LEVERAGING GENERATIVE AI TOOLS IN EAP

A CASE STUDY IN ASSESSMENT DESIGN AND AUTOMATED FEEDBACK FOR EAP WRITING

Mengqi Hu (胡梦琦) Rui Xu (徐蕊)
EAP Language Lecturer
English Language Centre, School of Languages

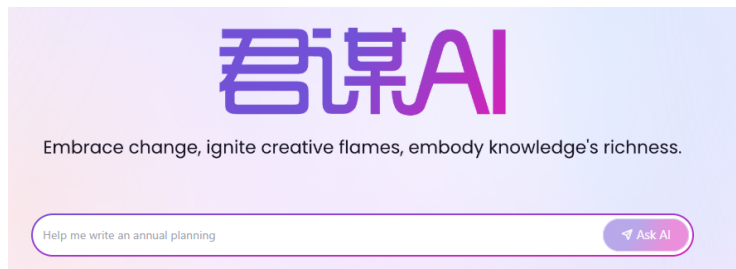Xi'an Jiaotong-Liverpool University
西交利物浦大学

19 May 2025

OUTLINE

- Introduction
- Hypothesis
- Key Concept
- Approach
- Results
- Implications
- Exploration
- Conclusion
- Q&A

INTRODUCTION

- English Language Centre, School of Languages
  - ➢ EMI
  - ➢ Global Citizen
  - ➢ XJTLU AI

君谋AI

Embrace change, ignite creative flames, embody knowledge's richness.

Help me write an annual planning   ⊿ Ask AI

INTRODUCTION

- EAP writing coursework assessment design
- Written feedback

Name (Class):

Core Task Requirements	Yes	No

1. Your Business Evaluation Report is appropriate for the Project WCW task. This includes:
  a. Make a business proposal
  b. Evaluate the business proposal using one (1) of the three (3) business analysis models studied in semester 2 (PESTEL, SWOT, or Porter's Five Forces)
	☒	☐

2. Your essay includes **all** relevant sections.
  a. Executive Summary
  b. Background/Introduction
  c. Business Proposal
  d. Analysis
  e. Recommendations
  f. Conclusion
  g. Reference List/References
	☒	☐

3. Word count: 1300 **words** (+/- 10%, not including Title, Executive Summary, reference_list).	☒	☐
4. You use a **minimum** of six (6) sources published in English, at least four (4) of which must be academic	☒	☐

Academic Integrity	Yes
5. There is a potential **AI-A penalty** for minor errors in in-text citations and/or the reference list.	☒
6. There is a potential **AI-B penalty** for poor academic practice (e.g. missing citations or references, inability to match citations and references, inability to locate sources using the DOI/URL or other means, minor collusion, or minor self-plagiarism).	☐
7. There is a potential **AI-C penalty** for plagiarism and/or collusion (e.g. frequently missing citations or references, major collusion, or major self-plagiarism).	☐
Five Priority items to address to improve your 1st draft	

INTRODUCTION

- SURF project:
  Artificial intelligence tools are claimed to be powerful study tools. It will be interesting to see how language learners evaluate AI tools' generated feedback on their English writing practices.
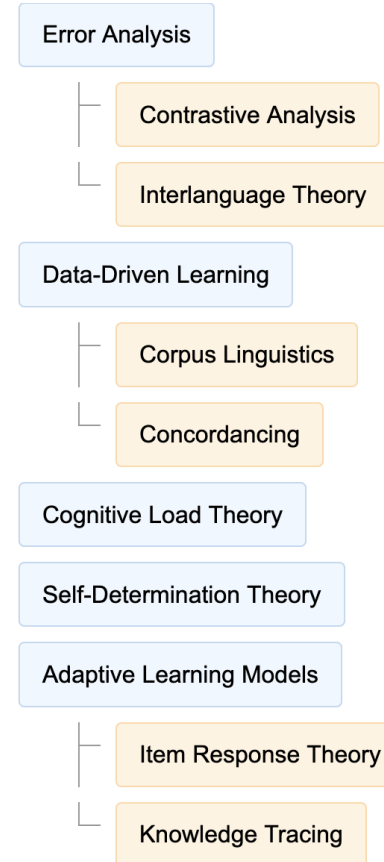
HYPOTHESIS

- The acceptance of AI-generated feedback by students is influenced by their perceived accuracy and personalization of the feedback.

