KiwiICP Interface: Redefining AI-Powered Educational Assistance

Team *Plumber*

Abstract

KiwiICP is an innovative educational assistant built on the Interactive Course Platform (ICP). It provides contextual support to students by following their progress on course slides and fostering an understanding of problem-solving approaches. This proposal presents enhancements aimed at making KiwiICP more efficient, personalized, and integrative, focusing on course progress tracking, learning management system (LMS) integration, self-learning support, teacher tools, and adjustable AI proficiency.

1 Introduction

Modern education demands tools that enhance learning through real-time, contextual guidance while encouraging problem-solving skills. KiwiICP fulfills this role by leveraging AI to assist students in navigating course content, solving assignments, and engaging with study materials.

However, current limitations such as scattered chat histories and lack of system integration restrict its potential. Our proposal seeks to refine KiwiICP, creating a more robust, connected, and user-friendly experience for students and educators.

2 Proposed Enhancements

2.1 Course-Based Chat Histories

Unlike traditional chat systems with scattered conversation records, KiwiICP will organize chat histories based on the courses enrolled. This enhancement will:

- Track progress and context across the semester.
- Provide course-specific suggestions and solutions.
- Automatically review prerequisite topics if students encounter difficulties.

2.2 LMS Integration (Brightspace and GradeScope)

Connecting KiwiICP with LMS platforms ensures a comprehensive tracking and assistance framework:

- Link announcements, grades, and assignments directly to KiwiICP.
- Alert students to review related topics when errors occur in assignments.
- Send push notifications for upcoming deadlines and updates.

2.3 Self-Learning Support

Beyond classroom learning, KiwiICP will:

- Integrate external tutorials and resources.
- Answer queries related to self-paced study.
- Offer guided tutorials to bridge gaps in understanding.

2.4 Advanced Teacher Tools

Teachers will have access to enhanced tools that allow:

- Real-time updates to course content.
- Advanced analytics for student performance.
- Identification of knowledge gaps and suggestions for remedial actions.

2.5 Adjustable Proficiency Levels

The "Zoom-In/Zoom-Out" feature will allow users to:

- Adjust KiwiICP's proficiency level based on individual needs.
- Explore advanced content or simplify explanations for foundational understanding.
- Tailor assistance to different levels of academic proficiency.

3 Implementation Details

3.1 Technical Design

The proposed enhancements rely on:

- API-based integration for LMS platforms.
- Modular architecture for scalability.
- AI models fine-tuned for contextual learning and feedback loops.

3.2 Feasibility Analysis

Our design aligns with current educational technologies and addresses specific pain points identified during pilot studies. Key insights from NYU Shanghai highlight:

- The need for seamless integration with existing learning tools.
- Demand for personalized, contextualized assistance.

4 Benefits of the Enhanced KiwiICP

- Increased engagement and retention through contextual learning.
- Bridging classroom learning and self-study with a unified assistant.
- Empowering educators with data-driven teaching strategies.

5 Conclusion

The proposed refinements to KiwiICP will transform it into a comprehensive educational assistant that empowers students and teachers alike. By combining personalization, LMS integration, and adaptive features, KiwiICP sets a new standard for AI in education.