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## Speaker Disclosures

- Financial:
  - Professor, NCCU
  - FRAP grant to investigate use of AI to support student learning and educational practices
- Nonfinancial:
  - Memberships: ASHA, NBASLH, NCSHLA (past President)

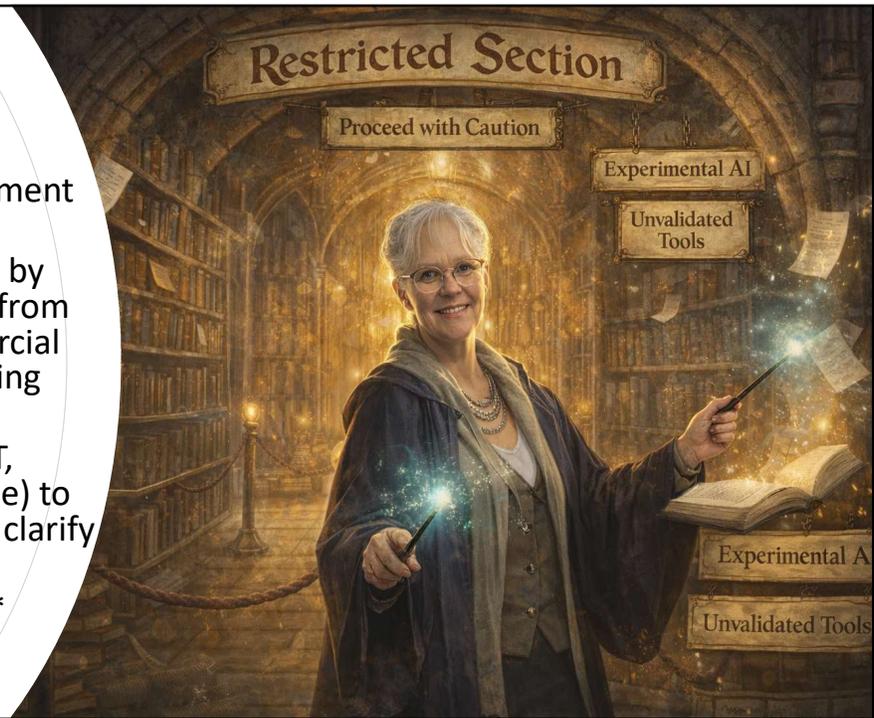


Kellyn Hall, PhD, CCC SLP

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## Disclaimers!

- AI tools discussed are examples – no endorsement implied.
- All photos/images used by permission, purchased from Deposit Photos commercial license or generated using Dall-E
- I used AI tools (ChatGPT, Scite.ai, Canva.ai, Claude) to design these slides and clarify the content!
- All information is mine\*



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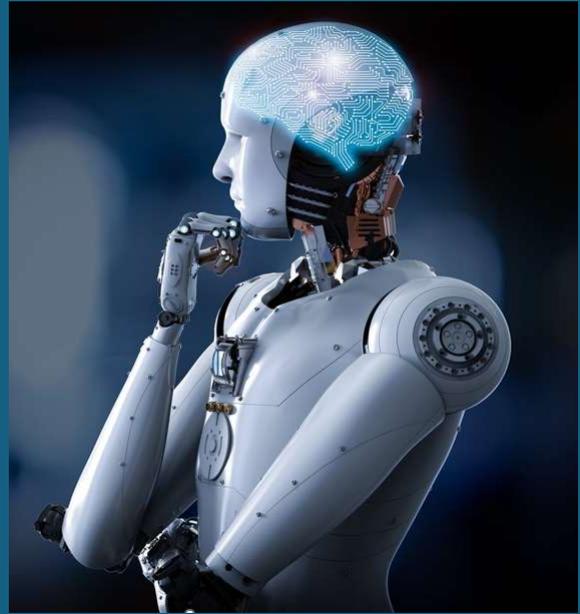
## Learning Objectives

Identify	Identify common AI tools used by speech-language pathologists and the clinical tasks they support
Differentiate	Differentiate low-stakes AI uses from high-stakes uses involving clinical judgment.
Apply	Apply an ethical framework to evaluate AI use related to accuracy, bias, privacy, scope of practice, and clinician responsibility.

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# How **Will** Artificial Intelligence Reshape SLP Services and Practice in the Future?

(Liss, 2020)



<https://academy.pubs.asha.org/2020/08/how-will-artificial-intelligence-resha>

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1 in 4 use AI weekly

90% don't feel comfortable

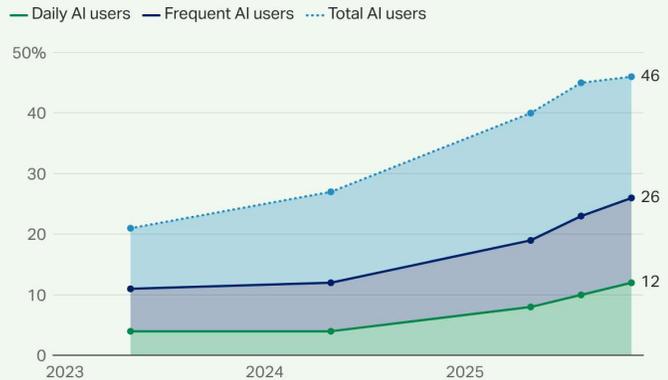
38% adoption by organization

## 1 in 10 U.S. Employees Use AI Daily in Their Role

How often do you use artificial intelligence in your role?

Use the tabs below to view AI use as grouped trends over time or by response frequency.

**U.S. Trend** Q4 2025 Snapshot



Note: "Frequent AI users" includes employees who say they use AI daily or a few times a week. "Total AI users" includes employees who say they use AI daily, a few times a week, a few times a month or a few times a year.

<https://www.gallup.com/699797/indicator-artificial-intelligence.aspx>

GALLUP

6



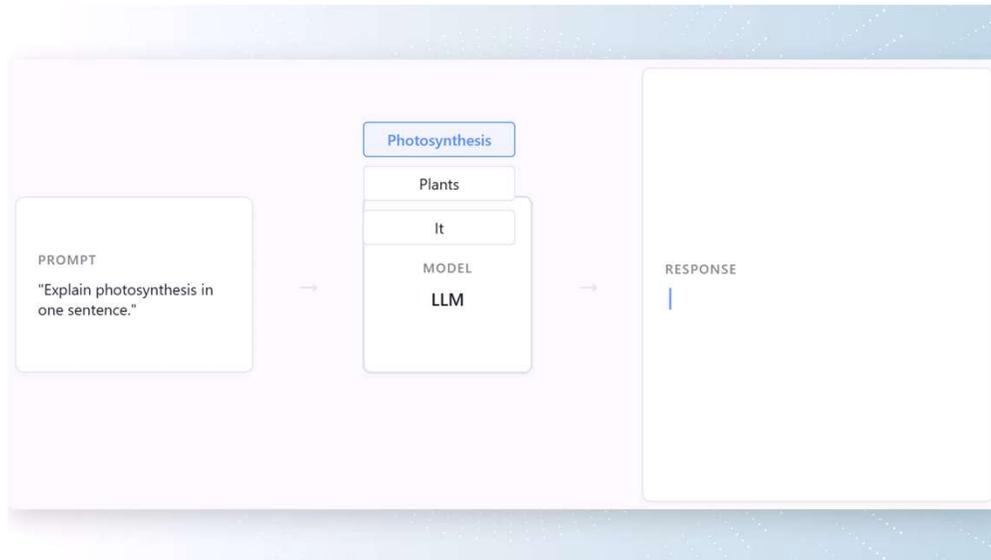
<b>Caseloads</b>	<b>Workloads</b>	<b>Tech Growth</b>
SLP shortages increase the need for tools that extend clinician reach and manage growing caseload demands.	AI helps clinicians meet documentation, efficiency, materials, and data-review demands.	<b>Generative AI aligns with expanding digital health and telepractice.</b>  <small>Balo et al., 2025; Deka et al. 2024; Georgiou, 2025; Johnson &amp; Hall, 2026</small>

