

Research Article

Research on the Teaching Practice of Data Governance

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Abstract

Purpose: The purpose of this study is to systematically analyze the teaching method and implementing effect of undergraduate students in data governance class for improving the students achievement and data practice capability based on their questionnaire data and class log data. *Method:* Using a questionnaire and systematic analyzing class log method, the fundamental data of the class and students are collected. The results are obvious for analyzing the collected data using the statistics and systematic analysis. *Result:* The study finds that data governance tend to focus on humanistic values, data security and privacy protection, and data ethics at abroad, yet domestic course focus on data architecture, data content governance, data quality and security governance, and data assetization. The study reveals that data governance can be taught in a modular format, using a problem-driven of blended learning approach, and hands-on labs that integrate professional knowledge. It finds that data governance can significantly increase students' desire to work in libraries, archives, and museums, while reducing their desire to work in the private sector. The study discovers that there are no significant differences in student evaluations of data governance. Students have a significant increase in the course's professional recognition and a clear understanding of the various data governance knowledge modules. It shows that the hands-on lab component of the course significantly enhance students' abilities in data collection, processing and analysis. Furthermore, to effectively teach data governance, it is necessary to develop a synchronized practice question database, strengthen interaction between teachers and students, and enhance students' hands-on lab training.

Keywords

Data Governance, Teaching Reform, Data Ethics, Data Security, Data Resources

1. Introduction

This study analyzes course teaching effective of data governance in the major of big data management and application, which is a newly undergraduate major in Chinese colleges and universities. It was officially established in 2018 and is affiliated with the discipline of management science and engineering. As of May 2025, 289 Chinese colleges and universities have successfully registered the "Big Data Management and Application" major in the Chinese Ministry of Education [1]. The course of Data Governance is an elective course for this

major. Jiangnan University offers this course in the second semester of the grade three. Data governance courses in domestic colleges and universities are booming, and there are more than 10 related textbooks available. The knowledge framework and content structure of domestic data governance textbooks vary from author to author.

The main problems can be summarized as follows: 1) The knowledge system is complex, and the textbooks are more based on the subject characteristics of the editors. The

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knowledge systems of textbooks are quite different; 2) The traces of copying previous related research results and textbook routines are obvious, and the coordination and unification between previous related course knowledge and emerging data governance are not solved; 3) Students' hands-on ability module has not received much attention. Data governance is generally an elective course for senior students. Students have systematically studied the core courses of the data management major. The data governance course needs to condense the core knowledge about the core courses of the major and strengthen the construction of students' hands-on ability module. To solve the above problems, it is necessary to actively carry out data governance course teaching design and reform research to provide basic support for the construction of big data management and application major.

I have been teaching the course of data governance for undergraduate students in the major since the spring semester of 2023. It's a continuous teaching program for three-year. From developing the syllabus and lesson plans to classroom instruction and post-class Q&A sessions, key challenges in data governance instruction lie in integrating it with social needs and integrating core data governance knowledge with other specialized courses. With the widespread adoption of AI-powered intelligent infrastructure and the resulting exponential growth in data volumes, the demand for data processing and analysis professionals continues to grow. In students' education process in the major of Big Data Management, the capability of students' hands-on practice and comprehensive application skills need to be continuously strengthened.

2. Literature Review

In terms of data governance course development, the iCaucus-listed universities tend to focus on humanistic values, data privacy and security, data ethics and others. Yet, Chinese data governance related textbooks focus on comprehensive governance knowledge, including: data architecture, metadata governance, master data governance, document and content governance, data quality governance, data security governance, the maturity of data governance capability (Xiuli Wang et al [2], 2022). It also include data integration, data standardization, the asset of data (Hongzhi Wang and Mohan Li [3], 2021), and include data acquisition, data storage, the value assessment of data governance, data governance regulation and norms, data governance culture (Hong Liu et al [4], 2024). Based on Chinese data governance knowledge structure and branch item of content, there appear 4 universities in iCaucus-listed have similar knowledge structure of data governance with China.

