UNIVERSITY OF CAMBRIDGE

香 港 大 學
THE UNIVERSITY OF HONG KONG

The Principles of Strategic Integration of ChatGPT into Foreign Language Writing

Mediation, Design and Guideline

Yunan Zhang

Yongcan Liu

Introduction

TAME THE BEAST OF AI

Theoretical Conceptualisation

Mediation: Sociocultural and Activity Theory
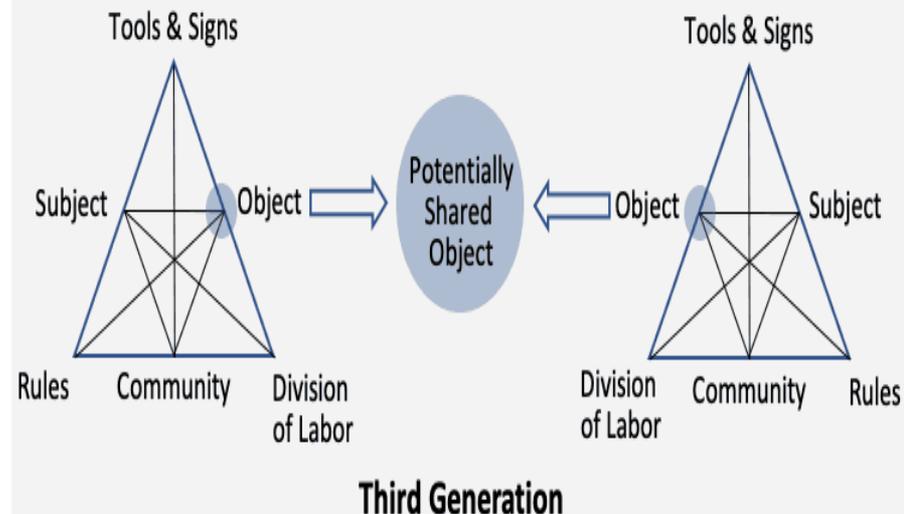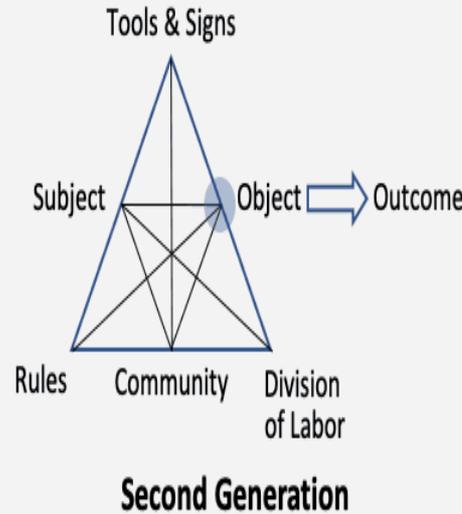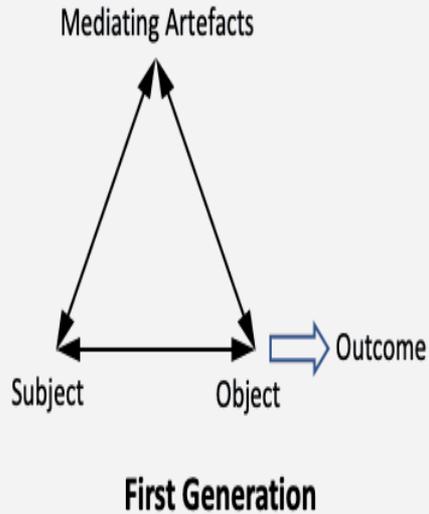
Research Method

Design: Design-Based Research

Practical Use

Guideline: Principles and Strategies

- Zhang, Y., & Liu, Y. (2025a). Tame the beast of ChatGPT: developing design principles to strategically integrate ChatGPT into EFL writing through an activity theory perspective. *Computer Assisted Language Learning*, 1–30. https://doi.org/10.1080/09588221.2025.2539156

- Zhang, Y., & Liu, Y. (2025b). Designing ChatGPT-mediated feedback activities in EFL writing: a design-based study of the dialogic feedback triangle. *Assessment & Evaluation in Higher Education*, 1–21. https://doi.org/10.1080/02602938.2025.2571846

Sociocultural and Activity Theory

Mediated Action	Activity System	Interacting Activity Systems
Vygotsky	Leontiev	Engeström

https://learningdiscourses.com/discourse/cultural-historical-activity-theory/

Design Based Research

DBR: a methodology of designing, developing, and evaluating educational interventions to both solve practical problems and advance our knowledge about the interventions and their development processes (Bakker, 2018)

The iterative cycles of design, implementation, and revision in DBR could ensure the strategies of AI-assisted writing are systematically developed, with researchers and participants cooperatively optimising the intervention (Zhang & Liu, 2025a).

