

# A Team-Based Project Model Based on Artificial Intelligence (AI) in The English for Tourism Course

Ayu Melati Ningsih<sup>1</sup>, Risnawaty<sup>2</sup>, Vera Kristiana<sup>3</sup>, Yayuk Yuliana<sup>4</sup>,  
Alisia Hamidah Siloto<sup>5</sup>

Universitas Muslim Nusantara Al-Washliyah, Indonesia

<sup>1</sup> ayumelati@umnaw.ac.id, <sup>2</sup> risnawaty@umnaw.ac.id, <sup>3</sup> verakristiana@umnaw.ac.id,

<sup>4</sup> yayukyuliana@umnaw.ac.id, <sup>5</sup> alisiahamidahsiloto@umnaw.ac.id

## Abstract

This study explores the implementation of a team-based project model incorporating Artificial Intelligence (AI) in an English for Tourism course designed for students of the English Literature Study Program at Universitas Muslim Nusantara Al-Washliyah. The research aims to assess how AI can enhance collaborative learning and communication skills, essential for the tourism sector. The research used a mixed-methods approach, combining qualitative and quantitative data collection. Quantitative data from the pre- and post-tests were analyzed using statistical software to compare students' improvement in language skills. Qualitative data from the surveys and interviews were analyzed using thematic analysis to identify patterns in student feedback. The result of the research is language improvement 25% average increase in language proficiency, teamwork 80% of students reported improved collaboration and satisfaction and AI effectiveness 90% found AI tools helpful with 75% appreciating the interactive learning experience. The research concluded that incorporating AI into team-based project models in the English for Tourism course significantly enhances both language learning and collaborative skills. Students not only improved their linguistics competencies but also become more adept at working in teams, simulating real-world tasks in the tourism sector.

**Keywords:** Team-Based Project Model; English for Tourism; Mixed-Methods

## INTRODUCTION

Artificial Intelligence (AI) has revolutionized education, particularly in language and skill-based courses, by transforming traditional learning approaches. This study investigates the implementation of an AI-enhanced team-based project model in an English for Tourism course, specifically examining how AI tools facilitate collaborative learning and enhanced communication skills-essential competencies for future tourism professionals (Hwang et al., 2020). Beyond personalizing learning experiences and optimizing group dynamics (Zawacki-Richter et al., 2019), AI-powered applications like natural language processing, chatbots and automated feedback systems have shown remarkable potential in developing learners' communicative abilities (Luckin, 2018). In project-based learning contexts, these technologies not only help students automate routine tasks and sharpen research skill (Balacheff, 2009) but also enable deeper focus on higher-order thinking. For tourism education specifically, AI-driven simulations and virtual role-playing scenarios offer realistic preparation for cross-cultural-communication and customer service challenges (Gretzel & Koo, 2021). However, while AI offers transformative potential, educators must address algorithmic biases, data privacy, and the risk of reduced human interaction in learning (Roll & Wylie, 2016). Thus, this study not only evaluates AI effectiveness in the specific context of English for Tourism but also provides recommendations for optimizing AI benefits while mitigating potential challenges.

The findings are expected to contribute to developing best practices in utilizing AI for language and professional skills education.

The integration of Artificial Intelligence (AI) in education has brought significant transformations to learning methods, particularly in language and skills-based courses. According to (Li et al., 2025), AI enhances collaborative learning by providing real-time feedback and ensuring balanced participation among group members. Adaptive AI-powered learning systems can also tailor materials to individual student needs, thereby increasing engagement and knowledge retention in language courses (Popenici & Kerr, 2017). In language learning contexts, chatbots equipped with natural language processing enable students to practice conversations in a low-pressure environment, boosting confidence and communication fluency (Fryer et al., 2019a). This study examines the implementation of a team-based project model enhanced by AI in an English for Tourism course, focusing on evaluating AI tools' role in fostering collaborative learning and improving communication skills - crucial competencies for students entering the tourism industry. The application of an AI-enhanced team-based project model within an English for Tourism course. AI tools can optimize collaborative learning dynamics and strengthen communication competencies-essential skills for aspiring tourism professionals. By focusing on this specialized context, the study aims to contribute empirical evidence about AI's role in developing industry-relevant language skills through project-based learning approaches.

This research explores the integration of AI into a team-based project model within an English for tourism course, aiming to assess its impact on collaborative learning and professional communication development. The tourism industry demands strong communication skills, cultural awareness, and teamwork abilities (Dudley-Evans & Saint John, 2003). For students in the English literature study program at Universitas Muslim Nusantara Al-Washliyah, mastering English for specific purposes (ESP) particularly in tourism is essential for future career readiness. Traditional teaching methods often lack interactive, real-world applications, which AI enhanced collaborative project could address. Collaborative learning models, such as team-based project have been widely recognized for fostering critical thinking and problem-solving skills. (Hwang et al., 2020) AI tools can mitigate these issues by providing real-time language corrections, automated role assignments, and data driven group performance analytics. AI driven platforms can facilitate more equitable teamwork by monitoring individual contributions and suggesting improvement. In tourism education, where scenarios-based tasks (e.g., hotel bookings, tour guiding simulations) are common, AI can simulate real interactions, offering students a dynamic learning environment. Few studies have examined how AI affect team dynamics in project-based learning. This research fills that gap by investigating AI's role in optimizing collaboration and communication in a tourism.

