

Management business intelligence teaching reform

Jiongen Xiao^{1,2}, Yiyang Lu¹, Xiaosha He¹

1. International Business School, Guangdong University of Finance and Economics, Guangzhou 510320, China

2. Laboratory of Electronic Forensics, Guangzhou Institute of Software Application Technology, Guangzhou 511400, China

Abstract: At present, the teaching mode of management business intelligence in colleges and universities needs to be reformed. This paper aims at the theoretical basis and existing problems of business intelligence, carries out practical innovation of reform, and puts forward suggestions to add impetus to promote the development of business intelligence reform.

Key words: Business intelligence; Teaching reform; Practical teaching

1. The theoretical basis of business intelligence teaching reform

1.1 The characteristics of business intelligence courses

First, business intelligence is data-driven and its core is data. Through targeted analysis and mining of data, reports, etc., valuable information can be extracted to provide help to decision makers of enterprises.

Second, business intelligence is highly practical, and its purpose is to provide useful information and data analysis results for enterprises to make decisions. Therefore, it is necessary to master the method of this course on the ground, learn how to help enterprises make decisions and strategies through a large number of practical cases and data analysis projects, and apply data analysis technology to actual business in combination with actual industry scenarios and needs. In order to master relevant skills and knowledge.

Third, business intelligence not only involves computer data analysis, database management, data mining and programming, but also involves various knowledge of economics, statistics and advanced mathematics. The interdisciplinary degree is high, and there are certain requirements for students to master basic subjects.

1.2 The theoretical basis of business intelligence teaching

Data warehouse theory, the core of business intelligence is data, is an important source of data analysis and mining, in the process of learning to understand the concept of database, design and data extraction, conversion methods and other basic skills, through the establishment of data warehouse to save and mining data, to get valuable information.

Data mining theory, business intelligence through the use of data mining technology, after the extraction of data after the data mining analysis, extract valuable information, students need to master the basic theory and methods of data mining, including classification, clustering, correlation mining and so on.

Visualization theory, business intelligence provides valuable information through data analysis, and presents it to decision makers with visual analysis, so as to facilitate their understanding and decision-making. Students need to master the principles of data visualization, design and implement a series of methods for analysis and visualization.

Business analysis theory, the purpose of business intelligence is to provide enterprises with valuable information and data analysis results, which requires students to master the basic business situation of the corresponding industry, but also to master the ability of business process analysis, demand analysis and decision analysis.

In the process of analyzing and testing data, statistical methods, including probability, hypothesis test and regression analysis, should be used, so as to have an accurate understanding of the data, which is convenient to improve the ability to grasp information and obtain valuable results.

2. Teaching status of business intelligence courses

2.1 Lack of knowledge of business intelligence

Business intelligence is a course combining practical theory formed by multi-disciplines. Its theoretical support model includes database principle, management, statistics, probability theory and other disciplines. In the process of learning business intelligence, it is necessary to have a deep understanding of its forerunner disciplines, and be able to apply the knowledge of these disciplines to the actual operation of business intelligence. Only in this way can we better grasp the application knowledge of business intelligence and solve the practical problems of enterprises in reality. In the process of learning business intelligence, students need to have interdisciplinary thinking ability and comprehensive analysis ability, and be able to integrate the knowledge of different disciplines. Teachers should pay attention to the combination of theory and practice, guide students to deeply understand the theoretical knowledge of business intelligence in practical operation, and cultivate students' practical operation ability and innovation ability.

2.2 The depth of curriculum knowledge is shallow

The teaching method of BI includes the theoretical methods and practical operations of data acquisition, database establishment and analysis such as Access, My SQL, SPSS, Python and MATLAB. In the process of learning, students need to be familiar with the theoretical methods based on the background of real e-commerce enterprises and human resources positions. And be applied to the actual operation of the company, in the process of teaching, the students' use of comprehensive knowledge level still stays at the theoretical level, has not reached the height of practical application and targeted problem application, for the actual problems encountered by enterprises and solutions

still can not break through, their practical experience needs to be further improved.

