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Research on the Development of Digital Resources and Teaching Reform in Logistics Management Professional Courses from the Perspective of Digital Economy

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Abstract

With the rapid development of information technology, digital transformation of education has become a trend in global education development. Relying on online teaching platforms, developing digital resources, innovating traditional teaching models, integrating online teaching resources, can effectively improve the teaching effectiveness of professional courses and achieve multi-dimensional educational goals. This article takes the logistics management major course as an example to explore the development of digital resources in university logistics management courses. In response to the current problems in digital resources, starting from course requirements and application scenarios, a quantitative and qualitative research method is adopted to design a set of digital resource development plans. Exploring digital teaching reform measures for logistics management courses from four perspectives: high-quality construction of logistics management course resources, organization and implementation of logistics management courses, reform of teaching methods, and evaluation and assessment methods for course grades. Not only does it provide a practical and feasible digital resource development model for logistics management majors in universities, but it also provides reference for the digital transformation of similar courses in other regions.

Keywords

Logistics management, Digital economy, Digital resources, Development research, reform in education.

1. Introduction

With the development of modern communication technology, information storage technology, and artificial intelligence products, the emergence of online course platforms and software such as MOOC, NetEase Cloud, DingTalk, OpenLearn, and edX has further promoted the development and accumulation of digital resources. The rapid development of online teaching methods has expanded the channels for students to acquire knowledge and broken the constraints of traditional teaching models in terms of time and space. Higher education institutions are facing challenges and opportunities for teaching mode innovation.

This article focuses on the specific situation and needs of the development of digital resources for the management major courses in universities, and deeply explores the necessity of digital transformation of courses. Based on field research and case analysis, key problems and challenges are identified. Propose to develop relevant high-quality online courses, develop and construct digital resources to enhance course interactivity and practicality, stimulate innovation in teaching methods, and effectively promote the improvement of students' learning efficiency. Under this demand, traditional teaching methods mainly focus on imparting

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theoretical knowledge, lacking practical and operational teaching. The cultivation of difficult students is difficult to meet the requirements of frontline positions for employment after graduation, resulting in a contradiction between higher education concepts and educational models that cannot meet the needs of applied management talents. Through the research conducted in this article, we hope to provide some experience and inspiration for the digitization of logistics management courses, as well as theoretical support for the deep integration of educational technology and teaching practice in other majors in universities.

2. Current situation divided

With the continuous development of global trade, logistics management and related industries are playing an increasingly important role in regulating international transportation and promoting international trade. As an important base for cultivating industry professionals, higher education institutions have a direct impact on students' future adaptability to the industry in terms of their logistics management training plans and course offerings. Through a survey of ten higher education institutions in Yibin University City, it was found that there are still significant deficiencies in the curriculum of logistics management in terms of digital resources. The digital resources of courses are relatively scarce, and most courses rely on traditional teaching models, lacking interactivity and modern teaching methods. Even though there are courses with digital resources, most of these courses with digital resources are relatively concentrated and have a high repetition rate. Such professional design will undoubtedly affect students' absorption and understanding of course content in the context of the digital age.

In addition, there is still a pile of outdated materials in the existing resources, such as scanned PDF textbooks, teacher provided PPT courseware, related promotional videos, and pictures of physical documents. These materials lack dynamic interactive elements and long-term strong attraction to students in the learning process, which is not conducive to improving students' active exploration and in-depth learning. At the same time, these digital resources often have a slow update speed, making it difficult to timely reflect the latest developments and cutting-edge trends in the industry, resulting in students being unable to quickly adapt to the latest situation in the industry and lacking a keen perception of the forefront of the industry.

3. There are problems in the construction of digital resources in universities

The development of digital resources should be approached from multiple aspects such as teaching content, teaching methods, faculty strength, and social demand guidance. In the process of conducting research on the development of digital resources related to logistics management courses in universities in Yibin University City, it can be found that due to the establishment of relevant majors by several advantageous universities, there is still a certain accumulation of digital resources in this field, but there are also some problems that need to be solved urgently.

