# Towards Responsible Voice AI in Primary and Special Schools



Dr Bilal Ahmad
Helena Ledermann

Learnovate

# Agenda

01

Members

02

Research Question Workshop

03

Research Question

04

Current Evidence

05

Defining Responsible Voice AI

06

Teacher Professional Learning

07

Detailed Insights

(Full Report)




Learnovate

# Members

c-learning

FOLENS




HIBERNIA COLLEGE

ISTE®



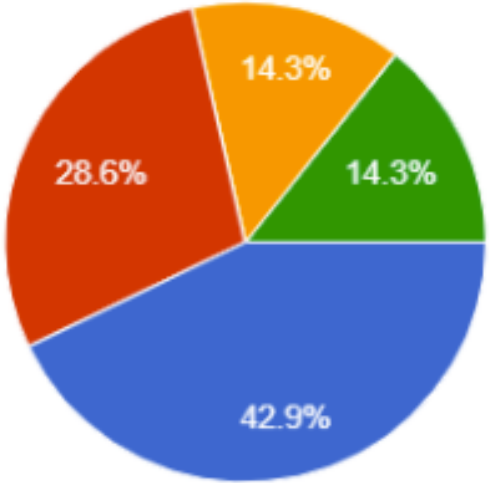
MERLYN MIND™



NCCA

An Chomhairle Náisiúnta Curaclaim agus Measúnachta
National Council for Curriculum and Assessment

# Research Question Workshop




- Student Engagement & Outcomes (in Primary & Special Schools)
- Pedagogy, Social Experience & Classroom Dynamics (in Primary & Special Schools)
- Teaching Impact, Workload & Technostress (in Primary & Special Schools)
- It's hard to say that one would be more impactful than another at this point.




Learnovate

# Research Question

*How might voice-enabled AI, grounded in pedagogical principles and responsible use, support teaching and learning in Irish primary schools, including pupil outcomes such as oral language skills, and what potential benefits and challenges are identified in the emerging evidence?*

# Current Evidence - Industry






# Current Evidence - Industry

[redacted] + Follow ···

4d • Edited •

What hope do children have when Meta make this clearly anthropomorphised device that breaches DfE expectations?

It's a clear breach of DfE product safety standards on emotional and social development setting the Tech bar by Meta here.

'We expect developers and suppliers not to anthropomorphise products or create products that imply emotions, consciousness or personhood, agency or identity.'

Yes, these aren't in school, but they are setting something for children to aspire to in their tech.

[redacted] 3rd+ + Follow

I genuinely hate that Meta has styled it's new Muse AI to look and feel like a cuddly child's toy. Watching this video where Mark Zuckerberg talks about playing with an AI Muse Charm, a new wearable (holdable?) device that he promises will be available for Christmas just feels like it's already being positioned a toy, and as something parents will once again be encouraged to buy their kids.

My Christmas recommendation: don't.

