

Using Co-Authorship Networks of Educational Data Mining to Explain Scientific Collaboration

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Abstract

Although many academic studies have been conducted in the field of EDM (Educational Data Mining), comprehensive literature reviews are needed. These studies allow us to explore gaps in research fields. Understanding the interaction between authors helps us to uncover research trends within the field. SNA (Social Network Analyses) determines the contribution of authors to academic performance and the research field. SNA visually reveals the patterns of relationships between authors. At the same time, walk-through analyses can be made within these relationships. In this study, 1903 articles scanned in Web of Science indexes between 2016-2021 in the field of EDM were examined. As a result of this study, co-authorship communities were detected within the SNA. The influence of the authors and their effects on these areas were revealed. The frequency of keyword occurrence belonging to studies in these communities was determined. Studies are classified by countries, publishers, and universities. Similarly, the funding status of the studies by the support institutions of the studies was examined. It's believed that this study will illuminate the development of educational data mining studies in the future.

Keywords: Web of Science, Social Network Analysis, Literature Review, Literature Classification, Community Detection