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Feasibility of using serious MIDI-AM videogames as resources in early childhood education

PROBLEM

There is little evidence regarding specific use as educational video games or serious games in controlled environments and their effectiveness as a tool in the process of developing cognitive skills, despite children being observed to use and interact with technology from an early age and the use of video games as an educational strategy for the development of cognitive skills and competencies.

GENERAL OBJECTIVE

The objective is to establish a feasibility analysis of educational video games from the MIDI-AM series (Spanish acronym for Mobile Applications for Chil-dren's Educational Interactive Multimedia) in infants attending Child Development Centers (CDI) and Growing with our Children (CNH) of the Ministry of Economic and Social Inclusion in urban-marginal and rural areas of Guayaquil.

PROPOSAL

- To analyze the implementation of these games in controlled environments and evaluate their effectiveness as educational tools by monitoring gameplay metrics and collecting on-site data, such as parent surveys.
- To determine whether MIDI-AM video games can be effectively integrated into early childhood education, supporting the development of cognitive skills and competencies in children.
- The theme and characters of the video game focus on curricular activities and technological training plans, making them part of the children's cultural development.

RESULTS

- 82.04% of children aged between two and four years old can achieve a level of engagement in using MIDIAM video games guided by their parents or caregivers.
- 100% of children over three years old were interested in playing the games, while younger children were more interested in physical play activities.
- Games like MIDIAM are suitable for effectively complementing the teaching and learning process for children over three years old.
- Early childhood learning strategies should select the type and level of game to be played alongside physical, playful activities, and concrete materials.
- Out of 985 families, only 446 managed to create a user and play at least one game.

Platform Architecture MIDI_AM.Created by: Adriana Márquez

CONCLUSIONS

The results regarding the feasibility of using serious educational video games from the MIDI-AM series in early childhood education suggest that children interact positively with technology and video games, contributing to the development of cognitive skills in areas such as reading and mathematics. However, the study also emphasizes the need for ongoing support and systematic integration of these resources into the educational curriculum to maximize their effectiveness and long-term sustainability.

ACKNOWLEDGMENT

Thanks to the Escuela Superior Politécnica del Litoral (ESPOL) for sponsoring the continuation of this research and publications. It is worth mentioning the contribution of the group of researchers, academics, and students from the Faculty of Art, Design, and Audiovisual Communication (FADCOM), especially Elizabeth Elizalde as the director of the faculty's social engagement program, and the "Instituto Superior Tecnológico Vicente Rocafuerte" (ISTVR) as the academic partner for carrying out the fieldwork of this research.