From Reflection to Performance: Integrating the 4F Reflective Thinking Model into Classic English Story Reading in an AI-Supported EFL Context

Recognizing how rapid technological advancement can intensify anxiety and uncertainty among young adults, this study utilizes English Bible stories to guide college students through fundamental life questions. By engaging with these enduring narratives and reflecting on their themes, students are encouraged to construct meaning and develop a sense of purpose. At the same time, the study promotes English language development within an AI-supported learning environment, aiming to cultivate positive values while strengthening linguistic and technological competencies for the modern world.

The intervention integrates Greenaway's (1993) 4F Reflective Model—Facts, Feelings, Findings, and Future—into English story instruction. Grounded in Dewey's (1933) reflective experience and Kolb's (1984) experiential learning theory, the 4F model provides a structured reflective pathway from experience to future action. Through this 4F process, this study fosters positive thinking and value formation while maintaining a clear focus on language learning outcomes. Empirical studies employing 4F in AI-supported EFL reading instruction are scarce. This study bridges the gap and expands the current literature in the fields of experiential learning, reflective practice, and AI-assisted language learning.

To support both linguistic and digital development, the intervention incorporates two AI-powered applications as learner scaffolds, Immersive Reader and Reading Progress. These systems provide oral reading modeling, immediate feedback, and progress tracking, enabling students to improve oral reading fluency and accuracy, as well as text comprehension at their own pace while promoting digital literacy.

Using a one-group pre- and posttest research design, the 18-week intervention involves 22 Taiwanese college students in 4F discussions and performance-based tasks that encourage active engagement and internalization of learning. Each student accomplishes six weekly reading tasks via the two AI-powered tools to enhance their pronunciation and comprehension of selected verses. As a group project, students create 4F reflection posters to synthesize textual understanding and personal insights in multimodal formats. They then share their insights in group poster presentations. These tasks are designed to enhance reading comprehension, vocabulary acquisition, and oral reading performance, while providing structured opportunities for students to articulate emotions, values, and insights in English.

To evaluate the effectiveness of the 4F-based, AI-supported approach, mixed-methods data are collected. Research questions examine shifts in students' learning motivation, positive thinking, empathy, English reading skills, and their overall perceptions of the project. Quantitative measures include a questionnaire, an English reading vocabulary test, and an English read-aloud oral test administered before and after the intervention. Qualitative data are drawn from 4F reflective worksheets, AI-assisted scripts, students' presentation videos, and focus group interviews. Findings will provide practical implications for educators seeking to integrate reflective, values-oriented learning with language instruction and educational technology. Ultimately, this project aims to cultivate empathetic, AI-literate, and globally minded communicators capable of addressing complex challenges with both innovation and humanistic awareness.

Keywords: 4F Reflective Thinking Model, AI-supported Language Learning, English Learning Motivation, English Reading, Positive Thinking

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