First generation Meta products inevitably forget to ask the privacy question,

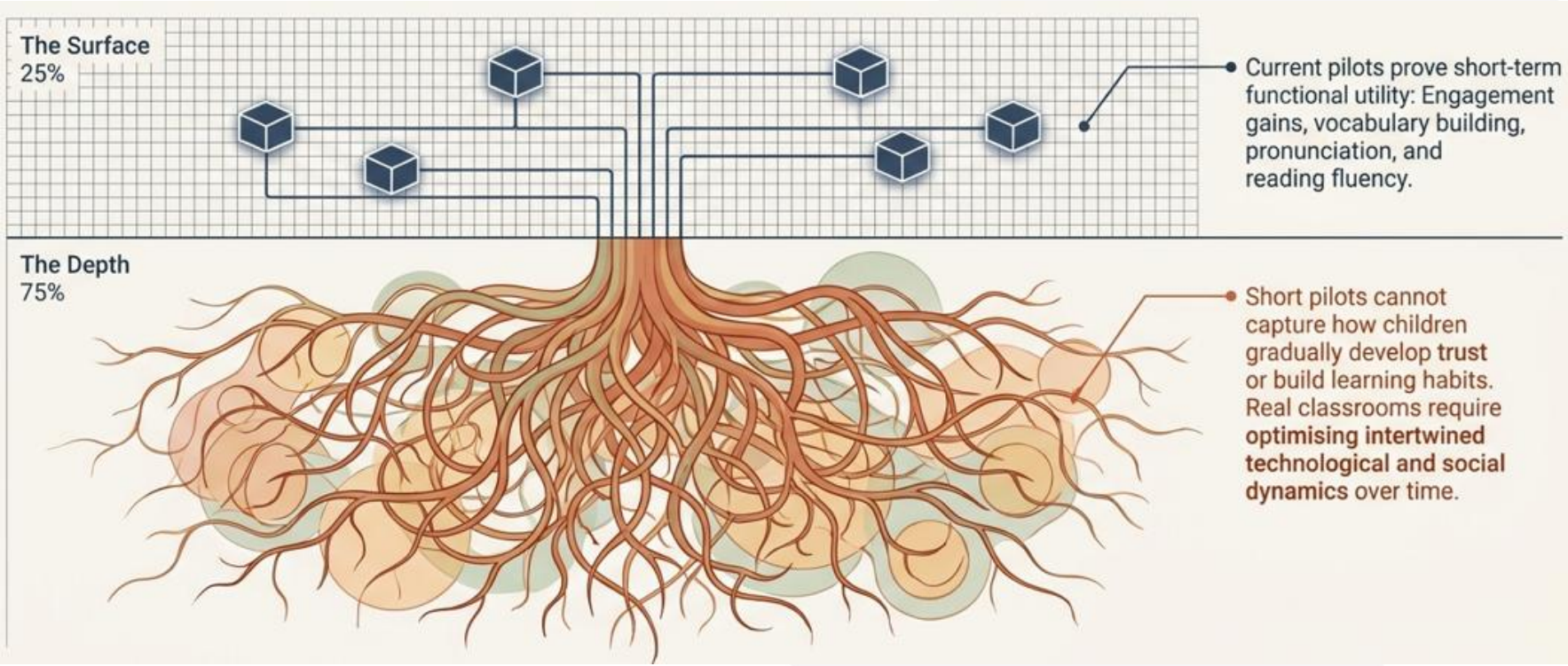
**anthropomorphism**

/ˌanθrəpəˈmɔːfɪz(ə)m/

Anthropomorphism is the attribution of human traits, emotions, intentions, or behaviors to non-human entities such as animals, objects, weather, or deities. Wikipedia +2

Learnovate

# Current Evidence - Academia

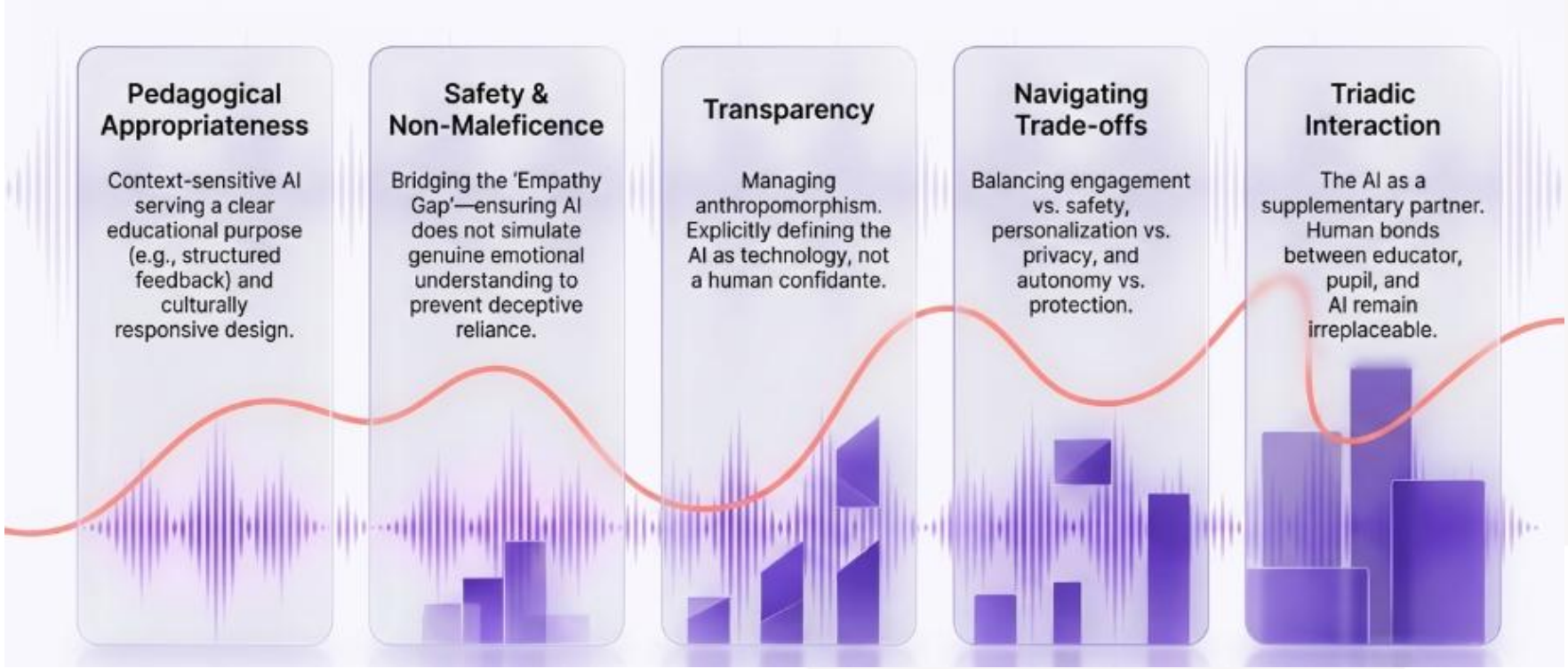



AI-Generated Content
Reviewed and Validated by a Human
Learnovate

# Defining Responsible Voice AI

*“Ethical and intentional design of voice-enabled AI systems that support **triadic** interaction prioritising **pedagogical appropriateness**, non-maleficence and **transparency**, while also navigating the complex **trade-offs** between system engagement and user safety”.*