Research Procedure in Zhang and Liu (2025a)

Design Based Research

Phase 1:
Preparation and design

1. Initial Intervention
2. Initial Design Principles
3. Initial Activity System Framework

Phase 2:
Intervention and enactment

Data Collection:
Three Iterative Cycles of
Observations and Interviews

Second- and Third-Version Intervention

Phase 3:
Retrospective analysis

Data Analysis:
Reflexive Thematic Analysis

Second- and Third-Version Design Principles and Activity System Framework

Design Principles for Strategic Use of ChatGPT

Four Core Design Principles

Design Principle 1: Orchestrate all available tools

Design Principle 2: Prompt ChatGPT with specificity

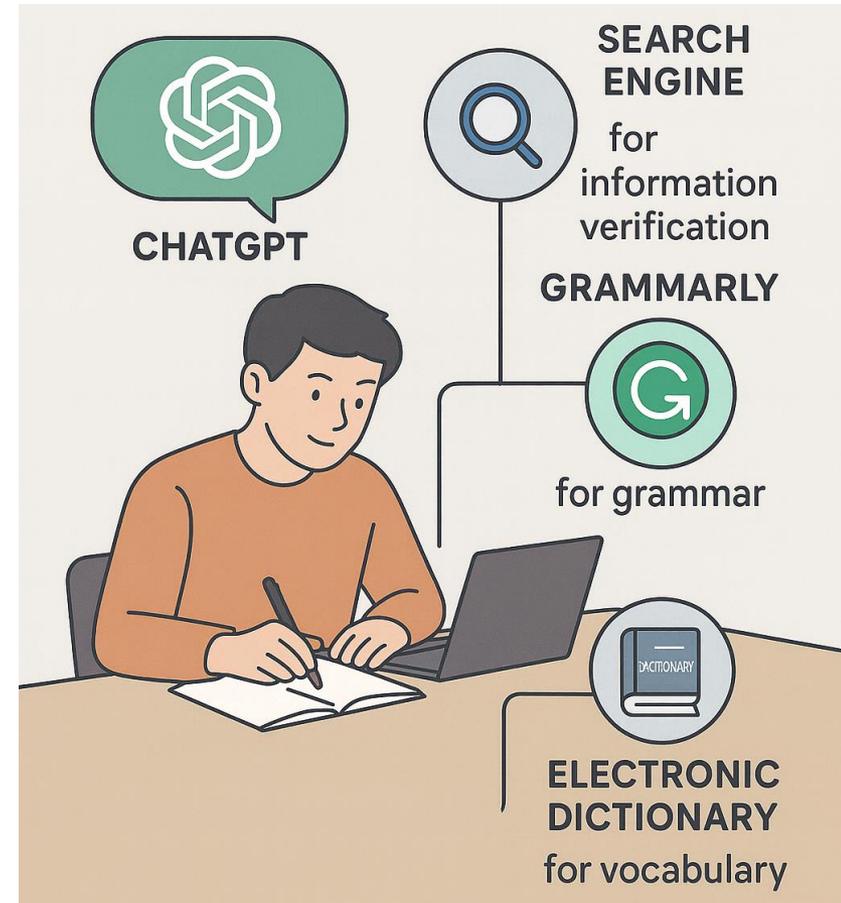**Design Principle 3:** Integrate ChatGPT's response with criticality

Design Principle 4: Adapt ChatGPT to different writing stages

Zhang, Y., & Liu, Y. (2025a). Tame the beast of ChatGPT: developing design principles to strategically integrate ChatGPT into EFL writing through an activity theory perspective. *Computer Assisted Language Learning*, 1–30. https://doi.org/10.1080/09588221.2025.2539156

UNIVERSITY OF CAMBRIDGE

香 港 大 學
THE UNIVERSITY OF HONG KONG

Design Principle 1: Students orchestrate all available tools

Strategies:

1. Consult E-dictionary for standard vocabulary use

2. Combine search engines for information verification

3. Combine automated writing evaluation tools for grammar check

Design Principle 2: Students prompt ChatGPT with specificity

Strategies:

4. Ask for elaboration based on prior knowledge
5. Define format and criteria in prompts

```
User:        A



ChatGPT:
```

Strategies:

6. Trim and extend based on prior knowledge
7. Compare and note down useful information

User: A

ChatGPT:

Strategies:

8. Brainstorming with ChatGPT before writing

9. Gaining focused feedback from ChatGPT after writing

```
User:        P


ChatGPT:
```

Conclusion or Originality

- **Theoretically:**

Conceptualise ChatGPT-mediated writing through **Activity Theory** to reveal sociocultural mediations and contradictions, rather than treating it as a linear input–output process

- **Methodologically:**

Adopt a **Design-Based Research** approach to iteratively developing design principles, rather than relying on one-off implementations.

- **Practically:**

Derive **four design principles** with nine strategies to inform future students, teachers and educational technology designers.

Thank you

Yunan Zhang (u3010204@connect.hku.hk)

Yongcan Liu (yl258@cam.ac.uk)