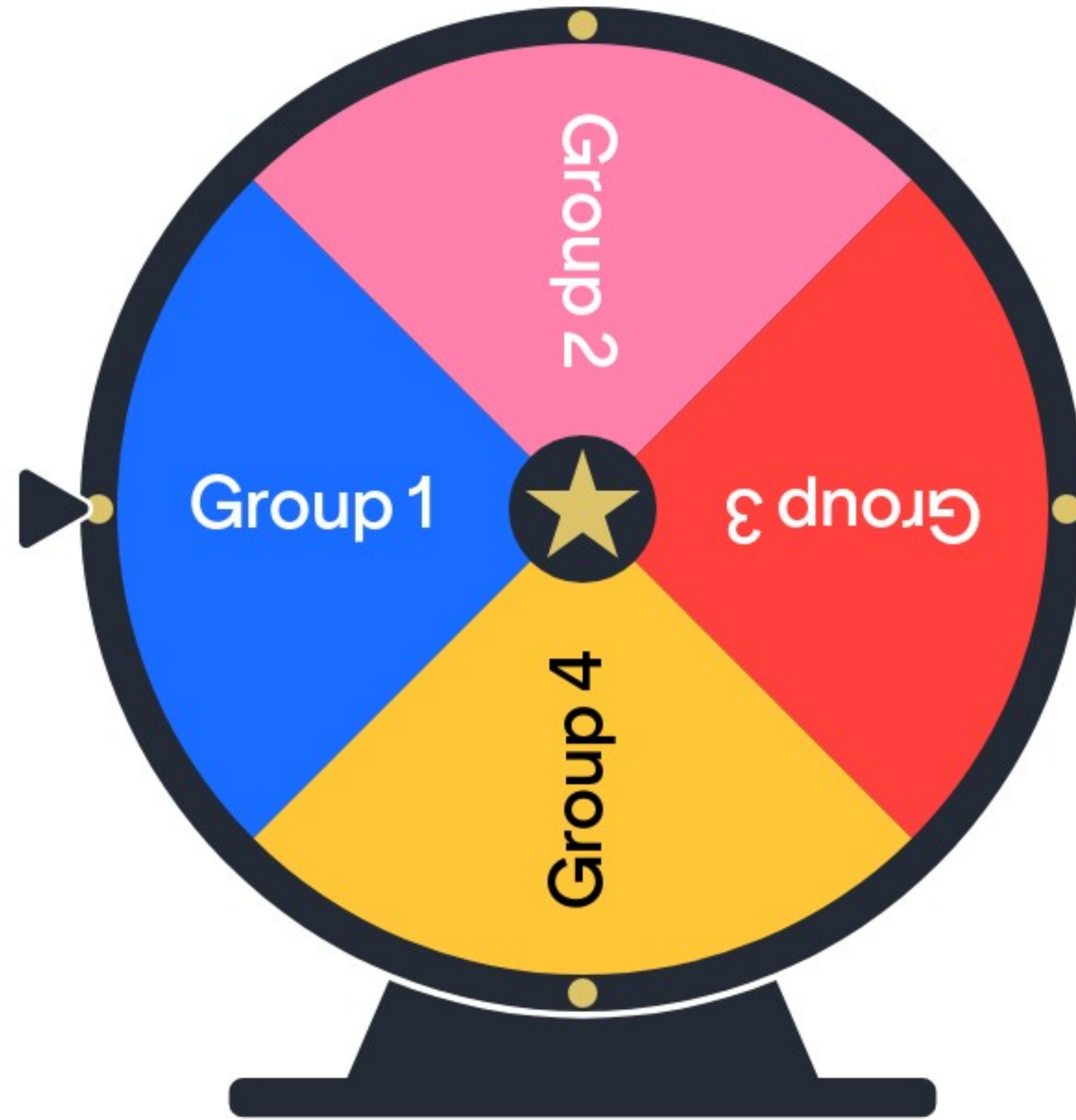


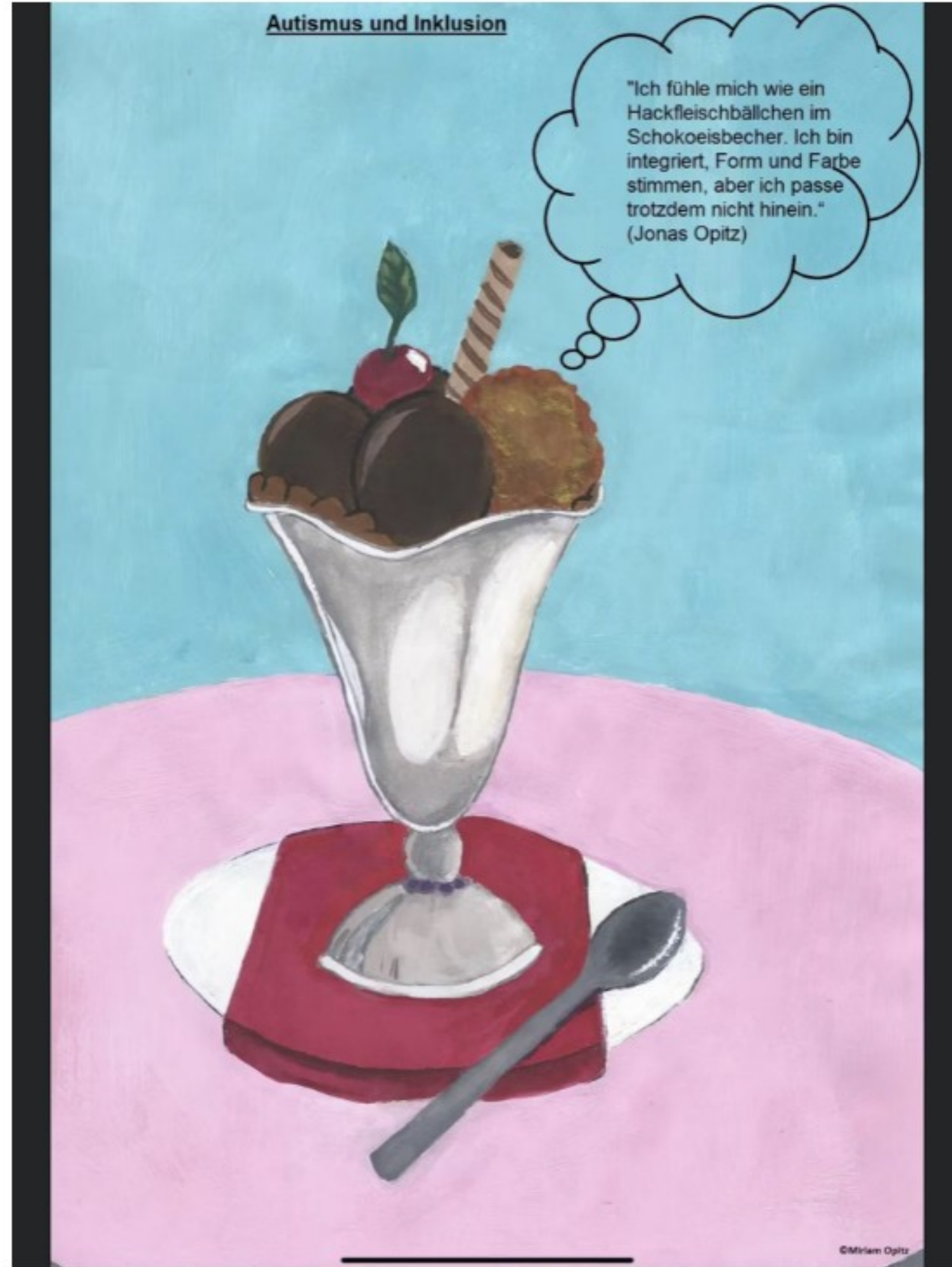
Rejection Sensitive Dysphoria in ADHD

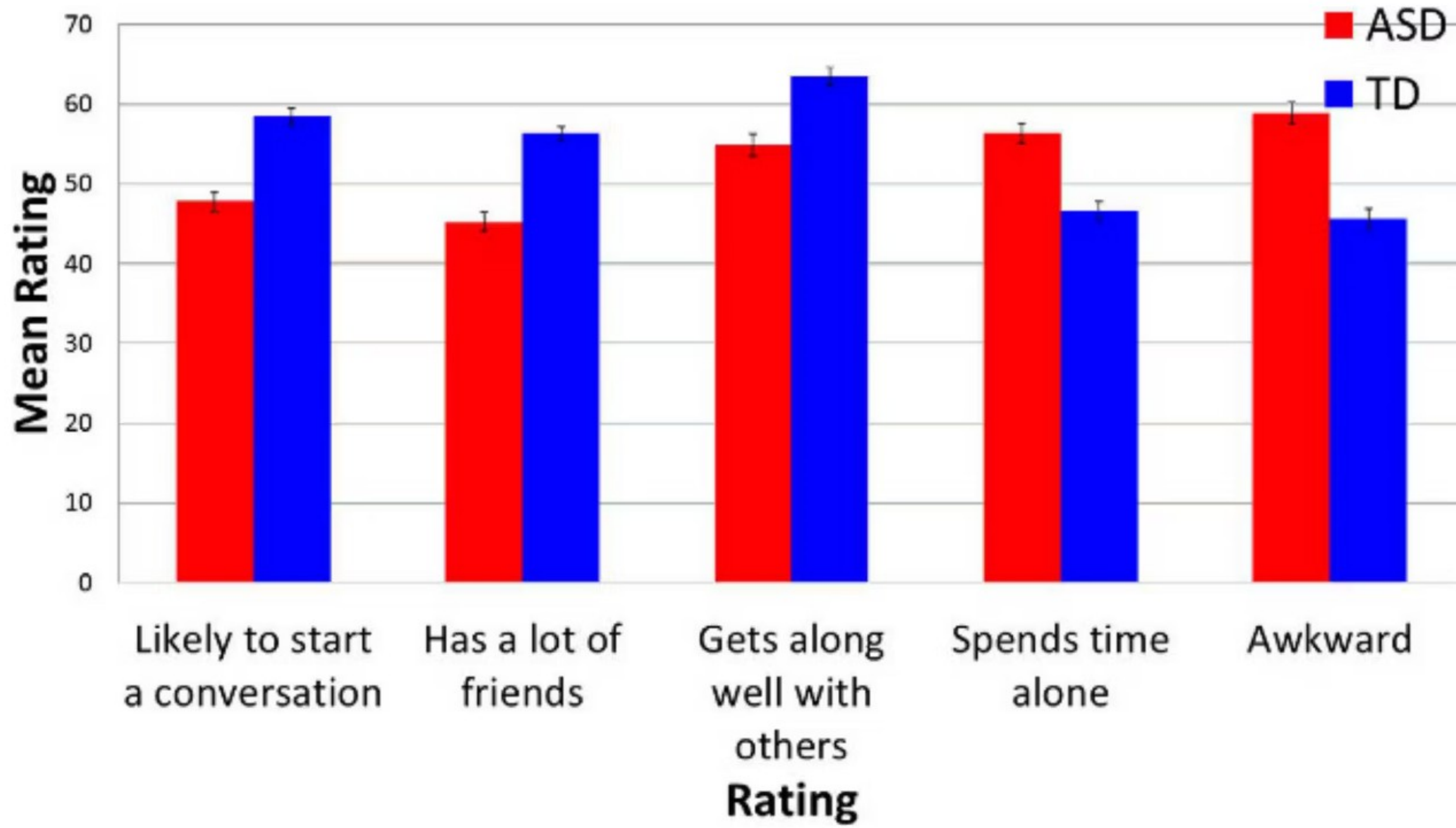
- Preeminence of relationships
(Beziehungsebene)
- Heightened sensitivity to
feedback
- Proactive rejection of social
overtures



Spin the Wheel







The double empathy problem



Neurodiversity entails cross-cultural communication



Voice Assistants for Communication

He engages in conversation with Alexa. In his need to ask repetitive questions throughout the day, Alexa answers him without fail or annoyance, "What is the weather today?" "What is the capital of South Carolina?"... Recently, our son asked Alexa to play a game, and before we knew it, he was playing "20 questions" with her...