(1) The interactivity and practicality of resource are insufficient. Although teachers have a high level of knowledge in their own fields, many of them do not have good professional abilities in the development and application of digital resources, especially for older teachers whose ability to develop and use digital resources greatly limits their use and development of digital resources.

(2) The sources of students from different universities vary greatly, and for some students with weaker foundations, their ability to learn independently may have certain problems. They may

ISSN: 2710-0170

encounter operational difficulties or difficult to understand knowledge points when accessing and using digital resources.

(3) Currently, there is insufficient accumulation and planning of digital resources, and most universities operate independently, resulting in unclear long-term comprehensive layouts. The development of digital resources in logistics management courses often lacks systematic planning, and there is a lack of completeness in the construction of related training and curriculum systems. The fragmentation of various digital resources is severe, and students find it difficult to learn coherently when choosing digital resources for learning, greatly affecting their learning outcomes.

(4) It is difficult to effectively integrate process evaluation and outcome evaluation in Learning. In the context of the digital economy, students learn from digital resources and need to observe and understand their learning situation in real time during the teaching process. Therefore, it is necessary to organically combine process evaluation and outcome evaluation. However, traditional teaching evaluations often only focus on the final exam results and neglect the evaluation of the learning process, which suppresses students' enthusiasm for learning.

The poor interactivity of teaching, uneven sources, insufficient accumulation of digital resources and technical support, and imperfect evaluation process require the joint efforts of universities, teachers, technical teams, and other parties to solve these problems. Through the integration and optimization of resources, skill enhancement training, and the formulation of long-term plans, we can promote the healthy development of digital resources and better meet the needs of educational digital transformation.

4. Logistics Management Course Requirement Analysis

Based on the research on the development of digital resources in universities with logistics management courses in University City, there are specific needs in the following areas:

(1) The frequency of content updates in Lesson should be fast, especially keeping up with the times, reflecting the latest practical operations in the logistics industry and changes in related logistics backgrounds. Teaching resources should preferably be dynamic resources, which can effectively achieve interaction between teachers, students, users, and the system, allowing students to truly experience the practicality of digital resources. The research results show that about seven levels of students have low interest in learning dry theoretical knowledge, and over 60% of students hope to increase teaching modes that can simulate real work scenarios.

(2) Add school enterprise cooperation, introduce enterprise resources in electronic resources, and add the practical needs and requirements encountered by enterprises in actual work to digital resources. The cooperation between higher education institutions and local logistics enterprises can not only provide students with internship and practical training opportunities, but also prevent them from feeling confused after graduation and entering the enterprise. At the same time, it also enables the development of digital resources to meet the business scenarios faced by real enterprises. School enterprise cooperation not only helps to update the content and improve the practicality of digital resources, but also enables students to break away from theoretical knowledge in books and come into contact with the real needs of enterprises during the learning process in school, achieving the combination of theory and practice.

(3) In the survey and interviews conducted in Volume, it was also found that teachers and students in logistics management generally reflected the shortcomings of existing teaching resources in terms of digitalization, update speed, and interactive practices. More than half of the teachers and students expressed a desire to integrate a complete set of professional teaching resources and make them available for free to teachers and students in universities. They hope that digital teaching resources can be more digitized and multimedia based; About

ISSN: 2710-0170

50% of teachers and students believe that the updating of textbooks and resources is far behind the development speed of the industry, which affects teaching effectiveness and makes students' learning situation not equal to the expectations of future enterprises.

