

Text Mining of Simulation Games in the Field of Business, Management and Accounting

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Managed Simulation Games (MSIM) have great potential in education. They represent a step forward from the current way of working with students, as they allow interactive work relations, promoting independent work, creative thinking, decision making, independence from others, and creating a positive attitude towards learning. MSIM is becoming an increasingly powerful educational tool that perfectly complements traditional learning methods by stimulating learning through experience, motivating students to work and introducing into the business world through simulation. MSIM also plays an important role in the business where it is used for talent detection, training and scenario analysis, whereby by adjusting simulation games MSIM allows a particular company to investigate the consequences of specific decisions about the business of the company. The aim of our research is to perform bibliometric analysis of the literature on simulation games.

For the purpose of our study, the Scopus database was used to search scientific publications published before March 2020, with the help of the following keyword combinations TITLE-ABS-KEY ("simulation games" OR "simulation game"). We found 2038 scientific papers in various subject areas, among which 11.8% are in the field of Business, Management and Accounting. Among 439 scientific papers, 13 were excluded, i. e. notes, erratum, editorials, and retracted, which resulted in 426 papers. Those were included in the preliminary bibliometric analysis. The following information was extracted from the articles: year of publication, number of publications for specific journals, institutions and organizations that published most articles, as well as country of origin of the article. The next step was to perform a average-link hierarchical cluster analysis. The Unweighted Pair Group Mean Averaging method and Jaccard's coefficient similarity measure to determine relationships of phrases that occur in proximity. This is represented by a dendrogram, which allows for analysis of meaningful and strong connections between phrases.

The bibliometric analysis showed most results done on simulation games are from computer science, engineering and social sciences. Most of the authors of scientific publications are from United States of America. We also looked at the top 10 most important phrases in regards to simulation games and performed the cluster analysis. The results of this study bring value for both business and academy, as it shows research trends in the field of simulation games.

Keywords: simulation games, text mining, management, data science