First, the knowledge systems of two courses at the University of Illinois at Urbana-Champaign are related to Chinese data governance courses. The first one with the number of IS524 has the same name of "Data Governance", which covers data governance issues, including data ethics, the design and implementation of governance policies, and data governance

best practices. Another one with the number of IS467 has the name of "Data Science Ethics and Policy", which covers common ethical issues related to data, including data privacy, data bias and data access. During the course time, the teacher will analyze real-life cases from enterprises, non-profit organizations, governments, academic research and healthcare. The course focuses on analyzing the complexity of data ethics in decision-making and the necessity of making trade-offs between priorities. The course also explores how to coordinate and resolve ethical issues among their stakeholders [5].

Second, the America Cornell University offers courses related to data governance, for example "Information Ethics, Law and Policy". This course explores the ethical, legal and policy foundations of information technology. The teaching method is in the form of lectures, readings, discussions and brief assignments. Teachers and students analyze the current challenges together, including the balance between intellectual property rights and privacy policies in the Internet world, and issues such as technology control. The course covers key areas of technology law and policy, for example, computational ethics, intellectual property rights, competition antitrust, freedom of speech, privacy and security, and ethical issues of artificial intelligence [6].

Third, the school of information at the University of California at Berkeley offers a course called "Behind the Data: Humanities and Values" which is data governance related course in the Master of Data Science program of the school. It mainly teaches data ethics applications, laws and policies. From the perspective of the data science life cycle, including data collection, storage, processing, analysis, and use, this course mainly analyzes the legal, policy and ethical issues that arise in this cycle, for example, privacy, surveillance, security, classification, discrimination, and decision-making autonomy etc [7].

Fourth, the University of North Carolina at Chapel Hill offers a course named Data Governance and Curation, which is part of its Master of Library and Information Science program. The course focuses on studying all activities in the data lifecycle, covering best practices, standard systems, new tools and workflows, for example, data equality, ethics in data collection, analysis and storage, data sharing and reuse in academic institutions, government and business sectors, key data curation standards, data quality, document and content management, data maturity models, and organizational change management [8].

The course named "Big Data Governance and Policy" has appeared in the list of Chinese first-class courses and is offered by the School of Public Administration of Tsinghua University. Its content covers the concept and functional analysis of data governance, government data integration and sharing, national big data strategy and policy system, open government data, data privacy protection, policy informatics, big data governance practice and etc [9]. The course uses big data theory and methods to solve national public governance problems. Based on the main content of data governance textbooks in the

world, the core knowledge of data governance can be summarized as: data quality, data architecture, master data management, metadata management, document and content management, data security and privacy protection, data ethics and etc.

From the perspective of learning desire among students majoring in Big Data Management and Application, courses that emphasize hands-on skills are popular for them. Based on students employment outcomes, students who learn big data analysis and processing techniques are adaptive to a wide range of jobs and have a great chance of being selected for interviews by employers. Data governance courses focus on theory and case analysis, but courses that integrate computer programs to aid instruction have not received sufficient attention. Data governance connects closely with research topics such as government governance, network governance, and information governance, all of which require close integration with social needs. Actively stimulating student interaction in the classroom, using hands-on computer programs as practical training tools, and introducing the latest social issues and cutting-edge technologies can stimulate students' learning interest and innovative spirit.

3. Best Teaching Practice of Data Governance

3.1. Modularized Teaching of Course Content

From a content perspective, Data Governance course is well-suited for segmentation based on the knowledge framework and student development objectives, forming relatively independent yet interrelated teaching modules. Modules are flexibly combined according to the course's teaching objectives, knowledge framework and learning progress to create a comprehensive and adaptable Data Governance knowledge system. During the Data Governance instructional process, each knowledge module is primarily divided based on the textbook content and the expanded knowledge system, with strong interconnectedness between modules. Data architecture provides a macro-level framework for analyzing data governance work and plays a strong guiding role. Following data architecture are considered data types, which named metadata and master data. The knowledge structure is then constructed based on the various data processing processes. On behalf of employment feedback from graduated students and a survey of students enrolled in the class grade of 2022, the modularized Data Governance instruction facilitates students' focused mastery of the course's knowledge system. The modules are logically interconnected, resulting in effective teaching outcomes.

