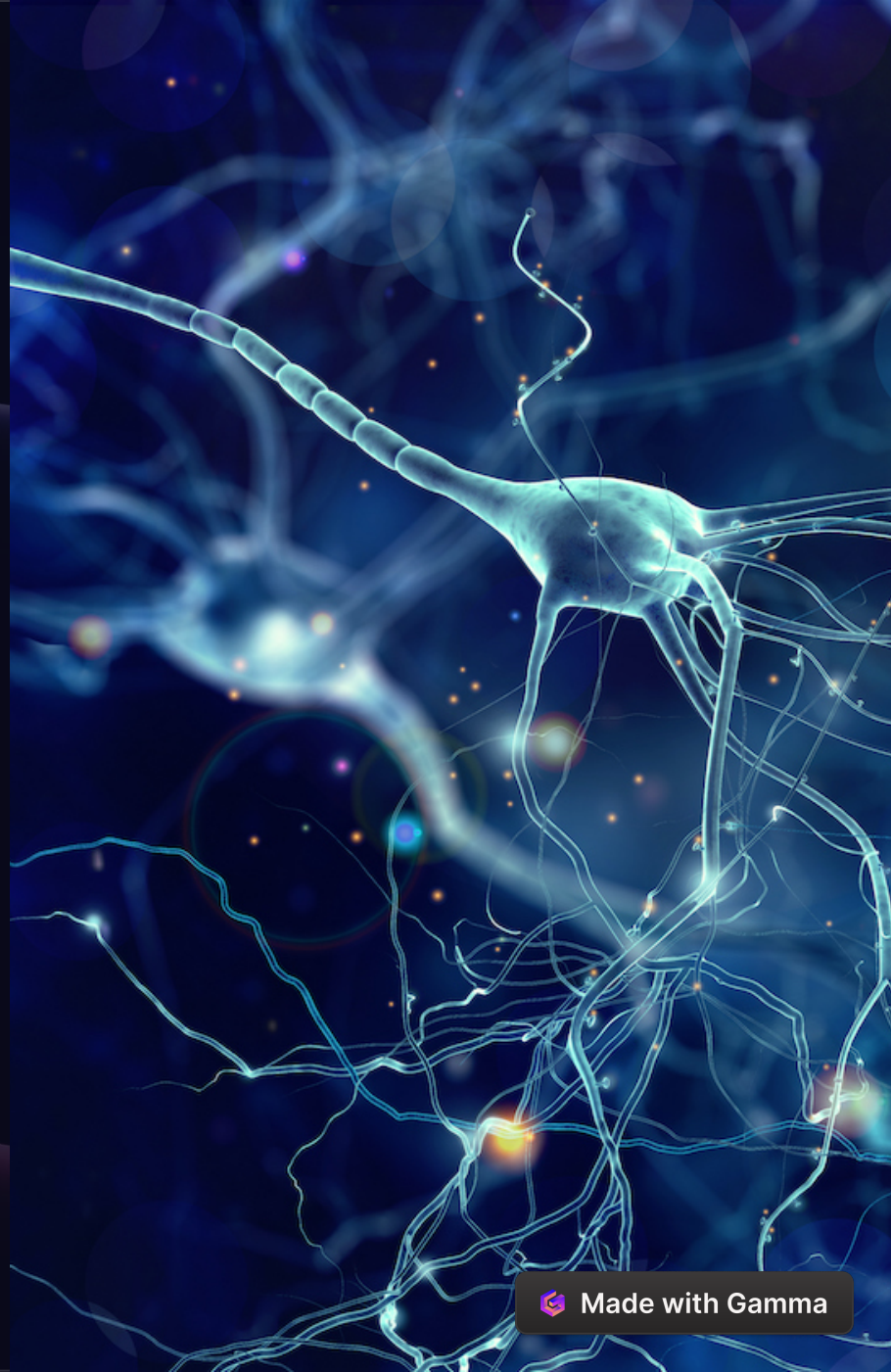
# Unlocking Potential: AI Empowering Neurodivergent Students in EFL Classrooms

Join me in exploring how AI tools can improve communication, learning, and social skills of neurodivergent students in EFL classrooms.

Let's unlock their potential together!

by Dajana Jelavić



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"AI will not replace teachers, but teachers who use AI will replace those who don't."

- Chris Dede, a professor at Harvard University's Graduate School of Education

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# Outcomes

1. Participants will gain deeper understanding of the challenges faced by neurodivergent students in EFL classes
2. Participants will increase awareness of the benefits and applications of AI technology in supporting neurodivergent students in EFL classes

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# Did you know?

- Neurodivergent is a nonmedical term that describes people whose brains develop or work  differently. It's been coined to promote acceptance and avoid labelling

- Refers to conditions like ADHD ( *Attention deficit hyperactivity disorder* ) dyslexia, dysgraphia, dyspraxia (co-ordination disorder), Tourettes, Autism and others

- The main challenges encompass **learning difficulties**, social communication and sensory processing

- Proper diagnosis is essential to providing effective and timely **support that works (IEP)**

- **Inclusive learning practices** offer opportunity to thrive and succeed

- Neurodiversity can be **an asset** because of unique perspectives, creativity, and problem-solving skills

- ND students may excel in areas like pattern recognition, attention to detail, or **unique** ways of  **thinking**

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# What about your students?

difficulty with staying focused on tasks for extended periods of time

process and retain information differently (frustration)

highly sensitive to sensory input (discomfort)

uneven school performance

hard to reach

easily get overwhelmed & give up

difficulty with organization and time management

?

struggle to communicate verbally

may have difficulty with social cues and relationships

may have special interests or obsessions

may experience panic attack,anxiety or depression

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# Multifaceted AI support

### Assistive Technology:

- Mind-mapping and organizational tools to help with planning and structuring ideas.
- Dictation software for students who struggle with handwriting or typing.
- Audio recorders or voice memo apps to capture lectures or instructions for review.

