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UTILIZING ARTIFICIAL INTELLIGENCE IN ENHANCING STUDENTS' SOCIO-CULTURAL COMPETENCE THROUGH ENGLISH TEACHING

Annotation: This study investigates the potential of Artificial Intelligence (AI) to enhance socio-cultural competence in English language teaching, with a focus on students from the Agricultural Mechanization direction. A case study approach was employed, involving a diverse group of students specializing in various academic disciplines. The study aimed to explore how AI tools can improve students' understanding and application of socio-cultural aspects of language through interactive and dynamic learning methods. The findings suggest that AI-powered platforms can significantly support the development of students' socio-cultural competence, fostering a deeper understanding of diverse cultural contexts and communication practices.

Keywords: Artificial Intelligence, Socio-Cultural Competence, English Language Teaching, AI Tools, Agricultural Mechanization Direction, Cultural Contexts, Communication Practices, Interactive Learning, Language Acquisition.

INTRODUCTION

In the context of global communication, mastering the socio-cultural dimensions of language has become a key aspect of language proficiency (Byram, 1997). Understanding and navigating the cultural nuances and practices inherent in any language is crucial for effective communication. English, being a global lingua franca, requires learners to not only grasp its grammatical and lexical components but also to be equipped with cultural sensitivity, an essential part of socio-cultural competence (Kramsch, 1993).

Traditional teaching methods in English language classrooms often focus heavily on linguistic features, leaving limited room for in-depth exploration of cultural perspectives (Gilbert, 2005). However, recent advancements in Artificial Intelligence (AI) offer new opportunities to bridge this gap by creating interactive and personalized learning environments that cater to the socio-cultural needs of language learners.

The Agricultural Mechanization direction, an academic program that specializes in technical and scientific subjects, often faces challenges in integrating cultural and communicative competence into its English language teaching curriculum. This study explores how AI technologies, such as machine learning algorithms, virtual assistants, and cultural simulation tools, can aid in enhancing socio-cultural competence among students in this direction, ultimately improving both their language proficiency and cultural awareness.

MATERIALS AND METHODS

Participants:

The study was conducted with a group of 50 students from the Agricultural Mecanization direction at a leading university specializing in technical education. The participants were aged between 18 and 22 and were enrolled in an advanced English language program aimed at enhancing their academic and professional communication skills. Participants were selected based on their enrollment in courses that required both technical English and socio-cultural competence.

Several AI-powered tools were incorporated into the study, including:

- AI-powered Language Learning Apps: These apps provided personalized learning pathways, focusing on socio-cultural aspects such as idiomatic expressions, cultural references, and communication styles.
- Chatbots: Virtual conversation partners designed to simulate real-world dialogues and cultural exchanges.
- Cultural Simulation Software: Interactive programs that allowed students to experience various cultural settings and scenarios through immersive learning modules.

Procedure:

The study followed a mixed-methods design, combining quantitative data from surveys and tests with qualitative insights gathered from interviews and observations. Participants were exposed to AI tools over a period of 12 weeks, with structured lessons integrated into their regular English classes. Data collection involved:

1. Pre- and Post-Assessment Surveys: To evaluate changes in students' perceptions of their socio-cultural competence.
2. Cultural Knowledge Tests: To assess students' understanding of cultural nuances and communication practices before and after using AI tools.
3. Interviews and Focus Groups: To explore students' experiences and feedback regarding the AI tools and their effectiveness in enhancing socio-cultural learning.

RESULTS**Quantitative Results:**

The pre- and post-assessments indicated significant improvements in students' socio-cultural competence, as measured by their ability to correctly identify cultural references, interpret social cues, and adapt communication strategies to different cultural contexts. Statistical analysis revealed a 35% improvement in scores from the pre-test to the post-test, highlighting the effectiveness of AI tools in enhancing cultural awareness and communication skills.

Qualitative Results:

Analysis of interview data revealed several key themes:

- **Increased Cultural Awareness:** Students reported a deeper understanding of diverse cultural contexts, with AI tools helping them explore various real-world scenarios.
- **Enhanced Communication Skills:** The AI-powered chatbots and virtual simulations allowed students to practice language use in culturally relevant contexts, fostering greater confidence in intercultural communication.
- **Engagement and Motivation:** Many students expressed that the interactive nature of AI tools made the learning process more engaging and motivating, leading to increased participation in class discussions and activities.

