

MemoSign Game: A learning Game for Deaf Learners

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MemoSign Game
<http://tunisigner.com/memosign>

Today, computer games are a ubiquitous part of almost all children's and adolescents' lives. A significant and growing body of research shows that the use of digital games for educational purposes is a promising and interesting alternative to support learning abilities of these teenagers. In fact, educational games can consume the attention of learners and increase their motivation and engagement which can then lead to stimulate learning. Nonetheless, most of the research to date on educational games focused only on learner with typical development. Rather less is known about designing of educational games for learners with special needs. For that, we present in this paper a new educational game for deaf learners, called MemoSign. This educational game was specially designed to foster vocabulary acquisition for deaf signers in both signed and spoken written languages.

MemoSign is a learning version of a well known card game called memory match game. It federates the use of avatar technology and the sign language written system SignWriting. Through the use of this game, learning SignWriting notations would become more enjoyable and extremely interesting. Actually, more than just play, MemoSign could be an effective way to impart knowledge and teach how read and write in sign language.

MemoSign is a very simple game; it is comprised 8 pairs of cards. The player just must turn over pairs of matching cards, which have the same meaning, with the least possible trials. Blue cards hold SignWriting notations, while green cards hold their description in written language. When the player flips a card that holds a SignWriting notation, the virtual signer starts the interpretation of its notation content in visual-gestural modality. The game is over when all the cards have been matched. It should note here that the incorporation of a virtual avatar in the game could be particularly beneficial for two main reasons. In the one hand, the signing avatar could offer a support for players to understand and grasp the SignWriting notation content, and this by displaying and interpreting the transcribed gestures in natural and comprehensible movements. In the other hand, rendering an animated human like character could certainly increase and promote the engagement, fun and motivation of deaf children.

Keywords: Video games, Signing avatar, SignWriting, children with hearing impairments

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