# Defining Responsible Voice AI




AI-Generated Content
Reviewed and Validated by a Human
TECHNOLOGY ENABLES. PEOPLE ENSURE QUALITY.
Learnovate

# Teacher Professional Learning

- Building capacity, addressing gaps and reducing technostress.




AI-Generated Content
Reviewed and Validated by a Human

# Detailed Insights (Full report)

## 1 General Purpose Tools

Commercial smart speakers in the classroom.



Amazon Alexa | Google Home | Siri

- Focus on usability in classroom environments
- Consider safety and safeguarding
- Understand child interactions

## 2 Special Purpose Tools

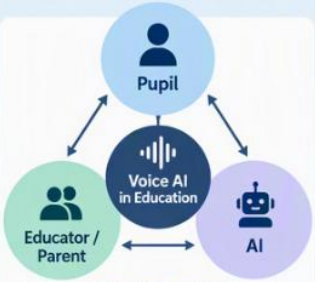
Dedicated educational platforms for literacy, oracy and teacher support.

ARCHe | Vovo | Whisper-based Phonetisation Tools | Merlyn Origin

- Support literacy development
- Enhance oracy and spoken language
- Streamline teacher workflow support

## 3 Pedagogical Frameworks

Grounding voice AI within core educational theories.




**The Triadic Model**
(Pupil – Educator/Parent – AI)

- Biesta's Functions of Education (Qualification, Socialisation, Subjectification)
- Vygotsky's Zone of Proximal Development
- Krashen's Input Hypothesis
- Structured Literacy Pedagogy

## 4 Potential Benefits & Challenges

Opportunities and limitations in real-world contexts.

### Key Benefits

- Reduced oral language anxiety
- Immediate pronunciation feedback
- Lower teacher technostress

### Key Challenges

- Speech recognition (ASR) limits with child accents and articulation
- Complete absence of Irish-language support
- Special education gaps

## 5 Design Dilemmas & The Four-Step Framework

Navigating ethical trade-offs using Kurian's iterative framework.

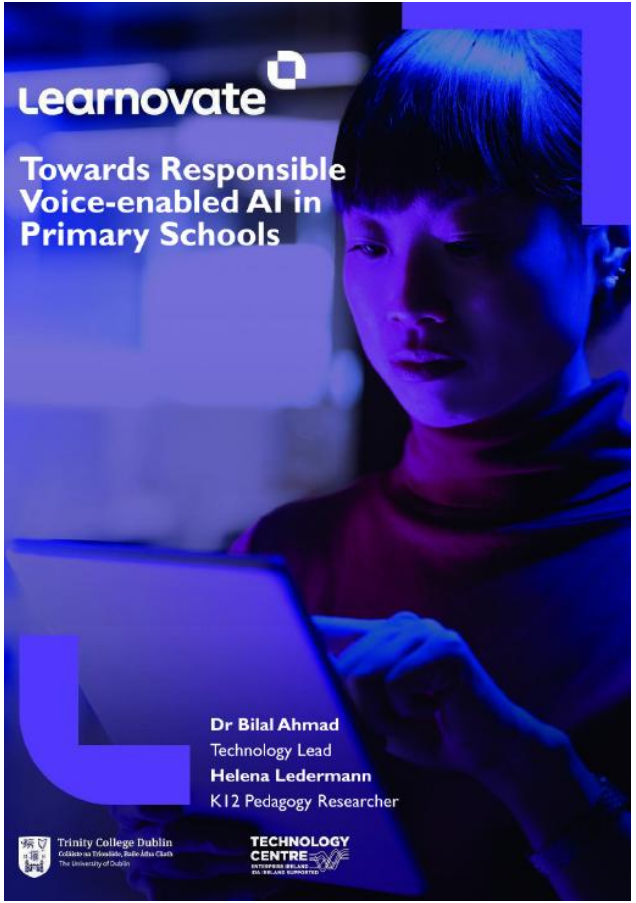
### Key Ethical Dilemmas

- Safety ↔ Engagement
- Personalisation ↔ Privacy
- Autonomy ↔ Protection

### Kurian's Four-Step Framework




AI-Generated Content
Reviewed and Validated by a Human
TECHNOLOGY ENABLES · PEOPLE ENSURE QUALITY




**Full Report**

Learnovate

momentum

Learning Tech Newsletter

**Research Paper Coming Soon (October 2026)**

Learnovate


Thank you!
Learnovate