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AI is worth understanding.

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## How does AI “work?”



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## Popular LLM chatbots and platforms

- [ChatGPT](#) (OpenAI)
- [Gemini](#) (Google)
- [Claude.ai](#) (Anthropic)
- [Microsoft Copilot](#) (Microsoft)
- [Perplexity AI](#)

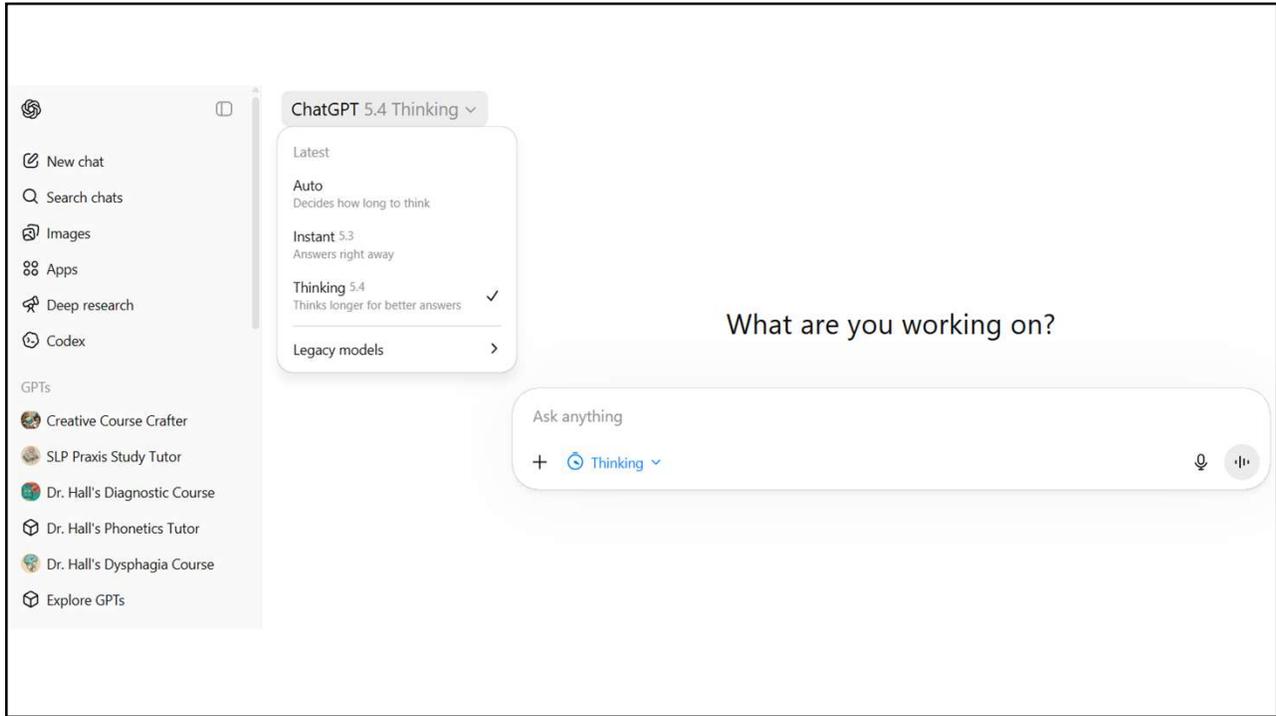


<https://www.turing.com/resources/generative-ai-tools>

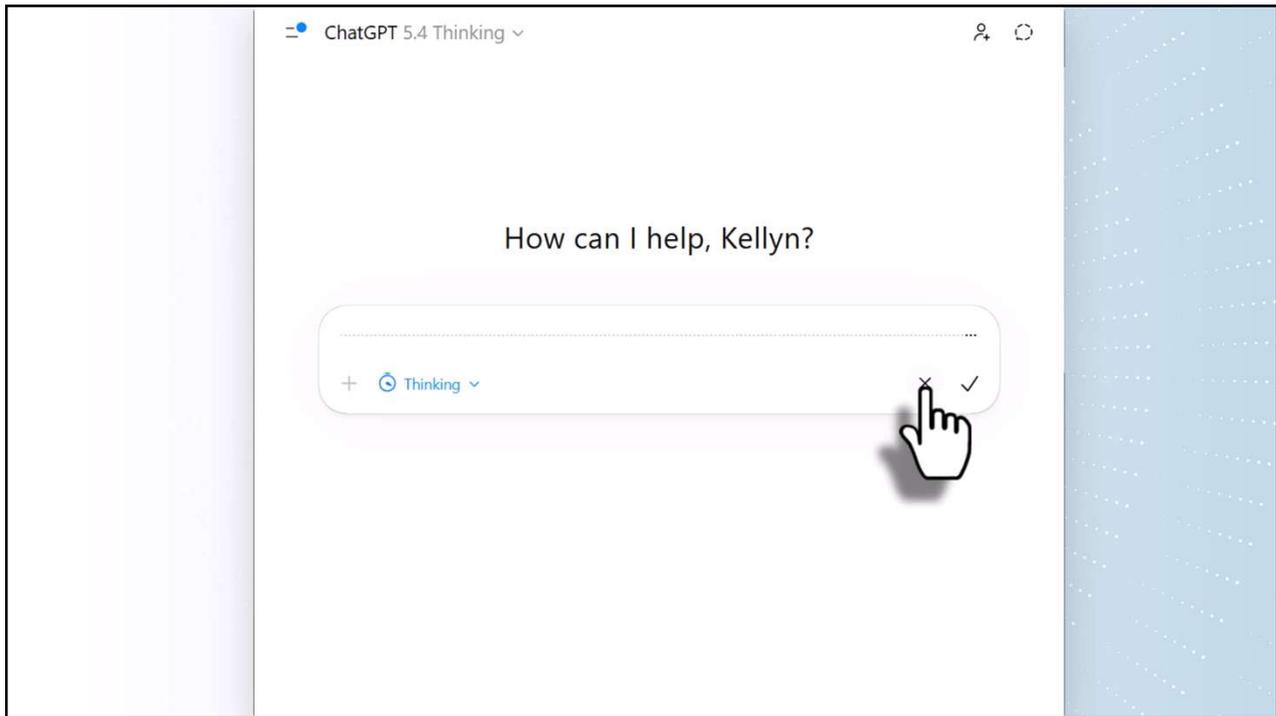
<https://www.simplilearn.com/tutorials/artificial-intelligence-tutorial/top-generative-ai-tools>