3.2. Blended Problem-driven Teaching Model

Blended teaching model is not only a mixture of offline classroom teaching and online teaching between students and

teachers, but also a mixture of teaching and question-answering guidance in offline and online environments centered on students [10]. Blended teaching model emphasizes student-centeredness and focuses on the changes and learning support that blended learning brings to students [11]. The data governance course has established online teaching environments such as teaching QQ groups and Rain Classroom platform, where teachers can provide learning tasks in advance. Students solve problems in the form of group learning outside of class and feedback the results of the problem-solving to the teacher. The teacher promptly gives students feedback on improvement suggestions and invites students to present their solutions in the form of PPT in class. In course teaching practice, the blended teaching similar with flipped classroom-style has a significant promoting effect on students who are active in learning and good at expressing themselves. However, its effect is greatly reduced for students who are not active in learning and do not actively participate in class teaching activities. They are more likely to become silent in classroom teaching and signatories of group learning.

To mobilize the full participation of students in course instruction, it's necessary to transform silent participants into active participants, and to make certain improvements to the aforementioned blended learning approach. We break down students' PowerPoint presentations panel, let them take the key roles, for example, presenter, first question answer responder, second question answer responder, and emergency question solver. Other students who aren't part of the group and don't actively participate in the interactive classroom sessions are designated as questioners in advance. They are required to prepare questions relevant to the content of PowerPoint presentations. This appropriate improvement of blended learning eliminates the silent participants and only signatories in the interactive classroom. Following the presentations and the Q&A session, teachers provide a timely summary and advisor, offer targeted suggestions for improvement, point out the right direction for further effort, and encourage them to conduct in-depth research through annual papers and academic dissertations.

3.3. Integrated Application of Experiment Class

The hands-on student lab component of the Data Governance course has been refined and improved year by year based on students' feedback and good suggestions. During the spring 2023 semester, the course primarily consisted of classroom teaching, with students completing hands-on practical parts as after-class assignments. When students were asked for their feedback after class, the majority reported a lack of big data technologies and concerns about their employment prospects upon graduation. To address the employment anxiety among senior students, on behalf of previous teaching experience in information management and information system major, a needs survey of students were conducted in the spring semester of 2024. Combined students' knowledge base, a

teaching improvement strategy were executed on the Data Governance class. The course added a hands-on lab component, focusing on web design and website development. The lab also replicated previously learned knowledge such as Python programming, data mining, data visualization, and data acquisition. However, this round of course reforms was not thorough. The labs were limited to in-class experiments, requiring students to bring their own computers and design their experiments in the classroom, which impacted the effectiveness of the experiments.

In the spring semester of 2025, 16 hours of experimental teaching will be allocated from the total number of hours for data governance instruction. The experimental venue will be moved from the classroom to the teaching laboratory to ensure optimal results for the data governance experiments. Regarding the arrangement of experimental course content, due to the difficulty in finding experimental course materials that match the knowledge structure of third-year students in Big Data Management and Applications, teachers have resorted to developing their own experimental course content. The principles for developing their own experimental course content are: soliciting suggestions from undergraduate students in the classes of 2020, 2021, and 2022 regarding the content of the data governance experimental course, and taking into account the employment needs of students after graduation, ultimately determining experimental course content that integrates knowledge from all data governance modules, and gradually improving and refining it through teaching practice. The 2024 data governance experimental course for students will primarily cover three web design structures: HTML, CSS, and JavaScript. The 2025 data governance experimental course for students will also include introductory instruction on the Django web application package based on the Python web framework. The experimental course content and scenarios are primarily based on familiar content, such as designing portal website pages, personal blog homepages, web calculators, and lucky lottery wheels. The Django module experiments focus on building interactive dynamic websites connected to MySQL databases and to realize website content renewing. Students are encouraged to independently learn outside of class. Students with strong hands-on skills can incorporate course content on data collection systems, data visualization, and data mining into dynamic website construction.