KEY CONCEPTS

- Automated Writing Evaluation (AWE)
  - NLP Models
  - Error Tagging
  - Rubric-based Systems
- Formative Assessment Theory
  - Black & Wiliam
  - Hattie & Timperley
- Sociocultural Theory
  - Collaborative Learning
  - Interactionist Approaches

Error Analysis
  - Contrastive Analysis
  - Interlanguage Theory

Data-Driven Learning
  - Corpus Linguistics
  - Concordancing

Cognitive Load Theory

Self-Determination Theory

Adaptive Learning Models
  - Item Response Theory
  - Knowledge Tracing

KEY CONCEPTS

An overview of AI generated feedback

- AWE Vs AI (Shi and Aryadoust, 2024)

- Feedback Type Preferences

KEY CONCEPTS

- Perceived usefulness of GenAI feedback

- Technology Acceptance Model (TAM) (Davis, 1989)

- Impact on writing skills

- Engagement and motivation

- Challenges

APPROACH

- How to use GenAI tools to design writing task and rubrics?

- What will participants engage with in this SURF project?

APPROACH-ASSESSMENT DESIGN

Essay Genre and Topic → Feed in CEFR, LO, Previous Task Sheets → Generate New Task Sheet and Samples → Refine the Task Sheet and Rubrics

MAGIC SCHOOL

Rubric Generator
Have AI write a rubric for an assignment you are creating for your class in a table format. ★

Prompt Assistant ✨ NEW
Input your prompt to have it improved and get feedback on your prompting skills. ★

AI Resistant Assignments
Receive suggestions on making assignments more challenging for AI chatbots. ☆

KIMI

PREPOSTSEO Plagiarism Checker   DA Checker   Paraphrasing   Summarizer   Essay Writer   Image To Text   Humanizer NEW

APPROACH-DATA COLLECTION

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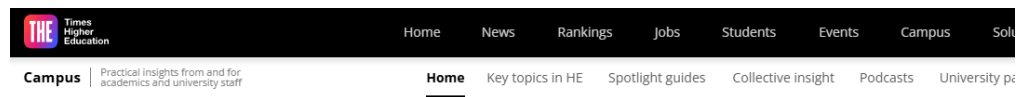
Using GenAI tools to refine EAP assessment

There are several tools available to help English for academic purposes assess students' writing skills. Here is some guidance on how to use a selection of them

Artificial intelligence   University assessment and quality assurance   Course design and delivery
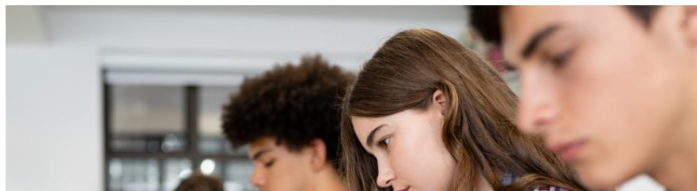
Feature article   Asia

Rui Xu (Tiffany), Mengqi Hu
Xi'an Jiaotong-Liverpool University

31 Oct 2024   1   1   1

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Main text

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Scan me!

APPROACH-PARTICIPANT INFORMATION

| Week	Participant responsibility	Duration
1	You will receive an essay topic and write a 300-word writing as your first draft in Microsoft word	2 hours
3	You will receive AI tools' generated feedback and finish editing, to submit your final draft	1 hour
4	You will complete an online survey about your editing experience with AI tools' generated feedback	20 minutes
5	You will join an online focus group discussion via Tencent to share your comments on this whole writing and editing experience with AI generated feedback	30 minutes

SURVEY RESULTS

- Survey sample size: 37 participants, primarily Year 1 and Year 2 students, with a slight majority being female (59.46%).

**5 The majority prioritize developing ideas with examples as the top factor.**

Over 83% of respondents selected 'How to explain and develop ideas with examples' as one of their three most important factors, making it the most emphasized aspect in first-draft writing.
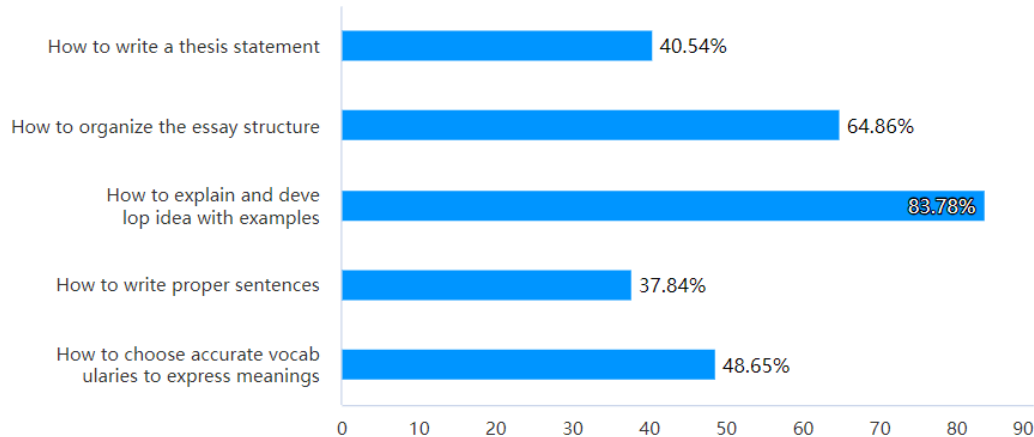
SURVEY RESULTS

11 Detailed error correction and immediate feedback are the most valued AI feedback features.

Detailed error correction was selected by 72.97% of respondents, followed by immediate feedback at 67.57%, indicating these are the top priorities for users.