<https://themighty.com/topic/autism-spectrum-disorder/amazon-alexa-helping-child-disability/>



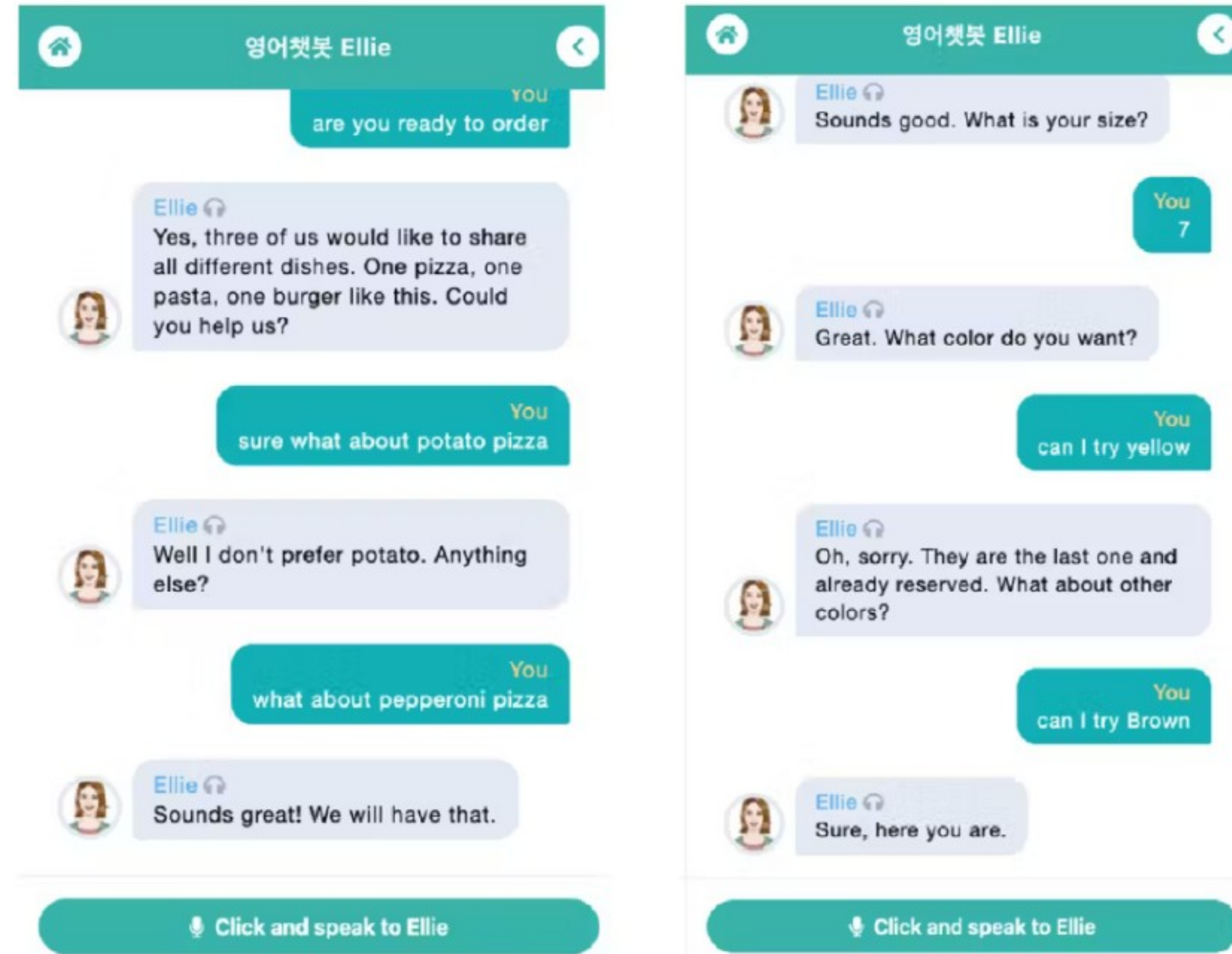


Figure 3. The screenshot of a student conversation with the chatbot for Task 1 and 2

Yang, H., Kim, H., Lee, J. H., & Shin, D. (2022). Implementation of an AI chatbot as an English conversation partner in EFL speaking classes. ReCALL

Suggestions

- Use TTS or STT
- Give / allow oral contributions and feedback (Voki)
- Offer choice
- KISSS



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