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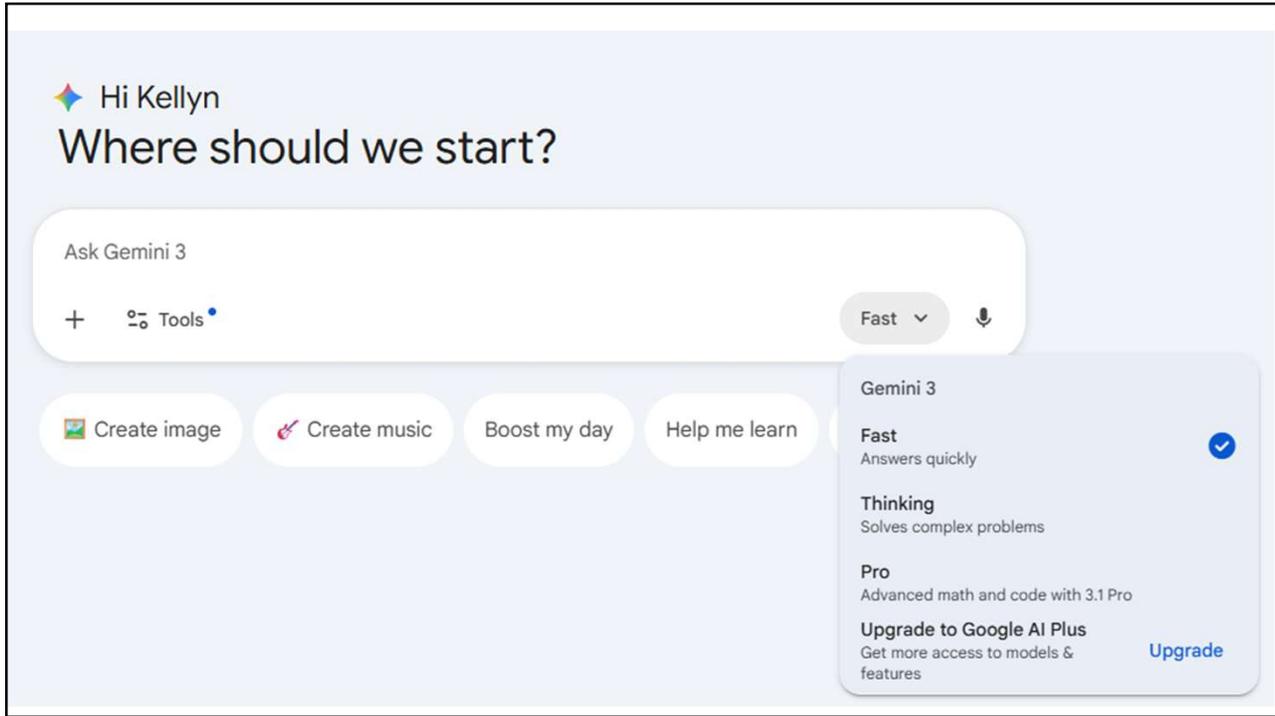
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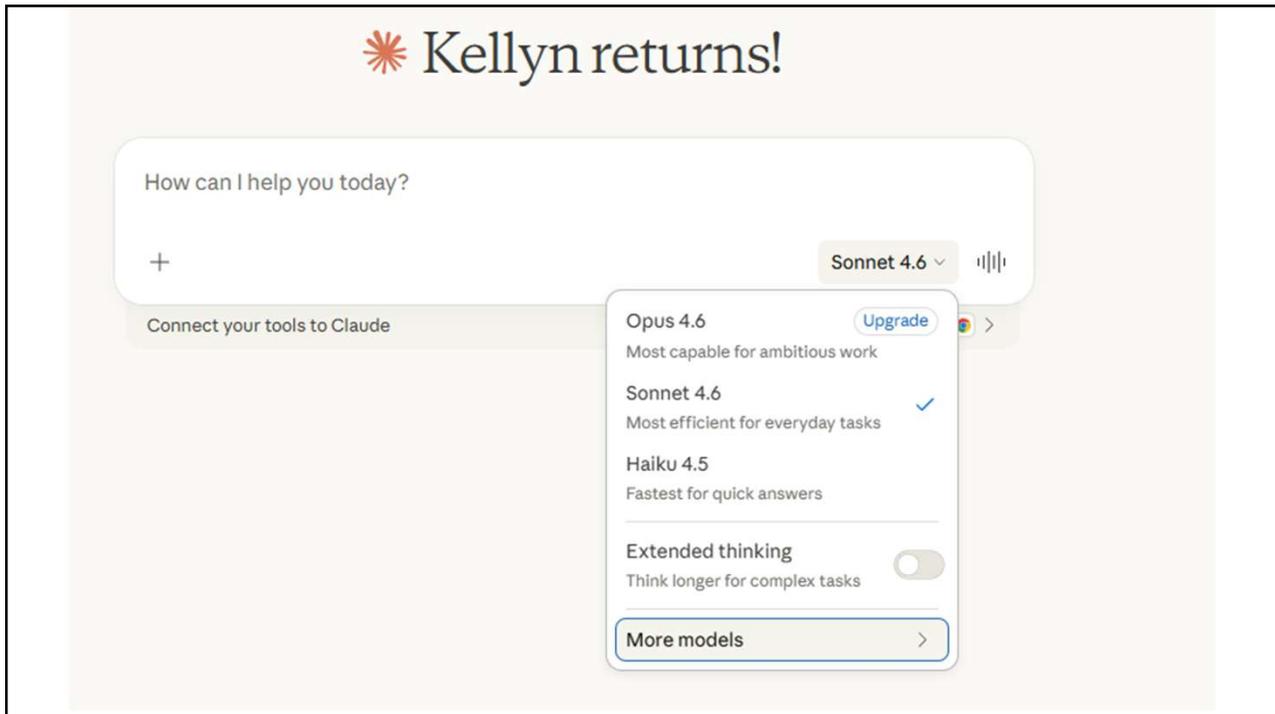
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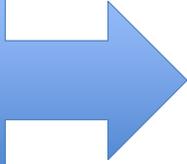


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## Prompt

Create some articulation activities for /r/.