4. Findings

4.1. Research Method

On February 25, 2025, a pre-course survey on Data Governance was distributed to students who enrolled the class in the spring semester of 2025. The survey included 21 questions, including basic student information and reasons for choosing the major. The course lasts for 8 weeks, with 6 classes per week, 4 of which are lectures and 2 are labs. After the Data Governance course concluded on April 24, 2025, a post-

course survey was distributed to students. The 14-question survey can be compared and analyzed with the pre-course survey. The deadline for questionnaire collection was May 1. A total of 28 students were enrolled in the course. 28 questionnaires were respectively distributed pre-course and post-course. 28 valid questionnaires were collected, resulting in a 100% response rate and 100% efficiency.

4.2. Basic Information of Students

Among students enrolled in this course in the spring semester of 2025, 17 were male, representing 60.7%, and 11 were female, representing 39.3%. Regarding their high school place, 26 (92.9%) were from Hubei Province, including 7 (25%) from Wuhan metropolitan. Regarding their upbringing place, 10 (35.7%) lived in cities, 8 (28.6%) lived in county towns, and 10 (35.7%) in rural areas (including townships). All of the students enrolled in this course majored in science in their high school, and all of them attended either county town or city high schools. 46.4% of them enrolled in this course had experience with make-up exams, and none of them cheated on exams.

From winter vacation to the first week of school, students showed signs of slackness and anxiety in their studies. One student wrote in a pre-class questionnaire: "Studying at home during winter break was inefficient and lacked the same learning atmosphere or emotion as at school." 12 students' pre-class questionnaires included information about studying at home during winter break (including English, advanced mathematics, studying postgraduate entrance exam books), preparing for interviews and internships, and studying for market investigating research competitions. 57.1% of students chose the major primarily due to the attraction of the major name, while 17.9% of them chose their majors randomly, and another 10.7% of them had their family decision and they only listened.

4.3. Analysis of Students' Learning Status

Students' learning status can be measured using four items: self-study frequency, study time, study stress, and learning attitude. A paired-samples T-test reveals that self-study frequency at the beginning of the semester is significantly lower than at the end of the course ($t=3.051$, $p<0.05$), with a difference of 0.82 grade points. However, T-tests on students' study time availability, study stress, and study attitude stability before and after the course are not significant. The end-of-course survey show a moderate negative correlation between study stress and learning attitude (Spearman's $\rho=-0.608$, $p<0.05$). The greater the student's study stress, the more stressed they are. A moderate positive correlation is also observed between study time availability and study stress (Spearman's $\rho=0.570$, $p<0.05$). Students who perceive more ample study time report less stress and achieve better grades.

When students are asked at the beginning of the semester

about the biggest setback they have experienced in campus time, 32.4% of them answer that it is failing the final exam. Further analysis reveals that students fail exams in their freshman and sophomore years, mainly in fundamental public courses, for example, applied multivariate statistics, advanced mathematics, and C programming. Students overcame failure mainly by retaking the course, learning from their mistakes and working hard, watching online courses, and reviewing carefully for make-up exam. At the end of the course, when the post-class questionnaire ask students about the biggest setback they have experienced on campus, 25.2% of students choose failing the final exam, a decrease in the proportion about 7.2%, but new frustrations emerge, for example, preparing for exams, preparing for the CET-6 exam. At the end of the course, more words appear when students are asked about how they overcome their failure, for example, trying hard to overcome, adjusting their mindset, etc.