- Immediate feedback
- Usability at any time
- Objective analysis
- Other (please specify) [详情]
- Detailed error correction
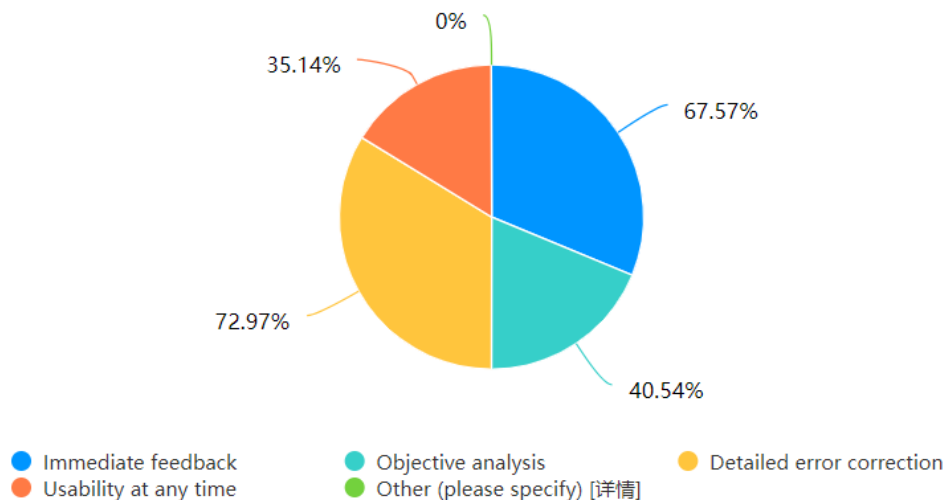
SURVEY RESULTS

The majority of participants:
- prioritized linguistic precision in feedback
- perceived high efficacy
- valued detailed error correction in grammar and vocabulary

FOCUS GROUP RESULTS

1. **Tool Usage**: Grammarly is widely used for grammar and vocabulary improvements, while XIPU AI excels in professional writing styles and detailed feedback. Kimi offers valuable logic-related feedback but performs less effectively in other areas.
2. **Grammar Improvement**: Grammarly and XIPU AI are effective in correcting grammatical errors and enhancing sentence structures.
3. **Vocabulary Enhancement**: Grammarly and XIPU AI assist users in adopting more formal and precise vocabulary, with Kimi providing limited support.
4. **Paragraph Organization**: Magic School and XIPU AI contribute to better paragraph structure, though Kimi show limited impact in this area.
5. **Logic Feedback**: Kimi is recognized for its ability to enhance logical coherence, while Grammarly and XIPU AI provide additional support through example suggestions and structural feedback.
6. **Teacher Feedback Importance**: Participants consistently emphasize the necessity of teacher feedback, especially for guiding logical reasoning, offering emotional support, and ensuring personalized guidance.

IMPLICATIONS

- Student Engagement and Learning Outcomes: The integration of GenAI in feedback provision has the potential to revolutionize learning feedback, with positive effects on student engagement and learning outcomes.

- AI+ Teacher Model: Combining AI feedback with teacher input can leverage the strengths of both, providing comprehensive and nuanced feedback that addresses diverse error categories and supports holistic learning.

IMPLICATIONS

- **Creativity and Critical Thinking**: Despite the benefits, students express concerns about the potential negative impacts of GenAI tools on creativity and critical thinking. Some fear that overreliance on AI might hinder their ability to develop these essential skills. This concern is rooted in the constructivist theory, which emphasizes the importance of active learning and critical thinking in knowledge construction.

- **Ethical and Practical Issues**: Students also highlight ethical concerns, such as the potential for plagiarism and the need for maintaining academic integrity. These concerns align with the ethical use of technology framework, which stresses the importance of using technology responsibly and ethically in educational settings.

EXPLORATION

- Kimi
- Magic school (Raina Chatbot)
- Grammarly

Let's explore and evaluate these AI tools' generated content.

Possible prompt:
Write a discursive essay based on the essay topic below.
Benefits and drawbacks of integrating Generative AI in Higher Education. Word count: 300-500 words. Source: use at least 3 academic sources.

REFERENCES

Davis, F.D. (1989). Perceived Usefulness, Perceived Ease Of Use, And User Acceptance. MIS Quarterly, 13(3), 319-340.

Shi, H., and Aryadoust, V. (2024). A systematic review of AI-based automated written feedback research. ReCALL, 36(2), 187–209. doi:10.1017/S0958344023000265

THANK YOU

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