- Defines the role and context
- Specifies the student profile
- Identifies the therapy target clearly
  - Provides constraints for vocabulary and difficulty
- Requests a structured output that is easier to use in therapy



Act as a school-based speech-language pathologist. I am working with a 2nd grade student targeting /r/ in the initial position at the word level. Please generate:

- 15 high-frequency words appropriate for early elementary students
- Avoid uncommon vocabulary
- Organize the words into three difficulty levels (easy, moderate, challenging)
- Suggest two short therapy activities that could be completed in a 30-minute session
- Keep the activities appropriate for a school setting

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## How can AI help us?



SEARCH FOR INFO

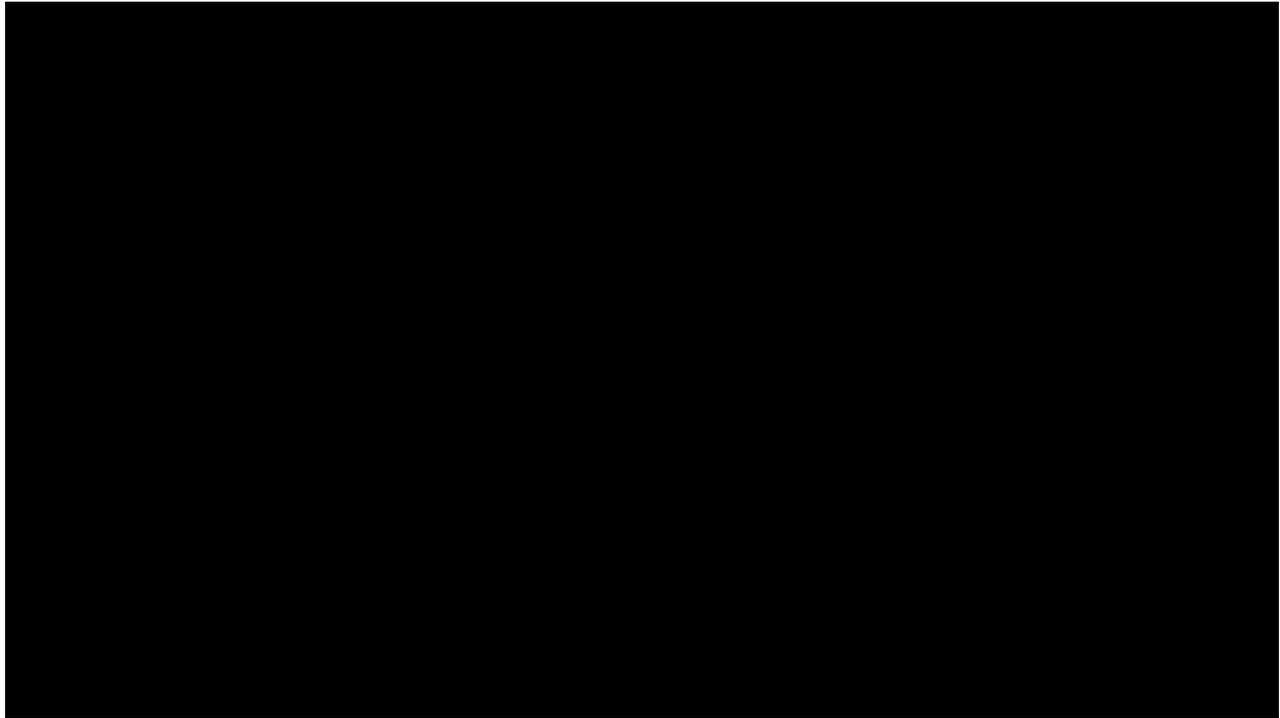


TRANSLATION



SLP MATERIALS

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# How can AI help us?



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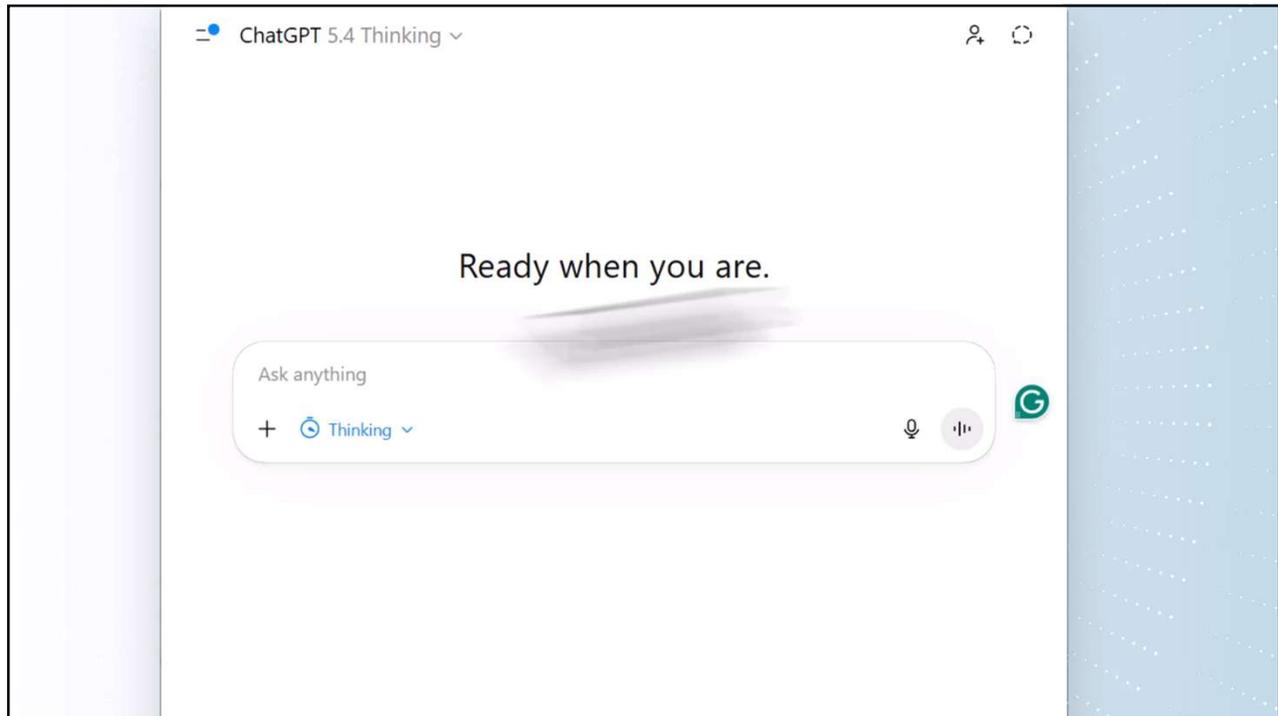


TRANSLATION



SLP MATERIALS

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## How can AI help us?