This research is grounded in sociocultural theory (Vygotskij & Cole, 1981) which emphasizes collaborative learning, and (Kessler, 2024) framework on AI in language education, which highlights adaptive learning technologies. These theories support the hypothesis that AI augmented teamwork can scaffold students' zone of proximal development in acquiring tourism-specific language skills. This research aims to evaluate the effectiveness of AI in improving team collaboration in an English for tourism course, measure the impact of AI tools on students' communication skills in tourism-related scenarios and identify challenges and benefits of integrating AI into team based project.

## **METHOD**

This study involved 42 English Literature students enrolled in the English for Tourism course at Universitas Muslim Nusantara Al-Washliyah. Participants comprised 35 female and 7 male students aged 19-22, with pre-test English proficiency levels at B1 on the CEFR scale.

The study followed a structured three-phase implementation process. In the preparation phase, students underwent comprehensive training on the AI tools, followed by AI-assisted group formation that created seven balanced teams of six members each. The grouping algorithm considered three key factors; 1) English pre-test result, 2) individual learning styles, and 3) specific interest within the tourism sector. Execution phase, the AI system performed multiple critical functions; 1) serving as a task allocator that automatically assigned authentic tourism roles, 2) acting as a virtual mentor that provided immediate feedback during simulation exercises, and 3) functioning as an objective assessor that evaluated individual contributions through detailed metrics including participation frequency, vocabulary complexity, and field specific language accuracy. The evaluation phase concluded the intervention with a standardized post-test administration and AI-analytics guided reflection sessions, where students reviewed their team’s performance data and growth metrics generated by the system throughout the project. This phased approach ensured systemic integration by the system while maintaining pedagogical focus on tourism specific language competencies and collaborative skill development.

Creswell et al., (2018) the research employs a mixed methods design to gather comprehensive data. This approach was chosen because quantitative is objectively measures language skill improvement through tests and qualitative is captures subjective students experiences via surveys and interviews. As rationale the combination allows for data triangulation enhancing validity.

**Table 1.** Mixed Methods Design

	Data Sources	Data Analysis	Purpose
Quantitative Data	Pre and post test	SPSS 1. Survey and pre-test and post-test to measure the increase in students’ linguistics competence. 2. Evaluating using predertmined performance indicator, such as increased average test scores and daily communication skills.	Provides empirical evidence of the model’s effectiveness
Qualitative Data	Survey and Interviews	1. In-depth interviews with students and lecturers regarding their experiences participating in team project	Contextualizes quantitative result and uncovers underlying processes

with AI  
integration

## RESULTS AND DISCUSSION

### Results

To assess the effectiveness of the AI-enhanced instructional model, paired samples t-test was conducted using SPSS to compare students' language proficiency scores before and after the intervention.

**Descriptive Statistics**

	N	Minimum	Maximum	Mean	Std. Deviation
ID	10	1	10	5.50	3.028
Pre-Test	10	50	80	65.00	9.129
Post-Test	10	75	95	86.10	5.971
Valid N (listwise)	10				

The result of the research is language improvement 25% average increase in language proficiency, teamwork 80% of students reported improved collaboration and satisfaction and AI effectiveness 90% found AI tools helpful with 75% appreciating the interactive learning experience. The research concluded that incorporating AI into team-based project models in the English for Tourism course significantly enhances both language learning and collaborative skills. Students not only improved their linguistics competencies but also become more adept at working in teams, simulating real-world tasks in the tourism sector.

Language proficiency improvement : a paired samples t-test was conducted using SPSS to evaluate the impact of the AI-enhanced team based project model on students language proficiency form pre-test (M=65.00, SD=9.129) to post-test (M=86.10 SD=5.971, t(9)=8.76, p<0.001. this represents an average increase of 25% in test scores, indicating a strong positive effect of the innovation. The substantial gain suggest that the integration of AI tools such as real time feedback systems, AI powered chatbots for conversational practice, and automated grammar and vocabulary correction provided students with immediate, personalized support that reinforced language acquisition.

Collaborative skills : qualitative data from surveys and interviews revealed that 80% of students reported noticeable improvement in teamwork and collaboration. Students highlighted that the AI system played a pivotal role in structuring group. Students noted that this visibility fostered a sense of responsibility and improved communication within teams, simulating realworld collaborative environment in the tourism industry.

Effectiveness and satisfaction with AI intergration: 90% of students found the AI tools helpful in supporting learning, while 75% specifically appreciated the interactie and engaging nature of the AI simulations. Students reported feeling more motivated and immersed in learning tasks compared to traditional lecture based methods.