5. Logistics Management Professional Digital Resource Development Strategy

5.1. Design Task for Digital Source

In the process of developing digital resources for the first course of logistics management, it is necessary to fully consider the key issues of the lack of practicality and interactivity in the current curriculum construction mentioned earlier. Based on the research and specific needs analysis of universities in Yibin University City, we hope to build a system of digital resources that can not only serve the purpose of imparting theoretical knowledge, but also enhance students' practical hands-on abilities, strengthen interaction between teachers and students, school training, and enterprise needs. To enhance interactivity, in addition to building a virtual freight forwarding operation platform to deepen students' understanding of the freight process, it is also possible to strengthen the digital construction of course design. By integrating discussion areas, Q&A interactions, online real-time feedback and other functions, students can be encouraged to actively participate in course learning and have sufficient communication with classmates and teachers. Due to the interdisciplinary nature of logistics management, the relevant laws, regulations, industry standards, and operational processes involved are constantly being updated. Therefore, the content of digital resources needs to be updated frequently and regularly to ensure that students are learning the most cutting-edge knowledge. In addition, these digital resources need to form a system where each module can be interconnected, allowing students to choose different learning modules based on their own learning progress and interests, achieving self-directed learning.

After analyzing the demand and current situation of digital resources for courses in the management major of Physical Education in universities, in order to further build a systematic digital resource, its core tasks should include:

(1) A batch of systematic high-quality courses can be established online through apps such as MOOC and NetEase Cloud, which can organize, update, and rebuild existing digital resources.

(2) Build a modular virtual simulation platform that is interrelated. By contacting logistics companies or referring to logistics design competitions, and relying as much as possible on real scenarios, building simulation systems, students can break free from the constraints of traditional classroom text, images, and PPTs, enter the complex and ever-changing environment of practical work, participate in real logistics business, combine theoretical knowledge with practical skills, and deepen their understanding and application of professional knowledge.

5.2. Development Process and Implementation of Digital Source

(1) Phase 1: Clarify requirements. Mainly conducting comprehensive and in-depth research on the teaching syllabus, course content, employment requirements of enterprises, feedback from teachers, students, and enterprises of logistics management majors in universities. Collect specific requirements, preferences, and needs of teachers and students for digital teaching resources through questionnaire surveys, interviews, and symposiums. At the same time, it is necessary to analyze the development trends of the industry and the employment needs of enterprises to ensure that the curriculum is cutting-edge and practical, especially to pay attention to solving the problem of the disconnect between current school knowledge and the actual situation of enterprises. Through requirement analysis, establish the goals and basic framework for digital resource development, laying the foundation for subsequent work.

ISSN: 2710-0170

(2) Phase 2: Design and Development Phase. Close collaboration is required among a team of teachers, industry experts, software engineers, resource teams, enterprise teams, visual designers, etc. to jointly develop the design work of digital resources. On the basis of ensuring the professionalism and accuracy of the content, multimedia technology and interactive design concepts are introduced to make digital resources more vivid. For example, simulating international logistics activities through virtual reality technology, understanding the interactive process of document operation, allowing students to learn and practice in a virtual environment, and improving the fun and practicality of teaching. Meanwhile, in the design process, full consideration should be given to the accessibility and compatibility of resources to ensure smooth use across different devices and platforms.

(3) Phase 3: Testing and Evaluation Phase. To ensure the quality of digital resources, repeated testing and quality assessment are required before they are officially put into use. The test subjects should include teachers, students, and social sources. By collecting feedback from various users, the content, functions, and user experience of the resources should be carefully adjusted. It is recommended to choose a combination of quantitative and qualitative methods as much as possible during the evaluation process, in order to comprehensively evaluate the teaching effectiveness of digital resources. Based on the evaluation results, timely optimize and upgrade resources to ensure they meet the teaching needs of logistics management majors in higher education institutions.

(4) Phase 4: Implementation and Promotion Phase. After passing the test, while ensuring the quality of digital resources, it is necessary to actively organize teacher training in advance in various colleges and universities, and promote the use of resources through online platforms and other forms. At the same time, the development and operation of digital resources also require the establishment of a sound technical support and service system, which can provide timely technical support for teachers and students.