2.3 The teaching mode needs to be improved

Business intelligence has high requirements for students' practical operation experience. Compared with other courses, the application and practical operation of this course account for a large proportion. In the class of business intelligence teaching, attention should be paid to practical operation and the handling of actual business operation problems. At the same time, teachers should pay attention to keep pace with The Times, introduce new practical methods and application cases in time, so that students can learn the latest business intelligence technology and application trend. In class, teachers should take students as the center, encourage students to actively participate in class discussions and practical operations, cultivate students' innovation ability and ability to solve practical problems, and at the same time learn theoretical knowledge and in-depth application and reflection on practical operations and principles.

3. The practical research of business intelligence teaching reform

3.1 Background and objectives of business intelligence teaching reform

First, business intelligence technology is widely used and plays an important role in current enterprise decision-making. Traditional business intelligence courses focus on the teaching and transfer of theoretical knowledge, while the current business intelligence teaching reform focuses on the integration of teaching content and actual conditions, and focuses on training students' practical application ability and data mining, analysis and decision-making ability. Artificial intelligence is developing rapidly. The analysis methods and models have undergone subversive changes. Therefore, the reform of business intelligence teaching needs to take actions.

Second, strengthen practical teaching, improve students' practical operation ability, so that students can proficiently use business intelligence tools and technologies, and can solve the decision-making problems faced by actual enterprises, through data mining, analysis, visualization results to assist decision-making.

Third, strengthen the combination of production and education, so that students can be exposed to real business intelligence projects and data, understand the needs and challenges of different enterprises, so that students can grow up in these real environments, cultivate the ability to cope with these challenges, and improve the future employment competitiveness.

3.2 The practice process of business intelligence teaching reform

First, strengthen the practice of combining production and teaching. In order to let students personally feel the actual application conditions and scenarios of BI technology, the school should actively seek cooperation with different enterprises outside the school while offering this course, and encourage students to participate in internal and external competitions to learn the latest application of BI technology. In the process of learning theoretical knowledge, use the actual application needs of enterprises to train students' ability of data processing and analysis, so as to improve students' application and understanding of business decision making.

Second, enrich the existing teaching methods. In the current business intelligence teaching mode, teachers generally help students master the concept and skills of business intelligence through infusion teaching method. The core of business intelligence is data, and the mode is the diversification of cross-disciplines, so more diversified teaching methods should be adopted. Online client learning methods such as competition practice, inviting external business tutors to explain, independent group project learning, MOOC learning can be used. Meanwhile, the artificial intelligence learning model sets the course content and student score standards to perceive the acceptability of students' teaching content, so as to reflect the efficiency and quality of teaching.

Third, the teaching content keeps pace with The Times. Business intelligence is usually offered in the third grade of management class. After students have a certain foundation of statistics, data warehouse establishment, data mining and analysis, a reasonable business intelligence teaching model should be designed, not only to update data in real time, but also to update teaching methods. With the rapid development of artificial intelligence, cutting-edge teaching methods should be used in the teaching process, and continuous exploration and practice should be conducted. And constantly enrich the existing teaching data and methods. For example, the concept of artificial intelligence is now introduced into the teaching model of business intelligence to help educators more deeply understand the learning direction of students, improve learning efficiency with the help of the power of artificial intelligence, guide students' needs, carry out personalized learning, and meet students' different curriculum learning requirements, so as to improve teaching quality

3.3 Evaluation and reflection on the reform of business intelligence teaching

Business intelligence teaching reform is one of the contents of teaching reform with high discussion degree at present. Reform the existing model of business intelligence, on the basis of school-enterprise cooperation and government cooperation, use the latest data and analysis methods to construct data warehouse, data mining and analysis, and construct visual results. Its purpose is to cultivate students' understanding of data, application degree of business intelligence and decision-making level. Under the background of the endless emergence of analysis methods, the explosion of data information and the application of intelligent technology, the teaching process of business intelligence should pay more attention to the cultivation of students' comprehensive decision-making ability, reasonable use of technical support, improve their learning ability and future work efficiency, and practically solve the problems in enterprise analysis and decision making. To improve students' comprehensive competitiveness in employment.

