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AI based Teaching:
Connecting Inclusion to Education.

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INTRODUCTION & AIM

INTRODUCTION

Language disorders affect children's ability to **understand** and **express** language, limiting their education and social participation.

Many children face **limited access** to inclusive education and rely on alternatives such as homeschooling.

Challenges include limited training, low **awareness**, and reluctance to adopt evidence-based technology.

AI tools (e.g., Speech Blubs, SymbolTalk, Articulation Station) support **speech and language development** through engaging, personalized learning.

Evidence-based approaches like AAC and DTTC offer promising **opportunities** to improve communication outcomes.

AIM

To explore perceptions and examine how AI-supported strategies can complement traditional therapies and enhance expressive and receptive language development.

METHOD

Approach
Mixed-methods design (quantitative + qualitative).

Participants
Parents (n=60), Speech–Language Therapists (n=30), Special Educators (n=30) in Saudi Arabia.

Data Collection
Online questionnaires and semi-structured interviews.

Focus Areas
Perceptions, usage of AI tools, benefits, challenges, and impact on language development.

Analysis
Descriptive statistics and thematic analysis.

Ethical Approval
Informed consent ensured.

RESULTS & DISCUSSION

ENGAGEMENT
86% ↑
reported higher engagement and motivation with AI-based tools.

LANGUAGE SKILLS
78% ↑
observed improvement in expressive and receptive language abilities.

AAC EFFECTIVENESS
82% ↑
agreed AAC support enhances communication and independence.

INCLUSION
84% ↑
believe AI tools promote inclusion in home and school settings.

AI-supported strategies complement traditional therapies and support meaningful language growth and participation.

CONCLUSION

AI-based teaching methods, when combined with evidence-based interventions such as AAC and DTTC, have the potential to significantly enhance communication outcomes for children with language disorders.

The findings highlight the importance of educator training, family involvement, and the effective integration of technology into intervention programs. Participants perceived AI-supported tools as engaging, motivating, and capable of supporting both expressive and receptive language development.

The study further emphasizes that inclusive educational environments can be strengthened through the thoughtful adoption of AI-assisted strategies, enabling children with language disorders to communicate, learn, and participate more effectively in school and everyday life.

KEY TAKEAWAYS

Increased engagement | Enhanced communication | Improved language outcomes | Greater inclusion

OUR VISION

إِنَّ اللَّهَ مَعَنَا

(Indeed God is with us)

is an inclusive future where every child acquires the essentials of language development through motor planning, multisensory supportive approaches, and emotional regulation, empowering them to communicate, learn, participate, and thrive.

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