

Accepted Manuscript

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PII: S0360-1315(18)30180-5

DOI: [10.1016/j.compedu.2018.07.005](https://doi.org/10.1016/j.compedu.2018.07.005)

Reference: CAE 3401

To appear in: *Computers & Education*

Received Date: 12 September 2017

Revised Date: 3 July 2018

Accepted Date: 4 July 2018

Please cite this article as: Schroeder N.L., Yang F., Banerjee T., Romine W.L. & Craig S.D., The influence of learners' perceptions of virtual humans on learning transfer, *Computers & Education* (2018), doi: 10.1016/j.compedu.2018.07.005.

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Running Head: VIRTUAL HUMANS LEARNING TRANSFER

The Influence of Learners' Perceptions of Virtual Humans on Learning Transfer

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Abstract: Virtual humans are often integrated into novel multimedia learning environments. However, little is known about learner's perceptions of the agents or the relationship between the perceptions and learning. In this study, the authors revise the Agent Persona Instrument, a measurement tool designed to examine how learners perceive pedagogical agents. The factor structure of the revised instrument was evaluated with confirmatory factor analysis. Next, k-means clustering was used to examine how participants' ratings on the instrument cluster into groups based on their perceptions of the virtual human. After describing the qualities of the clusters within the data, linear regression was used to examine to what extent the cluster membership influenced participant's scores on a transfer test of learning. The results indicated that cluster membership only explained a small amount of variance in transfer test scores. This study provides a revised instrument for measuring pedagogical agent persona. It implemented a novel method for investigating perceptions of pedagogical agents using k-means clustering which was able to identify two unique groups of participants based on their perceptions of the agent. Finally, it presents empirical results indicating that learner's perceptions of the agent had a small influence on their learning outcome scores.

Keywords: Pedagogical agent; Virtual human; Persona effect; API; Agent persona

Conflict of Interest: The authors declare that they have no conflict of interest.

Funding: Not applicable (no funding).

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