4. The future prospect of business intelligence teaching reform

4.1 The significance and value of business intelligence teaching reform

First, the reform of BI teaching can cultivate students' business intelligence and decision-making ability. Through practical teaching

and training combining production and teaching, students can master the relevant technologies and methods of BI, enhance students' competitiveness, and improve their comprehensive application ability. For enterprises, business intelligence teaching reform can train more high-quality talents, meet the needs of enterprises for business intelligence talents, and provide strong support for the development of enterprises.

Second, the deep integration of BI teaching and production-teaching practice can promote the innovation and development of BI teaching, reform the teaching methods and contents of BI, and keep pace with The Times. With the assistance of artificial intelligence technology and the latest intelligent analysis method, visual results can be obtained, which can further improve the teaching quality and effect of BI. It provides a good guarantee for cultivating high-quality talents needed by enterprises.

4.2 The significance and value of business intelligence teaching reform

First, the reform of BI teaching can cultivate students' business intelligence and decision-making ability. Through practical teaching and the training of combining production and education, students can master the relevant technologies and methods of BI, enhance their competitiveness and improve their comprehensive application ability. For enterprises, business intelligence teaching reform can train more high-quality talents, meet the needs of enterprises for business intelligence talents, and provide strong support for the development of enterprises.

Second, the deep integration of BI teaching and production-teaching practice can promote the innovation and development of BI teaching, reform the teaching methods and contents of BI, and keep pace with The Times. With the assistance of artificial intelligence technology and the latest intelligent analysis method, visual results can be obtained, which can further improve the teaching quality and effect of BI. It provides a good guarantee for cultivating high-quality talents needed by enterprises.

4.3 The development trend of business intelligence teaching reform

First, the reform of BI will be carried out towards more and more diversified teaching methods. It is not only the cross-combination of multiple disciplines, but also the integration of case analysis, project practice, school-enterprise cooperation and other models. It will also pay more attention to the combination of production and education and the teaching of students with different abilities. Different teaching methods will be adopted to carry out personalized teaching methods, so as to improve the practicality and application of BI teaching and improve the teaching quality.

Second, the innovation of methods and principles. Business intelligence teaching reform will be more inclined to interdisciplinary integration, combining business intelligence with other disciplines, including machine learning, artificial intelligence application, etc. The cross-integration of these disciplines will improve the comprehensiveness and practicability of business intelligence. At the same time, big data computing technology and artificial intelligence technology will be applied to obtain students' personalized learning needs and help teachers effectively manage teaching. Thus improving the efficiency and quality of teaching and providing a unique intelligent teaching experience.

References:

- [1] Weiping Zhu,Rong Xie,Wei Li,Xiangting Ji. [J]. Computer Education,2022(12):190-193.
 [2] Lewei Hu. Thinking on the construction of Business Intelligence courses for management majors in Colleges and Universities [J]. Modern Commerce and Trade Industry,20,41(01):161.

Fund Project: Social Science Fund of the Ministry of Education, "Research and Implementation Suggestions on cross-departmental Data Sharing and Collaborative Case Handling in the Context of Rapid Development of Artificial Intelligence" (22YJC630167); Postdoctoral Research Foundation of Guangzhou (Z000158).

About the author: Xiao Jiongen (1984 --), male, Guangdong, PhD, postdoctoral fellow of Guangzhou Institute of Software Application Technology, lecturer of Guangdong University of Finance and Economics, Business intelligence related research work and practical projects. Lu Yiyang (2003-), male, student of International Business School. He Xiaosha (1984-), female, research assistant.

Corresponding author: Xiao Jiong-en