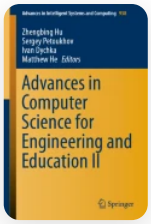
# Modeling of a Cooperative Distance Learning Environment: The Case of Optimal Size of Training Groups

| Conference paper | First Online: 29 March 2019

| pp 637–647 | Cite this conference paper




Advances in Computer Science for Engineering and Education II

(ICCSEEA 2019)

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Part of the book series: Advances in Intelligent Systems and Computing ((AISC,volume 938))

Included in the following conference series: International Conference on Computer Science, Engineering and Education Applications



## Abstract

There has been made an attempt to build a formalized model of learning environment that would take into account endogenous and exogenous parameters of the e-learning process and foresaw the prognostication of its effectiveness. The conceptual model was formalized on the basis of statistic information about the learning procedure of 15 academic groups. As the formalization methods there have been chosen the method of self-organized Kohonen maps, Artificial Neural Network modeling and Group Method of Data Handling.

In the result of clustering with the help of Kohonen maps method there has been found a cluster that encloses academic groups with high performance rate and average number of students – 7. Artificial Neural Network model has proven that performance of students depends greatly on the group size. But, unlike the Kohonen maps, a recommended minimal group size is 10 students. Artificial neural network model and Group Method of Data Handling, though, show a somewhat different result within the scope of the learning course (European Credit Transfer and Accumulation System credits). There has also been discovered that the restriction of the applied methods is the impossibility to estimate the information overload.

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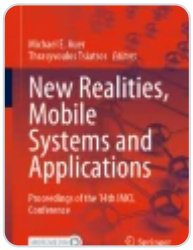


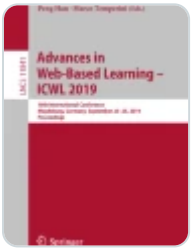


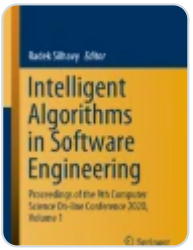

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Koroliuk, Y. (2020). Modeling of a Cooperative Distance Learning Environment: The Case of Optimal Size of Training Groups. In: Hu, Z., Petoukhov, S., Dychka, I., He, M. (eds) Advances in Computer Science for Engineering and Education II. ICCSEEA 2019. Advances in Intelligent Systems and Computing, vol 938. Springer, Cham. https://doi.org/10.1007/978-3-030-16621-2_59



DOI
https://doi.org/10.1007/978-3-030-16621-2_59

Published
29 March 2019

Publisher Name
Springer, Cham

Print ISBN
978-3-030-16620-5

Online ISBN
978-3-030-16621-2

eBook Packages
Intelligent Technologies and Robotics
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