4.4. Analysis of Students' Employment Intentions

The student survey on employment intentions list primary and junior schools, private companies, state-owned enterprises, abroad enterprises, government employee, archives, museums, libraries, and cultural centers, and ask students to rank these employment institutions based on their preferences. At the beginning of the semester, the ranking of these institutions was, from the first to the last, as follows: state-owned enterprises (1.85), abroad enterprises (2.74), government employee (2.96), private companies (3.92), primary and junior schools (5.91), archives (6.45), museums (6.77), libraries (7.00), and cultural centers (7.09). By the end of the last class, the ranking of these institutions have changed to: state-owned enterprises (2.37), abroad enterprises (2.77), government employee (3.22), private companies (4.74), libraries (5.81), archives (5.96), museums (6.48), primary and junior schools (6.52), and cultural centers (6.76). By the end of the course, the ranking of employment intention in the library is significantly upgraded, rising by 1.21 ranking places, which was related to the fact that the teacher is engaged in library research and most of the class examples come from library research.

Students' employment preferences for archives rank 6.45 at the beginning of the semester and 5.96 at the end of the course, an increase of 0.49 ranks. Their preference for museums rank 6.77 at the beginning and 6.48 at the end of the course, an increase of 0.29 ranks. A paired-samples t-test reveals a significant shift in students' employment preferences for private enterprises from the beginning of the semester to the end of the course ($t=-2.896$, $p<0.05$). At the beginning of the semester, the proportion of students who rank private enterprises first, second, third, and fourth in their job preferences are 7.7%, 11.5%, 26.9%, and 26.9%, respectively. By the end of the course, the proportions who rank private enterprises first, third, and fourth in their job preferences are 3.7%, 22.2%, 11.1%, and 18.5%, respectively. After systematically studying the

data governance course, students' career choices have significantly shifted, from blindly following trends to making independent, rational choices, and preferring stable employment.

4.5. Analysis of Teaching Effectiveness

Regarding the reasons for choosing the Data Governance course, 75% of students choose it because they lack academic credits, 25% choose it only by their interest. Both the interest and academic credits demand take 14.3%. The survey use a 5-point scale, with lower scores indicating greater interest. Regarding students' interest in the course, the average score is 2.07 at the beginning of the semester and 2.11 at the end. From the beginning to the end of the course, the average student interest score decrease by 0.05 points, but the paired sample T-test is not significant. This decrease in scores is due to measurement error in the questionnaire, but it suggests that there exist room for improvement in the course's effectiveness.

Regarding the data governance course content, there is a significant difference between the content submitted by students at the beginning and end of the course, primarily due to a shift in familiarity with the course content. At the beginning of the course, students expect coverage of data governance methods and skills (17.8%) and data governance architecture and structure (14.3%). A small number of students also request coverage of data security, data structures, data processing, data specifications, and data governance case studies. At the end of the course, students' expectations are more specific, covering essentially all data governance modules, including master data management (21.4%), metadata governance (17.8%), data security management (14.3%), web design and website construction (14.3%), data quality control (10.7%), and data annotation (10.7%). These modules are core components of the data governance course, with web design and website construction focusing more on hands-on skills and requiring additional study outside of class.

Regarding the perceived importance of data governance in their education programme, significant changes are observed at the beginning and end of the course. At the beginning of the course, 32.1% of students describe the position of the course as "relatively important", including the synonyms' term, for example, "major position", "very important", "dominant position", "TOP" and so on, are considered "relatively important" or higher. At end of the course, 50% of students use term "relatively important" to describe the importance of the course, including the synonyms' term, for example, "core supporting position", "upper-middle position", "connecting the past and future", "important leadership position closely related to the major", "indispensable position", "essential position", "core course", and "major elective course". By observing the individual student responses to the course's professional status in the questionnaire also show significant changes at the beginning and end of the course. Some students, who had previously described the course as "learning if possible", shifted to "upper-middle position" at end of the course. 3 students, who

had previously described the course as “optional position”, rated it “a practical course for fundamental training” and “one of the major courses” (2 students) at the end of the course.

Regarding data governance’s impact on professional competence, no significant difference is found in the pre-course and post-course questionnaires. Based on the content of students’ open-ended responses, experimental teaching is more effective in improving professional competence. In the post-course open-ended questions about professional competence improvement, 14.3% of students indicate that they have improved their skills in web design and website development. Students’ open-ended responses regarding professional competence improve from vague pre-course responses to more specific responses at end of the course. Their terms frequently mention in post-course responses including: data security, cross-departmental collaborative governance, data sensitivity, data thinking, and metadata.

