ETHICAL IMPLICATIONS OF USING ARTIFICIAL INTELLIGENCE AND GAMIFICATION TO IMPROVE TEACHING IN ENGLISH COURSES: A CASE STUDY IN MEXICAN EDUCATION

1 INTRODUCTION ATM

Contemporary education is undergoing a significant transformation, driven by the rapid development of digital technologies. These changes not only alter how information is accessed, but also how knowledge is taught and acquired in the classroom. In light of this situation, there is a need to investigate new methodologies that meet the demands of students who are increasingly integrated into digital environments.

2 METHOD

The study was conducted using a single-case design with a comparative approach. An initial socio-educational assessment was conducted to characterize the context and linguistic needs of the students. The intervention consisted of implementing a didactic sequence based on ChatGPT as a tutor and gamification strategies in the experimental group, while the control group followed a traditional methodology. Learning assessment was conducted using equivalent instruments administered to both groups. The data obtained were subjected to comparative analysis to identify variations in performance and motivation.


STAGES

Grupo	Promedio Test Indagatorio	¿Cantidad de estudiantes que tienen algún tipo de dispositivo móvil?	¿Con qué dispositivo cuentas?	¿Tienes acceso a internet ?	¿De qué forma accedes a internet?	¿Tienes cuenta de gmail?
A 42% Hombres 58 % Mujeres	4.8 ± 2	100 %	7 % Tablet; 43 % Comp.	96 %	85 % Wifi hogar; 15 % datos	88 %
B Hombres 15 % Mujeres: 85 %	5 ± 2.3	100 %	26 % Tablet; 39 % Comp.	96 %	83 % Wifi hogar; 17 % datos	100 %

3 RESULTS AND DISCUSSION

The qualitative analysis of the responses obtained revealed growth in the group that worked with ChatGPT and gamification strategies. Interacting with the AI assistant allowed them to clarify doubts immediately and receive explanations ideal to their own learning pace. Overall, the qualitative data reveal that integrating ChatGPT as a digital tutor, coupled with gamification elements, not only fostered English language learning but also enhanced motivation, academic confidence, and student engagement.
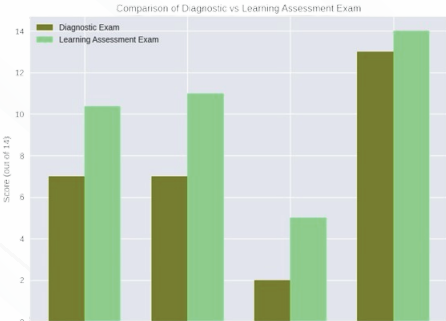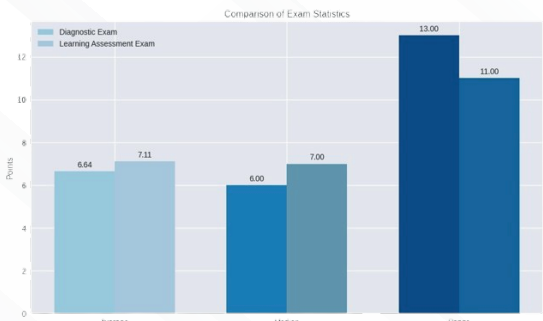
4 CONCLUSION

- First, The combination of AI and gamification can significantly improve English teaching in secondary school.
- Second, AI is a powerful tool, but it is only effective when accompanied by clear pedagogical intentions and teacher supervision.
- Third, This study provides practical and relevant evidence for Mexican institutions seeking to integrate AI into their educational practices responsibly.

5 FUTURE WORK

The design of new instructional sequences that integrate generative artificial intelligence with active pedagogical approaches is being considered, along with the implementation of mixed-methods assessment instruments to obtain a more comprehensive view of performance. As well as developing institutional ethical protocols and more deeply assessing students' digital autonomy when interacting with AI.

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