SEARCH FOR INFO

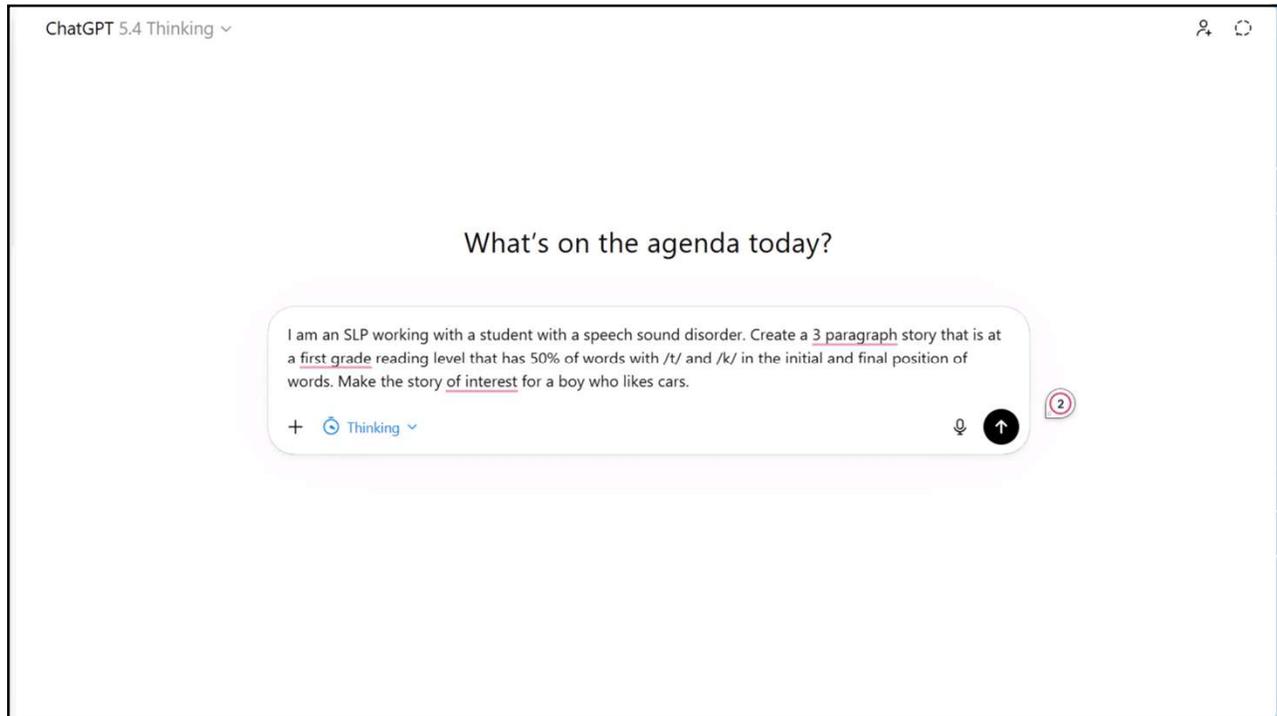


TRANSLATION



SLP MATERIALS

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What we're doing	Typical approach	With AI support
<b>Initial screening</b>	SLP completes screening and history review; 30–45 minutes	Digital intake and screening tools may save time; SLP confirms findings and determines next steps
<b>Therapy activities</b>	SLP designs activities and provides feedback during sessions	AI-assisted tools can suggest practice items; SLP selects, adapts, and monitors accuracy and carryover
<b>Progress monitoring</b>	SLP documents performance and reviews periodically	Automated tracking can summarize practice and trends; SLP interprets data and updates goals and plans
<b>Documentation &amp; scheduling</b>	Notes, billing, and scheduling completed manually; 2–3 hours/day	AI-assisted templates can reduce writing time; SLP reviews, edits, and finalizes all documentation
<b>Access between sessions</b>	Practice depends on attendance and caregiver follow-through	Structured home practice can be supported by apps or portals; SLP sets parameters and checks progress

Lie et al, (2024); Georgiou, (2025); Özdemir (2024)

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If a therapy approach has strong evidence when delivered by a clinician, is an AI-driven version of that same therapy also evidence-based?

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## AI Literacy: A Professional Responsibility



**Everyday digital tools**  
Students and families encounter AI through phones, apps, and school platforms.

**School and district systems**  
AI appears in documentation tools, learning platforms, scheduling, and communication systems.

**AI literacy and critical thinking**  
Students learn to navigate AI thoughtfully, not blindly.

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Big Ideas

Start with your need

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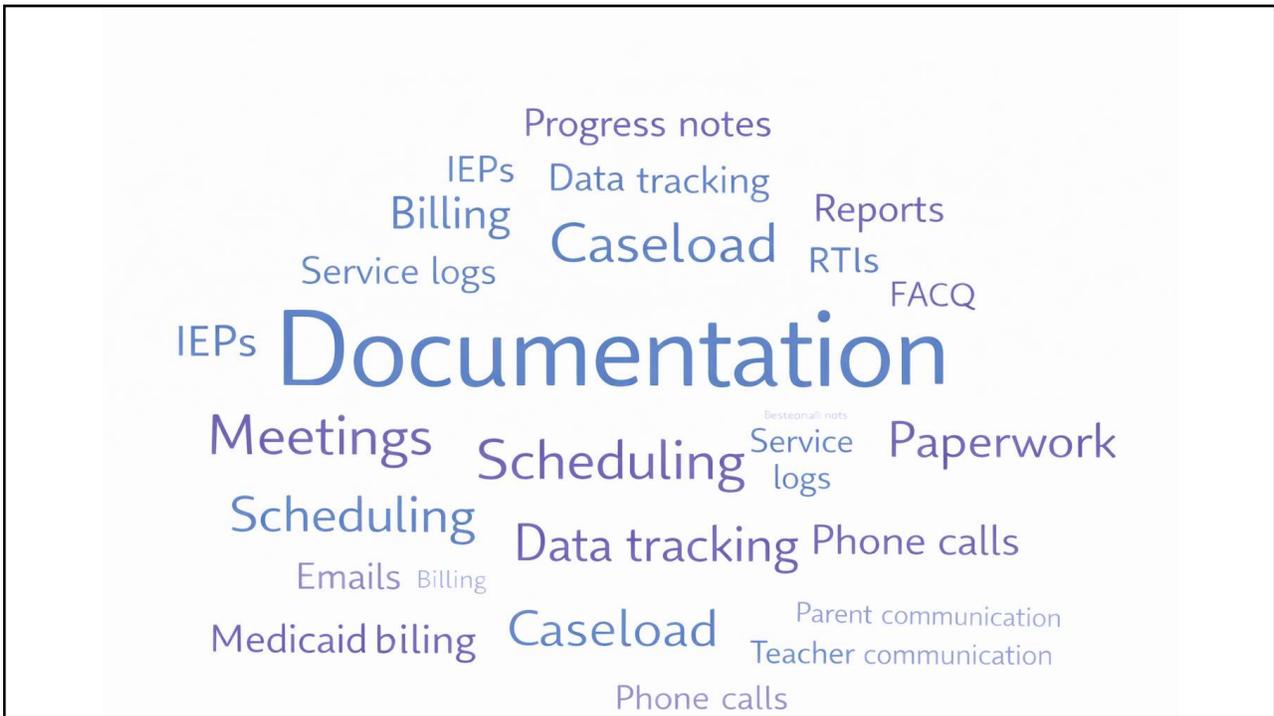
*Do not edit  
How to change the design*



