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Data Mining Meets Educational Analysis: Opportunities and Challenges for Research

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Abstract : Recent development of information and communication technology enables us to acquire, collect, analyse data in various fields of socioeconomic – technological systems. Along with the increase of economic globalization and the evolution of information technology, data mining has become an important approach for economic data analysis. As a result, there has been a critical need for automated approaches to effective and efficient usage of massive amount of educational data, in order to support institutions to a strategic planning and investment decision-making. In this article, we will address data from several different perspectives and define the applied data to sciences. Many believe that 'big data' will transform business, government, and other aspects of the economy. We discuss how new data may impact educational policy and educational research. Large scale administrative data sets and proprietary private sector data can greatly improve the way we measure, track, and describe educational activity and educational impact. We also consider whether the big data predictive modeling tools that have emerged in statistics and computer science may prove useful in educational and furthermore in economics. Finally, we highlight a number of challenges and opportunities for future research.

Keywords : data mining, research analysis, investment decision-making, educational research
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