Accepted Manuscript

Robotics applications grounded in learning theories on tertiary education: A systematic review

Newton Spolaôr, Fabiane B.Vavassori Benitti

PII: S0360-1315(17)30097-0

DOI: 10.1016/j.compedu.2017.05.001

Reference: CAE 3170

To appear in: *Computers & Education*

Received Date: 15 November 2016

Revised Date: 27 March 2017

Accepted Date: 3 May 2017

Please cite this article as: Spolaôr N. & Benitti F.B.V., Robotics applications grounded in learning theories on tertiary education: A systematic review, *Computers & Education* (2017), doi: 10.1016/j.compedu.2017.05.001.

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Title: Robotics applications grounded in learning theories on tertiary education: a systematic review.

Authors: Newton Spolaôr[12*] and Fabiane B. Vavassori Benitti[3].

Keywords: Post-secondary education, Teaching/learning strategies, Evaluation methodologies, Improving classroom teaching.

Abstract: Empirical evidence suggests the effectiveness of robotics as a learning complementary tool in tertiary education. In this context, some experiences benefited from the link between educational practice and theory. However, a comprehensive survey on initiatives that explores this link in universities and colleges is missing. This work systematically reviews quantitatively assessed robots applications, grounded in learning theories, in tertiary institutions. By applying a protocol review in different bibliographic databases, 15 papers were selected for synthesis. As a result, experiences developing non-robotic concepts and skills in universities and colleges were found. In most of the cases, Computer Science and Engineering undergraduate courses were involved. In addition, empirical results reported by the selected publications suggest that some literature proposals can be useful in practice. Based on the panorama obtained, this work also points out future directions for practitioners and researchers in education.

ACCEPTED MANUSCRIPT

[1] Laboratory of Bioinformatics, Western Paraná State University. Foz do Iguaçu, Paraná, Brazil.
[2] Laboratory of Computational Intelligence, Institute of Mathematics and Computer Science, University of São Paulo. São Carlos, São Paulo, Brazil.
[3] Department of Informatics and Statistics, Federal University of Santa Catarina. Florianópolis, Santa Catarina, Brazil.

*Corresponding author. Phone number: +55 (45) 3576 8815
Email addresses: newtonspolaor@gmail.com (N. Spolaôr), fabiane.benitti@ufsc.br (F. B. V. Benitti)

Download English Version:

https://daneshyari.com/en/article/4936850

Download Persian Version:

https://daneshyari.com/article/4936850

Daneshyari.com