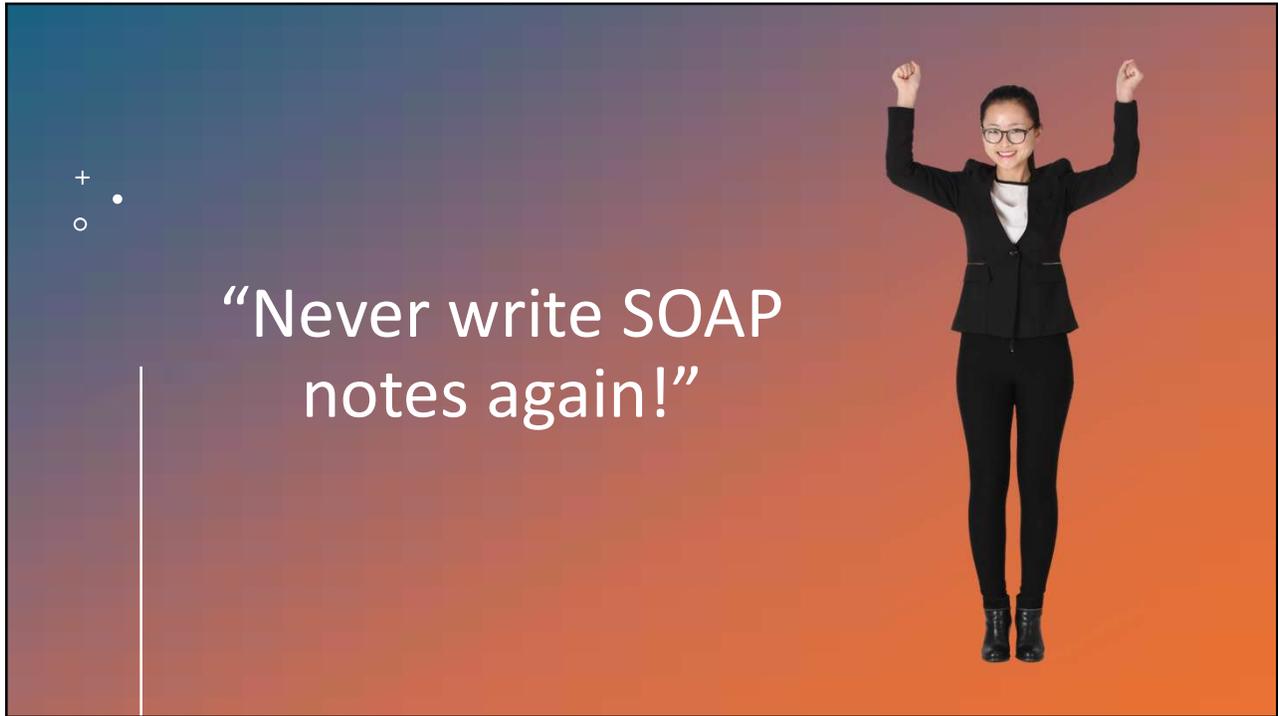
**In one or two words, what task takes the most time away from what you think your job should really be?**

*i* The [Slido app](#) must be installed on every computer you're presenting from **slido**

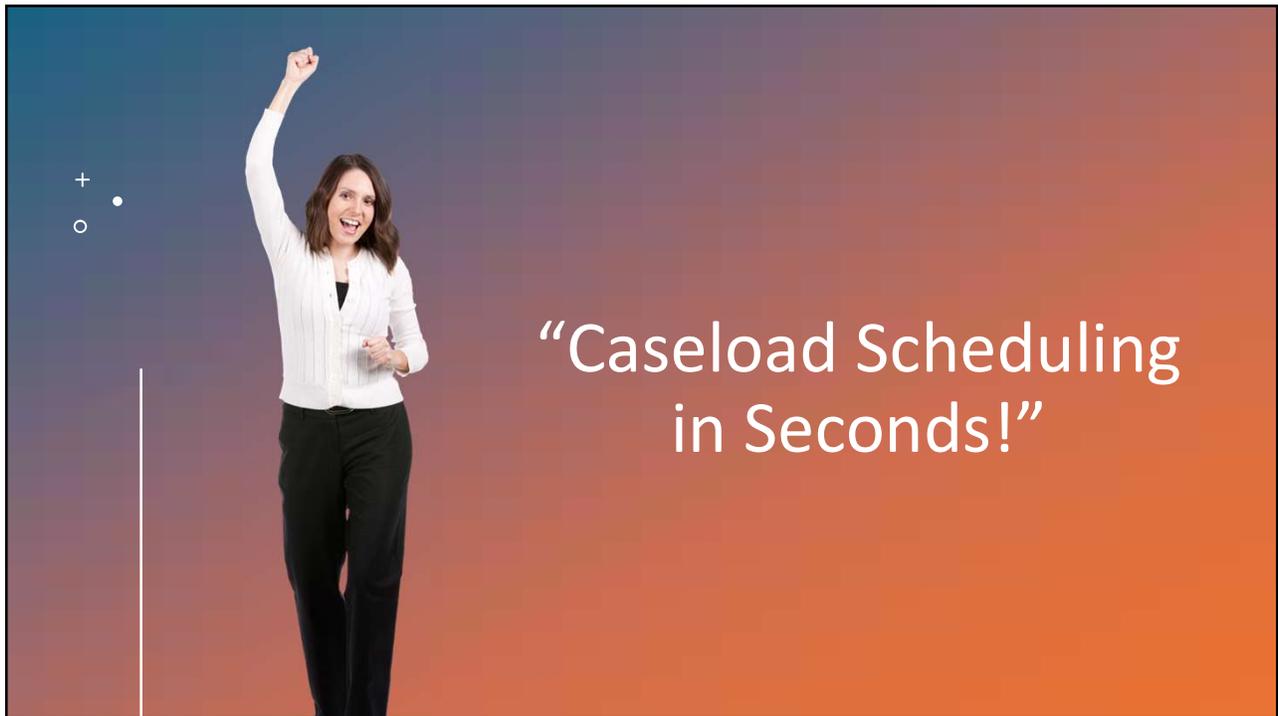
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- + • “Accurately score all assessments without the manual!”