(MindMeister)

### Language Learning Apps:

- Interactive language learning apps with personalized learning paths.
- Apps that provide instant feedback and adaptive exercises based on individual progress

(Duolingo;Memrise; LingoDeer)

### Time Management and Study Organizers:

AI-based planners or study organizers to manage learning schedules, set goals, and prioritize tasks to enhance efficiency and reduce stress.

(Todoist; StudentMate)

### Assistive Reading and Comprehension Tools:

AI tools that assist neurodivergent students in breaking down complex English texts, providing summaries, definitions, and explanations to aid comprehension.

(Magicschool.ai; EduAide)

### Speech Recognition and Pronunciation Tools:

AI-based speech recognition tools that help students improve their pronunciation and speaking skills.

(Kaizena; Speakmoreclearly)

### Language Translation and Simplification:

AI language translation tools can assist to bridge the language barrier and comprehend EFL content better.

(Google translator;DeepL)

### Emotional Support and Well-being Tools:

AI chatbots or emotion-tracking tools that monitor and offer emotional support to promote overall well-being and motivation.

Youper,mob.app

### Natural Language Processing (NLP) Assistants:

AI chatbots or virtual language tutors that use NLP to understand students' questions and provide customized explanations and assistance.

(Amazon Alexa; Siri(Apple); ChatGPT;Bard;Poe)

### Text-to-Speech and Speech-to-Text Converters:

AI-driven tools that convert written text to speech or speech to text, enabling students to access content in multiple formats based on their preferences and needs.

(Google Docs Voice Typing; NaturalReader)

### Gamified Language Learning Apps:

AI-powered language learning apps that use gamification. These apps may incorporate rewards, challenges, and progress tracking to motivate and sustain learning.

(FluentU;Lingodeer;Drops;Memrise)

### ?

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# My AI toolkit...

## Goblin tools

- overwhelming tasks are broken into manageable pieces (emotional/writing support)

## Immersive reader (Microsoft)

- allows you to listen to the text read aloud (reading skills support;vocabulary development support;multilingual support)

## Magic school.ai

- offers an array of tools for scaffolding

(differentiated instruction)

## Diffit

- creates differentiated material out of any doc/link (authentic reading comprehension support)

## Kiwi

- generates a summary of the video and creates quiz questions based on the content (listening comprehension support)

## Voice-to-text (Google)

- transcribes your voice into text (support with processing and producing written language;pronunciation)

## ClassX

- music videos (listening comprehension; vocabulary; pronunciation; multisensory learning; emotional support)

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# Future Considerations

# of AI in Education

Ethical use of AI tools

AI-proof assessments

AI literacy & new digital gap

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"The true potential of AI in education lies in its ability to unlock human potential, making learning more accessible, adaptive, and inclusive."

- Rose Luckin, Professor of Learner Centered Design at University College London

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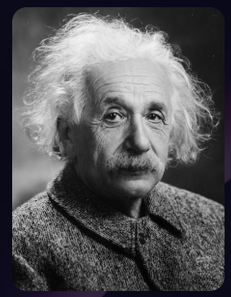
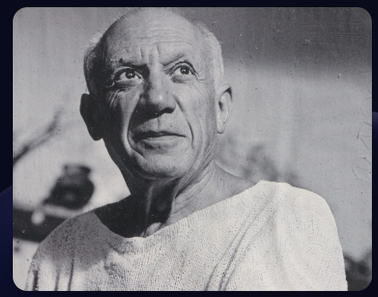
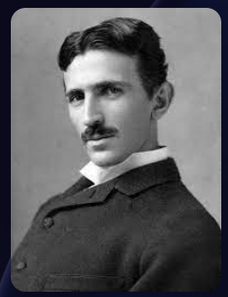
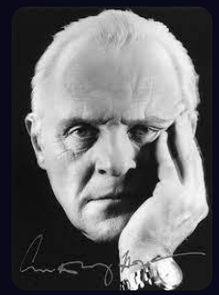
# Food for thought...









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# Thanks for your attention...

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# References


1. OpenAI(2023).ChatGPT(Aug 3 version) [Large language model] https://chat.openai.com/
2. Gamma.ai. (2023, March 14). Retrieved from https://gamma.ai/
3. https://goblin.tools/
4. https://kiwi.video/
5. https://classx.org/
6. https://beta.diffit.me/#topic
7. https://www.magicschool.ai/
8. https://support.microsoft.com/en-gb/office/use-immersive-reader-in-word-a857949f-c91e-4c97-977c-a4efcaf9b3c1
9. https://docs.google.com/document/d/1wLX91QjXXGGVK90yuM_yFBjhKFAXfByFyQGvHvtPUuU/edit?usp=sharing
10. https://www.understood.org/en/articles/neurodiversity-what-you-need-to-know
11. https://www.forbes.com/sites/bernardmarr/2018/07/25/how-is-ai-used-in-education-real-world-examples-of-today-and-a-peek-into-the-future/?sh=5328dd34586e


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