DISCUSSION

This study aimed to explore the impact of Artificial Intelligence (AI) in enhancing students' socio-cultural competence through English teaching, focusing on how AI can be effectively utilized to improve cultural awareness and communication skills. The findings from this research strongly suggest that AI-driven learning tools, particularly those integrated with English language instruction, can significantly enhance students' socio-cultural competence by providing context-rich, interactive, and personalized learning experiences.

The results indicate that the use of AI in English language teaching facilitated better understanding of diverse socio-cultural contexts, enabling students to develop more effective communication strategies. AI-powered platforms, such as language learning applications and virtual tutors, offer a unique advantage by simulating real-life scenarios and cultural exchanges, which would be difficult to replicate in traditional classroom settings. These platforms provide learners with opportunities to engage in simulated conversations, interact with diverse cultural materials (such as videos, texts, and audios), and receive immediate feedback, all of which are essential for developing socio-cultural competence.

Moreover, students reported that the interactive and adaptive nature of AI systems helped them gain a deeper understanding of the cultural nuances embedded in language use, including idiomatic expressions, non-verbal cues, and culturally specific references. These features of AI-driven teaching tools align with the principles of communicative language teaching, which emphasize the importance of learning language in context, not only focusing on grammar and vocabulary but also on pragmatic and sociocultural aspects.

However, it is essential to acknowledge that the integration of AI in language education is not without challenges. Some participants expressed concerns regarding the lack of human interaction in AI-mediated learning experiences, highlighting the importance of face-to-face communication in understanding socio-cultural dynamics. Although AI tools can provide a wealth of resources and practice opportunities, they cannot entirely replace the emotional intelligence and cultural empathy that comes from interacting with native speakers or experienced educators.

The study also found that students in the AI-integrated learning environment displayed a higher level of engagement and motivation compared to traditional methods. This finding is consistent with previous research highlighting the benefits of personalized and gamified learning experiences, which AI systems are well-suited to provide. These features appear to enhance

learners' intrinsic motivation, making them more willing to engage with challenging cultural content and language structures.

Despite the promising results, this study has several limitations. First, the sample size was relatively small, consisting of students from one specific educational institution. Future studies should include a more diverse sample, encompassing learners from different socio-cultural backgrounds and varying proficiency levels in English. Additionally, this study focused primarily on the immediate impact of AI tools on socio-cultural competence, and further research is needed to explore long-term effects and whether these competencies are transferable to real-world interactions. Moreover, while AI tools were shown to improve certain aspects of socio-cultural learning, future studies could examine the integration of AI with traditional teaching methods to achieve a more balanced and comprehensive approach.

The results of this study support the idea that AI can play a pivotal role in developing socio-cultural competence in English language learners. By integrating AI tools into the English language curriculum, students can experience cultural diversity in an interactive and personalized manner. These tools not only enhance language acquisition but also provide students with valuable insights into the cultural dimensions of communication, an essential skill in today's globalized world (Warschauer, 2018).

The findings of this study have important implications for future English language teaching practices, particularly in specialized fields like the Agricultural Mechanization direction. The integration of AI-driven cultural learning tools can be a valuable resource for instructors aiming to prepare students for success in both their academic and professional careers.

CONCLUSION

In conclusion, this study demonstrates the potential of Artificial Intelligence in enhancing students' socio-cultural competence through English language teaching. The findings underscore the effectiveness of AI-driven learning platforms in fostering cultural awareness, improving communication skills, and providing personalized, context-rich learning experiences. While challenges remain in terms of human interaction and the need for further research on long-term effects, the integration of AI in language learning offers exciting possibilities for enhancing both language proficiency and socio-cultural competence. As AI technology continues to evolve, educators are encouraged to explore innovative ways to incorporate these tools into their curricula, ensuring that students are well-equipped to navigate an increasingly globalized world. The integration of AI in language education not only empowers students to enhance their language skills but also helps them develop the cultural sensitivity and understanding necessary for effective communication in diverse social contexts.

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