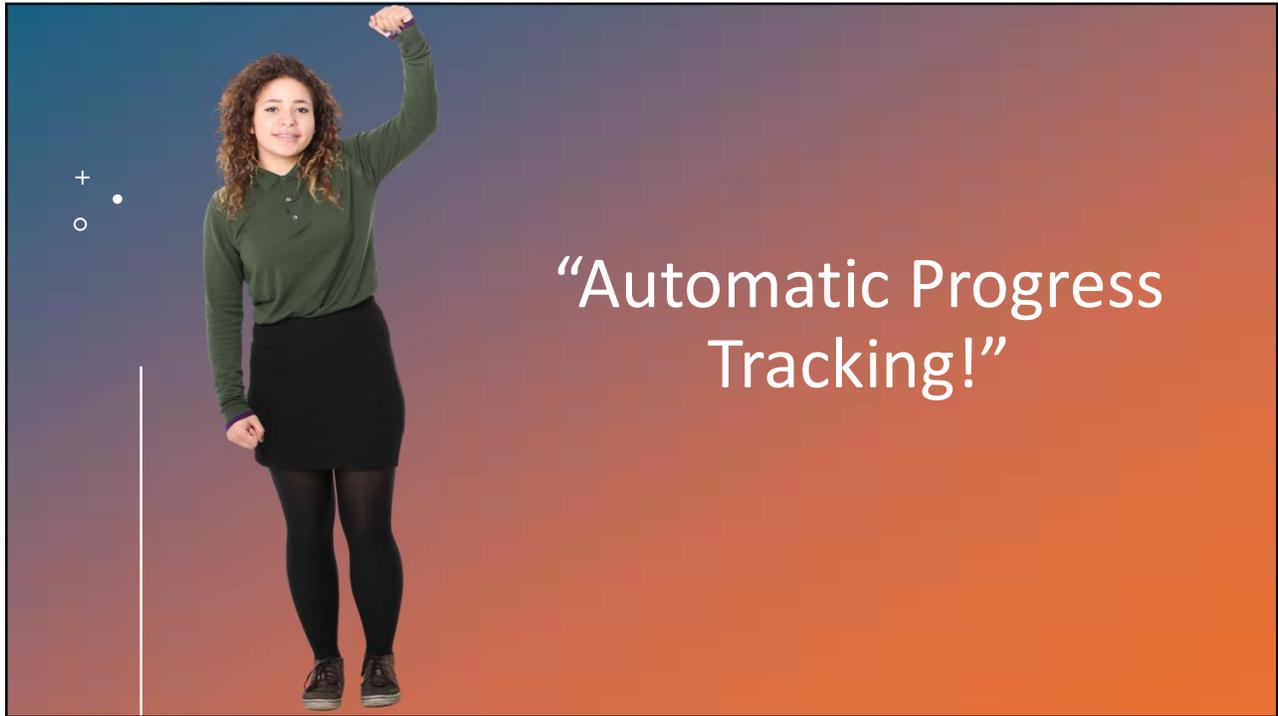
A woman with dark hair, wearing a black ribbed sweater and light blue jeans, stands with her arms raised in a celebratory gesture. She is smiling broadly. The background is a gradient from dark blue on the left to orange on the right.

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- + • “Instant Language Sample And Fluency Analysis”

A man with glasses, wearing a grey patterned sweater and blue pants, stands with his arms raised in a celebratory gesture. He is smiling. The background is a gradient from dark blue on the left to orange on the right.

32



33



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**Clinical fit:** Can you control target sound, word position, and level, and does the feedback appear accurate for your students' dialects and error patterns?

