Law Case Teaching Combining Big Data Environment With SPSS Statistics

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ABSTRACT

This paper proposes an online learning platform learner DM method based on the improved fuzzy C clustering (FCM) algorithm, constructs a learner feature database, and combines clustering analysis and SPSS statistical methods to statistically summarize the big data of law, thus improving the deficiencies of static and absolute classification of students in the student model. In the experiment paper, the improved algorithm is implemented and the experimental data is analyzed. The results show that the learner behavior feature extraction model in this paper has fewer errors and higher recall rate. Compared with the traditional CF algorithm, the error rate is reduced by 19.64% and the recall rate is increased by 22.85%. This study provides better targeted teaching programs and case resources for legal case teaching and promotes the innovation of legal case teaching mode.

KEYWORDS

Big Data Environment, Case Teaching, Data Mining, Law

INTRODUCTION

With the development of technology, strengthening the legal education system in universities is crucial for teaching effectiveness. This positively impacts college students' internship work and reduces the boredom in law classes. Strengthening the legal education system in universities can also enhance students' interest in learning and ability to learn independently. Optimizing university law classrooms' teaching efficiency more quickly is another significant effect of strengthening the university law education system (Darmon & Le Texier, 2016). Law education is an integral part of China's education system. It is an essential task for law educators to actively explore and practice new and suitable instructional methods (Cheah, 2017). The convenience brought by the Internet provides more choices for the study of law courses, and the growth of big data provides us with more possibilities (Ohlhausen, 2016). By collecting students' learning behavior data, we can infer their learning progress, learning status, and learning status so that the school can have a more intuitive understanding of students' information and provide guidance for their better learning (Taylor & Taylor, 2022). Driven by big data, students strengthen their existing knowledge and ask new questions through case screening, case discussion, case analysis, or other interactive methods.

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In the teaching of law, we must carry out teaching reform according to its laws and training objectives, combined with the characteristics of the course, and seek breakthroughs in instructional methods (Wang et al., 2022). The theory of law course is professional and practical, requiring students to have a solid theoretical foundation, combine theory with practice, and improve their legal practice ability (Rasulov, 2021). In the traditional online instructional platform, teachers organize teaching according to instructional progress, and students can only learn according to the pre-set learning path. The system does not play the role of teachers' immediate guidance and regulation and cannot realize individualized teaching (Meier, 2016). The law case base and laws and regulations driven by big data will comprehensively strengthen students' practical training. The innovation of law case instructional mode driven by big data makes personalized learning possible. In this article, a learner data mining (DM) method based on improved fuzzy C clustering (FCM) algorithm for an online instructional platform is proposed, and the statistics of legal big data are summarized by combining cluster analysis and SPSS (Statistical Package for the Social Science) statistical methods, to provide better targeted teaching schemes and case resources for law case teaching and promote the innovation of law case instructional mode. In the teaching process of law class, teachers will adopt the Case method according to the teaching content and purpose. Through the Case method, students can deeply analyze the legal situation of specific events and focus on developing their practical ability. The Case method can also improve students' problem-solving ability through independent thinking and teamwork. Students can combine theory with practice from the Case method to improve application skills and professional ability.

Case teaching of law plays an essential role in the vocational education of law school, and it is one of the essential ways to cultivate the professional ability of basic law (Gazzini, 2016). Under the influence of traditional teaching ideas, the content and methods of case teaching are no different from the traditional instructional mode, and they are just the means for teachers to impart authoritative knowledge. There are problems, such as the deviation of understanding of case teaching, the writing of teaching cases not meeting the objectives of case teaching, and the lack of classroom interaction and student participation (Green & Hendry, 2022). As an essential part of China's higher education, the law should keep pace with the times and implement a more modern reform plan for traditional education. Law case teaching with the help of an online instructional platform driven by big data can solve the problem of role-playing not being in place due to the large number of students, different learning levels, and acceptance ability (Fu, 2022). After the network instructional platform has been used for some time, the system database has accumulated data, such as user registration information, access control information, course scores, and other practical and valuable data. However, these data have not been fully utilized (Medeiros et al., 2018). The platform can only display the learning content statically, users cannot make personalized learning content according to their hobbies, and learners cannot evaluate their learning situation in time and effectively. The main methods and innovations of this article are as follows.

First, this study constructs a behavioral characteristic model of law learners based on the improved FCM algorithm. By collecting and analyzing the recent usage information of learners, the learning similarities of users are analyzed, and these data are matched and compared with DM patterns. A specific ranking is based on the matching degree to predict what users will learn next.

Second, the model uses DM function to analyze learners' characteristics and combines the SPSS statistical analysis to collect legal big data. Through law, it compares the analysis results of learners' characteristics with the pre-established behavior target standards and provides feedback to help law learners correct their learning behavior.

Third, in terms of instructional platform, this method permeates the growth of big data into the network big data platform and online instructional platform, combines the different data characteristics of students, carries out personalized training, and provides platform support for legal research and project promotion.

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