

Indigenous AI Tools in Educational Practice: Chinese Teachers' Experiences Integrating Localized Generative AI

Lin DENG

Department of TESOL, Hankuk University of Foreign Studies

denglin@hufs.ac.kr

Advisor: Prof. Kilryoung Lee

PhD Candidate in TESOL Education

Focus: AI Integration in Higher Education

1 Why Localized AI Tools Matter

Global AI discourse prioritizes **ChatGPT**, yet **Chinese universities** rapidly adopt rapidly adopt **localized tools** (Doubao, Kimi, Jimeng) with native-language language capability and regulatory alignment.

Across the four cases, teachers favour domestic tools for their **Chinese-Chinese-language proximity, regulatory alignment, and barrier-free access free access (no VPN)**; international tools keep an edge on **English output, so output**, so teachers negotiate a division of labour.

Critical Question: *How does institutional context shape teachers' agency in indigenous-AI use?*

4

Institution Types

16

Week Longitudinal

2 Research Design

Longitudinal qualitative multiple-case design (reflexive thematic analysis) examining how institutional context shapes teachers' agency in GenAI use.

Teacher	Institution Type	Primary AI Tools
Sharon	Private University	Doubao + DeepSeek
Helen	Public University	Doubao + Tencent
Daisy	Junior College	Doubao + ChatGPT
Joy	Vocational College	Doubao + Gemini

Data: Interviews (T1/T2/T3) · Prompt screenshots · Reflective journals · Classroom videos (focal case)

5 Limitations & Future Work

Scope: Small sample (n = 4), single-country context; the 16-week week window may not capture long-term adoption sustainability. sustainability.

Future Research: Cross-national comparison (Vietnam, India) · Student-outcome tracking · Institutional barrier analysis · Indigenous AI model evaluation.

3 Key Findings: AI Teacher Agency Typology

Reflexive thematic analysis across the four cases yielded three agency types and five sub-types:

Participant	Agency Type	Sub-type
Sharon (focal)	Mediated	Institution-Mediated
Helen	Defensive	Capability-Based
Joy	Defensive	Critique-Driven
Daisy	Performative	Training-Driven
(no case yet)	Performative	Self-Taught · placeholder

THEORETICAL CONTRIBUTION · A FOURTH ECOLOGICAL SUB-CONDITION

Institutional AI Deployment — the fourth sub-condition this study adds to study adds to the practical-evaluative dimension of Priestley et al.'s (2015) al.'s (2015) framework, alongside the original three (**culture, structure & structure & materiality**). It captures how institutions turn AI from a a discretionary tool into an embedded structural condition.e.g., DeepSeek DeepSeek integrated into the Xuetong LMS, plus AI use written into teacher into teacher appraisal and project requirements (focal institution). Because Because this situation had not yet emerged when the framework was was formulated in 2015, none of the original three sub-conditions can can accommodate it.

4 Implications for Education

Core Finding: Technology adoption is context-dependent: domestic tools win on access & compliance, international tools on English output; teachers negotiate a division of labour.

Policy: Indigenous tools warrant equal institutional investment. Compliance (≠ restriction) enables deep pedagogical integration.

Practice: Agency develops over a full semester (T1→T3); PD should should allow sustained tool-exploration time between rounds. rounds.

Global Implication: *Non-English nations should prioritize indigenous indigenous AI ecosystems, not default to English-first tools.*

Keywords: Teacher Agency · Localized AI Tools · Educational Technology · Higher-Education Equity · Indigenous Technology Design

Theoretical Framework: Priestley, Biesta & Robinson (2015) ecological model of teacher agency · Bronfenbrenner (1979) ecological systems theory