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Explaining Primary School Teachers' Intentions to Integrate AI into Teaching

A Theory of Planned Behavior Approach in the Cypriot Context

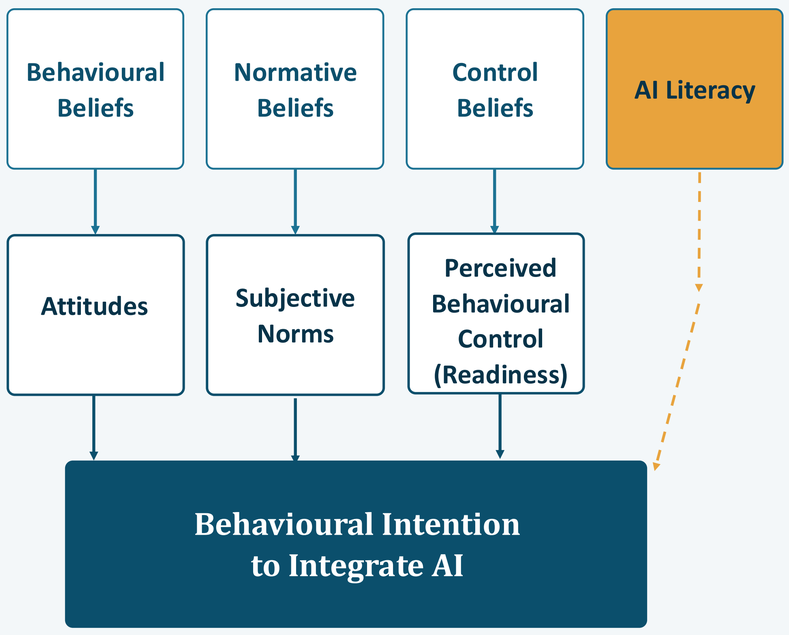
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Background & Motivation

AI is reshaping teaching through adaptive learning, automated feedback, and personalised instructional design. Yet meaningful integration depends less on technological capability than on how teachers perceive, trust, and engage with it.

Primary school teachers shape students' earliest encounters with technology — but their perspective remains underexplored, particularly in Cyprus, where classroom AI use is still emerging and readiness varies widely.

Conceptual Model: Extended TPB



Sample & Instruments

~300 primary school teachers, Cyprus (target sample)

Instruments: Behavioural Intentions towards AI Integration (Mnguni et al., 2025) and the AI Literacy Scale for Teachers – AILST (Ning et al., 2025).

Followed by 15–20 semi-structured interviews with a purposively selected subsample of participants.

Research Questions

- RQ1: What patterns are observed among primary school teachers regarding their behavioral intentions, AI literacy, and perceived readiness to integrate AI into teaching?
- RQ2: To what extent do teachers' attitudes, subjective norms, perceived behavioural control (operationalised as AI integration readiness), AI literacy, and underlying beliefs predict their behavioural intentions to integrate AI into teaching?
- RQ3: How do teachers explain and interpret their intentions and readiness to integrate AI into teaching within their professional and institutional contexts?

Methodology

Sequential explanatory mixed-methods design: a quantitative phase establishes patterns and predictive relationships; a qualitative phase then explains and contextualises them.

Quantitative Phase
Structured questionnaire (TPB constructs + AILST) distributed to primary school teachers across Cyprus; analysed via structural equation modelling (SEM).

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Qualitative Phase
Semi-structured interviews with a purposively selected subsample of teachers; findings analysed via thematic analysis.

Current Progress

- ✓ Instruments adapted & finalised (EN / GR)
- ✓ Research approval obtained — Cyprus Ministry of Education, Sport & Youth
- ✓ National Bioethics Committee approval obtained
- ✓ Pilot testing with a small group of teachers
- … Full-scale data collection with primary school teachers — underway

✓ completed … in progress

AI Literacy Dimensions Measured

Assessed via the AI Literacy Scale for Teachers (AILST; Ning et al., 2025) across four dimensions:

- **Perception**
- **Knowledge & Skills**
- **Applications & Innovation**
- **Ethics**

Research Timeline

Preparation & piloting	Quantitative data collection	Quantitative analysis (SEM)	Qualitative phase	Integration & writing
Jun–Oct 2026	Oct–Dec 2026	Jan–Apr 2027	May–Jul 2027	Aug 2027–Mar 2028

> *"By extending the Theory of Planned Behavior with AI literacy and HCI/HAII perspectives, this study aims to inform how primary school teachers can be meaningfully supported in integrating AI into their practice."*

Expected Impact

- Theoretical: extends TPB with AI literacy and HCI/HAII perspectives.
- Practical: informs teacher training, curriculum design, and AI policy in Cyprus.
- Positions primary teachers as informed, active partners in AI adoption — not passive recipients.

Open Questions for Discussion

- What additional factors might help explain AI integration readiness, beyond TPB and AI literacy?
- How can the qualitative findings best triangulate with, and enrich, the SEM results?

Ajzen, I. (1991). The theory of planned behavior. Organizational Behavior and Human Decision Processes, 50(2), 179–211. • Mnguni, L., Sibanda, D., & Ramulumo, M. (2025). Cogent Education, 12(1). • Ning, Y. et al. (2025). Education and Information Technologies, 30(12).

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