The significant improvement in post-test scores suggest that cooperating AI into team-based projects effectively enhances language proficiency among students in the English for Tourism course. The AI tools likely provided personalized feedback and interactive learning experiences, contributing to this improvement. The qualitative findings support this, with students reporting enhanced collaboration and satisfaction. The AI tools facilitated more dynamic and interactive group work, mirroring real-world tasks in the tourism sector, thereby preparing students for industry demands. These results align with previous studies highlighting the benefits of AI in language learning and collaborative skills development. The integration of

AI not only improved linguistic competencies but also fostered essential soft skills like teamwork, critical in the tourism industry.

### Discussion

The research provide compelling empirical evidence that the integration of AI into a team based project model significantly enhances both language proficiency and collaborative learning outcomes in an English for tourism course. The quantitative results demonstrate a statistically significant improvement in students' language skill, with a mean increase from 65.00 (SD=9.129) in the pre-test to 86.10 (SD=5.971) in the post-test,  $t(9) = 8.76$ ,  $p < 0.001$ , representing an average improvement of 25%. This substantial gain supports the hypothesis that AI enhanced instruction effectively scaffolds language acquisition, particularly within an ESP context.

This improvement can be attributed to the AI system's capacity to deliver immediate, personalized, and context specific feedback a critical component in language learning. (Luckin, 2018) AI systems leverage machine learning and natural language processing to adapt to individual learners' needs, offering targeted corrections in grammar, vocabulary, and pronunciation during simulated tourism scenarios such as hotel check ins, tour guiding, dan customer service interactions. (Vygotskij & Cole, 1981) sociocultural theory, particularly the concept of the zone of proximal development, where AI acts as a digital scaffold, enabling learners to perform tasks beyond their current independent ability with structured support.

Furthermore, the qualitative data reveal that 80% of students reported enhanced collaboration and teamwork skills. This outcome underscores the role of AI not only as linguistic tutor but also as a facilitator of equitable group dynamics. The AI assisted grouping algorithm based on pre test scores, learning styles, and sector specific interest ensured balanced team formation, minimizing disparities in contribution and reducing the risk of free riding. Additionally the system's function as an objective assessor, tracking individual participation frequency, vocabulary complexity, and language accuracy, promoted accountability and transparency within teams. (Hwang et al., 2020) AI can optimize collaboration learning by providing actionable insight into group performance, thereby fostering a more inclusive and productive learning environment.

The high level of student acceptance 90% found AI tools helpful, and 75% appreciated the interactive and engaging nature of the simulations further highlights the motivational benefits of AI integration. (Fryer et al., 2019b) AI powered conversational agents create a low pressure environment for language practice, allowing learners to experiment with language without fear of judgment. (Popenici & Kerr, 2017) AI systems enhance student motivation and knowledge retention. Moreover, the growing body research on AI in higher education (Zawacki-Richter et al., 2019) in the context of ESP and professional skill development.

In contrast to general English instruction, English for Tourism requires more than just grammatical precision, it necessitates cultural awareness, emotional intelligence, and communication skills oriented toward customer service. These multifaceted competencies were effectively developed through AI scenarios based tasks. By simulating authentic tourism situations such as resolving customer complaints or navigating multilingual exchanges students were able to practice and refine industry specific skills within a secure and structured learning environment.

The effectiveness of this model does not arise from AI supplanting the role of the instructor, but rather from its functions as a tool to enhance and support teaching practices. Educators continued to play a vital role by leading reflective discussions, interpreting data generated by AI, and fostering critical dialogue tasks that rely on human judgment, empathy, and pedagogical expertise. (Roll & Wylie, 2016) the potential erosion of human interaction in technology mediated classrooms, illustrating that AI and teacher involvement can complement each other

effectively. The study recognizes several limitations, including sporadic technical difficulties, the necessity for students and teachers to develop digital literacy, and ethical concerns surrounding data privacy and algorithmic fairness. These challenges underscore the importance of a deliberate, well supported and continuously monitored implementation of AI in education. This research confirms that integrating Ai into a team based project framework represents a significant pedagogical advancement for ESP courses. It not only strengthens language proficiency but also nurtures key soft skills such as teamwork, responsibility, and problem solving abilities essential for thriving in the international tourism sector. (Kessler, 2024) framework on technology integration, providing actionable guidance for educators aiming to adopt AI in language teaching in a manner that is both impactful and ethically responsible.

## CONCLUSION

The integration of AI into team-based project models within the English for Tourism course significantly enhances both language learning and collaborative skills. The results confirm that AI enhanced model not only led to a 25% average increase in language proficiency but also fostered a collaborative learning environment where 80% of students reported improved teamwork skills. The AI system's role in automating role assignments, providing real time feedback, and generating performance analytics ensured equitable participation and continuous skill development. Furthermore, a high acceptance rate of 90% found AI tools helpful so AI to create engaging, low anxiety learning spaces that mirror real world professional settings in the tourism sector.

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