5. Discussion

5.1. Synchronous Question Database Effect

Generation Z (born between 1997 and 2012), who grew up with smartphones, are accustomed to checking their phones while attending classes. This phone addiction is particularly evident in their classroom, with over half of students unconsciously holding or browsing their phones. This also makes it difficult for students to deeply analyze the teaching cases they read before class. Given this situation, teachers can only use synchronized question and practice to motivate students to study diligently.

The elements of database are extracted key knowledge points from each chapter of the textbook in the form of exercises that complement the course, including multiple-choice questions, fill-in-the-blank questions, definition questions, short-answer questions, code completion questions, essay questions, and case analysis questions. By completing these synchronized practice questions, students can more systematically learn and diligently grasp the knowledge covered in class. The speed and accuracy of final exams for students enrolled in the course from the spring 2023 to spring 2025 semesters show that students’ speed is significantly higher than that of other professional exams, and their accuracy rate on the final exams remains consistently above 80%.

5.2. Interactive Communication Effect

Teachers encourage students to ask questions, answer students’ questions carefully, encourage students to do their best, assign homework and provide timely feedback, and conduct objective and fair assessments. All of them can significantly impact on students’ learning outcomes [12]. In data governance teaching, interactive communication need to be seamlessly connected with students’ perception scenarios. The interaction time can be the preparation time before class and the

break time between classes, when teachers communicate with students to understand their learning interests and knowledge needs. It can also be other time after class, when teachers use online tools to communicate with them. For example, through WeChat, QQ, Xuexitong, Yuketang, Douyin and other commonly used communication tools and learning platforms for students, teachers can answer students question online in time.

Through active interaction with students, teachers can accurately capture students’ knowledge needs, grasp the shortcomings of class teaching, and make improvements in the subsequent teaching process, for example, adjusting the teaching progress, adding and deleting knowledge content, improving teaching methods. Teacher can make simultaneous adjustments in the course syllabus and plans for the next teaching year. Active teacher-student interaction can narrow the psychological distance between teachers and students, and students are more willing to actively participate in classroom teaching activities. During the classroom teaching process, students who interact with teachers frequently are more willing to raise their hands to answer teachers’ questions in class, and their final exam question answers and scores are at the forefront of the class.

5.3. Experimental Classes Effect

The advantages of online and offline hybrid teaching and on-site experimental teaching complement each other. Experimental teaching can improve the efficiency and effectiveness of laboratory experiments [13]. The major of big data management and application focuses more on the cultivation of data analysis and programming skills. The data governance experimental course also needs to be consistent with the characteristics of the major. Experimental teaching focuses on the experimental process. The teaching content and teaching methods should be flexibly adjusted according to the current situation of the experimental site. The adjustment basis comes from the judgment of the experimental operation process of students at the experimental site [14]. Before teaching the experimental course, the teacher needs to understand the knowledge framework and software practical ability of the students’ previous courses in advance, and use this as a basis to dynamically adjust the content of the data governance experimental teaching.

In experimental teaching, for easier knowledge or teaching content where students have already learned introductory knowledge, the review method can be used to briefly explain the core knowledge content, for example, the syntax structure of HTML, the box model and border structure of website. For knowledge that students have not learned in depth or have not learn, it is necessary to pay more attention to explain it in experimental teaching. Students can refer to the experimental example code explained by the teacher in class and appropriately modify or expand new functions by themselves. For example, CSS interactive nested syntax, JavaScript language, Django website construction, etc.