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## Big Ideas



Start with  
your  
need

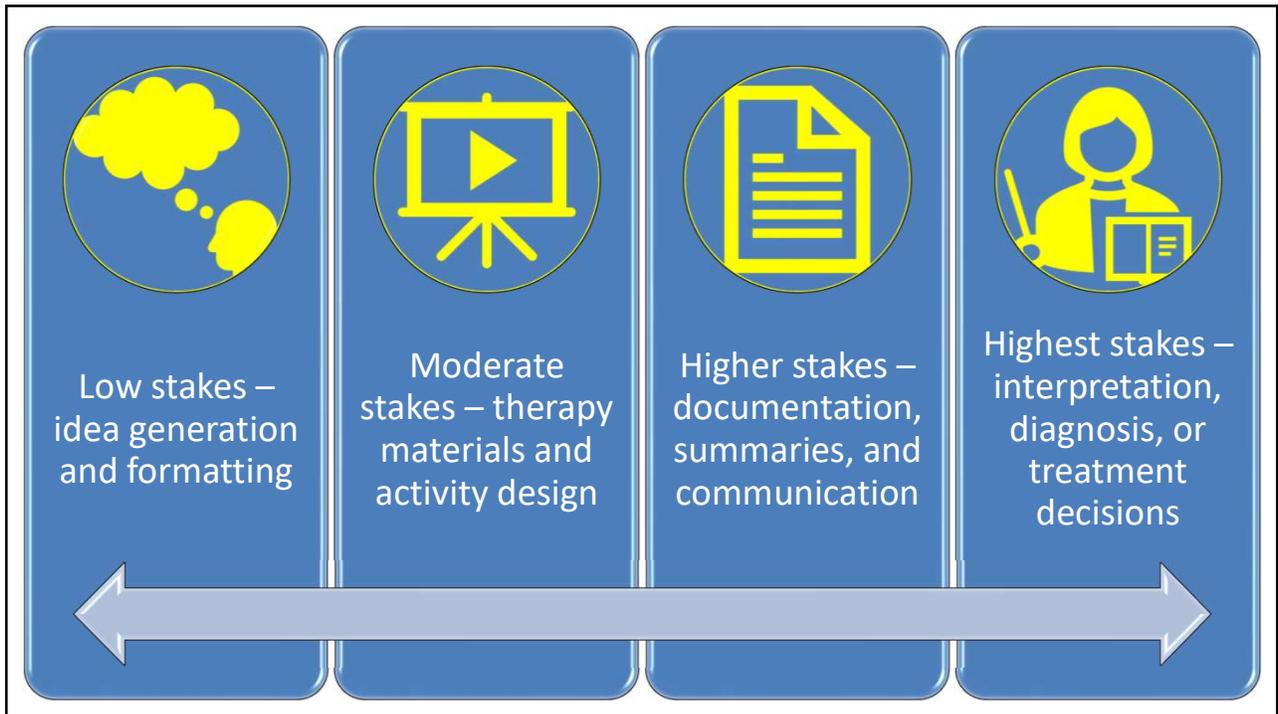
Understand the  
limits

36

36

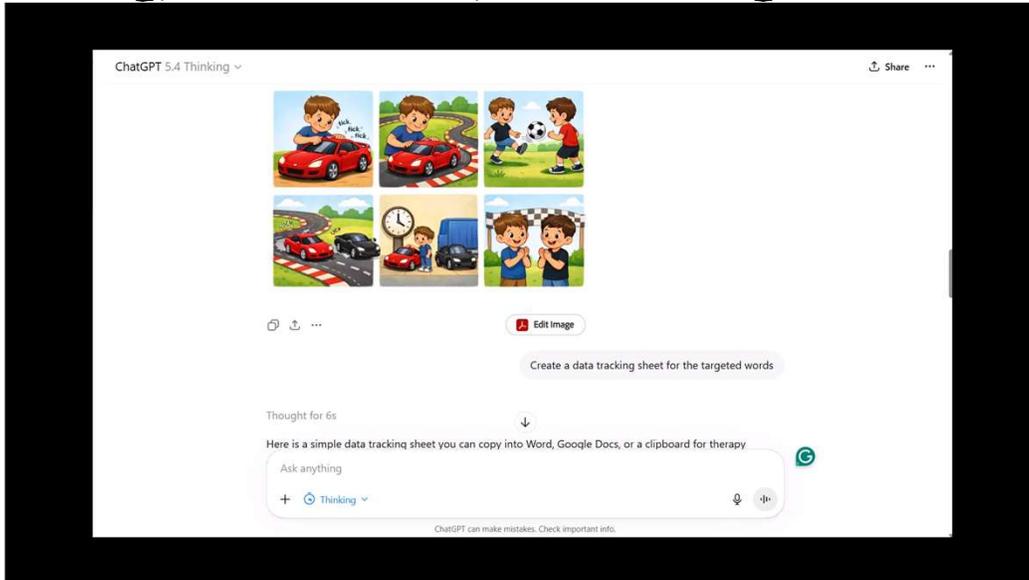


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# Drifting, Inaccuracies, and Oversight



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40

## How SLPs Can Use AI More Responsibly

Use	<p>Use AI when it clearly supports:</p> <ul style="list-style-type: none"> <li>• Student care or access</li> <li>• Clinician efficiency or well-being</li> <li>• Meaningful reductions in documentation burden</li> </ul>
Avoid	<p>Avoid high-volume, low-value use:</p> <ul style="list-style-type: none"> <li>• Decorative or novelty outputs</li> <li>• Treating AI as a replacement for basic web searches</li> <li>• Unnecessary or excessive generation</li> </ul>
Choose	<p>When possible, choose tools that:</p> <ul style="list-style-type: none"> <li>• Use smaller or more efficient models for routine tasks</li> <li>• Commit publicly to energy efficiency and responsible data practices</li> </ul>

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## Professional Judgement

- AI can assist with drafting and organizing language, but it cannot assume responsibility for decisions
- The SLP remains accountable for accuracy, appropriateness, and impact on the student
- Anything that affects eligibility, services, goals, or educational outcomes requires human judgment

Mytsyk, & Suchikova (2025)

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## CARE Framework

Domains for critically appraising clinical AI tools

- C**linical relevance Does the AI address a clinical need?
- A**ccuracy How well does the AI perform the task?
- R**eliability Is the AI consistent in its results?
- E**quity Has AI AI been validated across populations?

Benway & Preston, 2025

A woman in a dark blazer and white shirt is standing and pointing her right index finger upwards. She is smiling and looking towards the camera. The background is plain white.

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# CARE Framework

Domains for critically appraising clinical AI tools

**C**linical relevance Does the AI address a clinical need?



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✓ **Good progress monitoring but *not sufficient* for initial evaluations where detailed qualitative analysis is required.**

+	Automatic stuttering counts	No types of disfluencies	-
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# CARE Framework

Domains for critically appraising clinical AI tools

**A**ccuracy How well does the AI perform the task?



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**!** *Concerns about accuracy, especially for borderline cases where small miscounts could change severity ratings.*



85% match rate with human judges

Trained on adults

48

# CARE Framework

Domains for critically appraising clinical AI tools

**R**eliability Is the AI consistent in its results?



49

**!** *They note a lack of consistency and plan to trial it in controlled conditions before use.*



Fast  
analysis

Slightly  
different  
ratings



50

## CARE Framework

Domains for critically appraising clinical AI tools

**E** **quity** Has AI been validated across populations?



51

**✗** *The tool may be biased and could mislabel dialectal features as disfluencies.*

Trained  
on adults

Limited  
sample

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## SLP Team's Decision

- Decided **not** to adopt the tool
- Tool shows promise → supplemental data
- Lacks adequate validation
- Poor clinical reliability
- Doesn't meet standards of equity



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## Learning Objectives



Identify

Identify common AI tools used by speech-language pathologists and the clinical tasks they support



Differentiate

Differentiate low-stakes AI uses from high-stakes uses involving clinical judgment.



Apply

Apply an ethical framework to evaluate AI use related to accuracy, bias, privacy, scope of practice, and clinician responsibility.

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## References

- <https://news.mit.edu/2025/explained-generative-ai-environmental-impact-0117>
- Benway, N., & Preston, J. L. (2025). Equipping speech-language clinicians for the critical appraisal of an artificial intelligence–driven, evidence-based future. *Language, Speech, and Hearing Services in Schools, 56*(3), 442–468. [https://doi.org/10.1044/2025\\_lshss-24-00085](https://doi.org/10.1044/2025_lshss-24-00085)
- Deka, C., Shrivastava, A., Abraham, A., Nautiyal, S., & Chauhan, P. (2024). AI-based automated speech therapy tools for persons with speech sound disorders: A systematic literature review. <https://doi.org/10.21203/rs.3.rs-1517404/v2>
- Deka, C., Shrivastava, A., & Kumar, R. (2024). Towards human-centered AI in speech therapy: Perspectives from a low-resource setting. <https://doi.org/10.21203/rs.3.rs-4833343/v1>
- Georgiou, G. (2025). Transforming speech-language pathology with AI: Opportunities, challenges, and ethical guidelines. *Healthcare, 13*(19), 2460. <https://doi.org/10.3390/healthcare13192460>
- Jeanquartier, F., Jean-Quartier, C., Rieder, P., Misirlić, V., Pasero, C., Hohensinner, R., Müller, H., & Holzinger, A. (2026). Assessing the carbon footprint of language models: Towards sustainability in AI. *Resources, Conservation and Recycling, 226*, Article 108670. <https://doi.org/10.1016/j.resconrec.2025.108670>
- Johnson, L. W., & Hall, K. D. (2026). Equity, function, and data: A review of social and functional representation in AI datasets for traumatic brain injury. *Informatics, 13*(2), 33. <https://doi.org/10.3390/informatics13020033>
- Liu, D., Yang, J., Albrecht-Buehler, I., Qin, H., Li, S., Hu, Y., & Xiong, J. (2024). Automatic screening for children with speech disorder using automatic speech recognition: Opportunities and challenges. *Proceedings of the AAAI Symposium Series, 4*(1), 308–313. <https://doi.org/10.1609/aaaiss.v4i1.31807>
- Mytsyk, H., & Suchikova, Y. (2025). Stench of errors or the shine of potential: The challenge of (ir)responsible use of ChatGPT in speech-language pathology. *International Journal of Language & Communication Disorders, 60*(4). <https://doi.org/10.1111/1460-6984.70088>
- Özdemir, Ş., Kayhan-Aktürk, Ş., İyigün-Uzunöz, E., & Tunçer, A. (2024). Beyond line drawings and photographs: A narrative review on the potential use of AI-assisted images in acquired language disorders. <https://doi.org/10.31219/osf.io/gg26d>