6. Conclusions

The study presents an analysis of the teaching effect of the data governance course. The mutual selection of students' annual paper topics and their supervisors' choice can indirectly reflect the teaching effect of data governance. After the course in the spring semester of 2023, only 1 student took the initiative to choose the "data resources" topic proposed by the teacher when deciding the topic of annual paper. After the course in the spring semester of 2024, 3 students took the initiative to contact the teacher to be their annual paper supervisor, and one of them focused on the website design for his graduation thesis topics. After the course in the spring semester of 2025, 5 students contacted the teacher in advance to be their annual paper supervisor, two of whom explicitly apply for the advisor's master degree program, and two of them decide to choose website design as the topic of their graduation thesis.

Data governance course needs keep close attention to social opinion trend topics and analysis of them through case studies from a data governance perspective. Teachers can invite group representatives to present their case analysis ideas. After students finished their presentations, teachers should critique their presentations and guide students through deeper reflection from data governance perspectives. Because data governance is a professional elective course and is offered in the second semester of their junior year, students are nearing the end of fulfilling their credits. This inevitably leads to achieve fulling credit requirements, so teachers need to be flexible their teaching model to individual students. During teaching time, receiving, grading and explaining student assignments, as well as reviewing students' oral reports and case studies, are crucial forms of effective teacher-student interaction. The five stages of assignment submission, grading, and reviewing in data governance course provide crucial insights into students' grasp of professional knowledge. Reviewing assignments can bridge the gap between teachers and students, fostering effective teaching outcomes.

The major of Big Data Management and Applications is open to nationwide students. However, students' knowledge storage levels, learning abilities, and willingness to study good vary in different provinces and regions. To maintain student engagement, teachers must dynamically adjust teaching content and methods based on their individual circumstances. Pre- and post-class questionnaire feedback from students suggests that data governance course that closely integrate social needs with the latest case studies are most effective. For example, in laboratory teaching, appropriate consideration should be given to student employment needs and cutting-edge developments in artificial intelligence. Adding an intelligent data collection website experimental teaching module is also a major trend. Subsequent laboratory teaching should include more hands-on experiments in web design and artificial intelligence using the Python programming language.

This study has a few limitations. First, the data dimension

is limited and cannot fully reflect the actual need of Data Governance. Some data cannot represent the real development level of data governance course. Second, most data cannot be fully used. Third, different schools have different teaching model for data analysis in their class, resulting in large differences in data values in some dimensions, which affect the accuracy of the data analysis results.

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Author Contributions

Hanhua Wu: Conceptualization, Data curation, Formal Analysis, Writing - original draft, Writing - review & editing

Junying Sun: Data curation, Formal Analysis, Writing - review & editing

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Data Availability Statement

The data is available from the corresponding author upon reasonable request.

Conflicts of Interest

The authors declare no conflicts of interest.

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Biography



Hanhua Wu is a professor at Jiangnan University, Logistics and Big Data Department. He completed his PhD in Library and Information Science from Peking University in 2012, and his Master of Library and Information Science from Wuhan University in 2008. His research interests are in the areas of social library and rural library, library data analysis, digital library, and history of Chinese merchants. He has honored 5% top scholars in Chinese library and information science in CNKI database. He is holding the Chinese National Social Science Funding project of rural library promote rural cultural revitalization and several other funding projects. He has participated in Chinese academic libraries' annually data analysis for 15 years. He currently serves on the Editorial Boards of two Chinese library and information journal.



Junying Sun is a postgraduate student majoring in Management Science and Engineering (Engineering) at Jiangnan University. Her research and studies primarily focus on management science, data analysis, and engineering management, with an emphasis on the interdisciplinary integration and practical application of management theory, information technology, and data methods. During her postgraduate studies, she focuses on strengthening her professional foundation, actively improving her research skills and academic thinking abilities, and striving to enhance her comprehensive capabilities in theoretical analysis, problem research, and practical application. Throughout her studies, she maintains a close eye on the development trends in the discipline, emphasized applying management science methods to the analysis of real-world problems, and continuously improves her data processing, academic writing, and research innovation abilities.

Research Field

Hanhua Wu: Social library, rural library, library data analysis, digital library, history of Chinese merchants

Junying Sun: Management science and engineering, data analysis, engineering management, information systems, digital management