6. Measures for Teaching Reform of Logistics Management Major from the Perspective of Digital Economy

6.1. High Quality Construction of Digital Resources for Logistics Management Professional Courses

In the process of building logistics management resources, it is necessary to comprehensively integrate online and offline mixed teaching resources, construct and reconstruct teaching content and teaching system. In addition to existing related textbooks, teaching case videos, teaching courseware, teaching outlines, etc., more digital resources should also be summarized and unified on the virtual simulation platform. By organically combining online and offline teaching resources, students should be guided to make full use of online digital resources. The logistics management course is a relatively practical course that requires students to be able to use basic knowledge points to solve practical problems, thereby cultivating their professional ethics and abilities.

When designing the logistics management course, it is also necessary to integrate ideological and political education into various aspects of theoretical and practical teaching. Starting from the aspects of "four confidences" and "two maintenance", innovative construction of ideological and political case libraries related to logistics management should be carried out to cultivate students' patriotism in the teaching process.

In the process of conducting digital teaching, it is necessary to first improve the professional ability and ideological and political literacy of teachers, especially for some older teachers who have limited adaptability to modern software and platforms in the process of digital teaching, and are slow to accept new teaching concepts such as MOOC and SPOC. Therefore, universities need to provide specialized training for such teachers to enhance their professional abilities

ISSN: 2710-0170

and comprehensive qualities. At the same time, it is necessary to introduce a group of experts with rich practical experience in the front line of enterprises and institutions into the classroom, scientifically and reasonably integrating their own work cases with teaching practice, enhancing the authenticity of the cases, helping students to have a more accurate understanding of theoretical knowledge, and broadening their horizons.

6.2. Organization and Implementation of Logistics Science Major Courses

The teaching of Logistics Management Professional Course can be implemented through a combination of offline and online methods, utilizing digital resources such as Chinese university MOOCs to establish an online teaching platform. Through the online teaching platform, students' learning situations can be timely understood, and relevant teaching content can be adjusted in a timely manner according to the teaching syllabus and teaching objectives based on the actual situation of different classes. It is not necessary to strictly follow the teaching syllabus and teaching logs like offline teaching. This enables students to better engage in targeted and personalized learning when using digital resources, providing a favorable environment for curriculum organization and implementation models.

6.3. Reform of Teaching Methods for Logistics Science Major Courses

(1) Practical case teaching. Logistics management is a discipline that requires high practical requirements. In classroom teaching design, many real-life cases should be incorporated into digital resource construction, especially those provided by frontline personnel in enterprises. Teachers should integrate cases related to logistics management courses into digital resources. Design relevant cases for the key and difficult points, teaching objectives, and other aspects of the course. Before teaching, introduce cases so that students can bring problems into the classroom and improve learning effectiveness. In addition, there are some discussion based cases where students can fully learn independently by incorporating digital resources, collecting relevant digital materials, and discussing the issue, achieving a flipped classroom and giving students the initiative in the classroom. Finally, in the process of designing teaching cases, teachers should fully connect with employers, combine classic and real cases from home and abroad, combine textbook cases with practical problems, hand over the most cutting-edge enterprise demand issues to students, and integrate new problems faced in today's economic and social development into the classroom through cases.

(2) Group discussion. In the process of teaching logistics management courses, the method of grouping is adopted to brainstorm and group students according to the actual situation of the class, using group collaboration to answer the questions raised by the teacher. Different students have different ways of thinking and foundations, and their perspectives on problems may vary greatly. Through group discussions and mutual communication, students' thinking can be opened up, which can maximize the interaction between various elements in teaching and improve learning effectiveness. The results of group discussions can be uploaded to digital resource platforms such as MOOCs, where groups can compare and learn from each other. Through healthy competition and comparison, students' learning motivation can be improved.

(3) Flipped classroom. In the teaching process of logistics management courses, the implementation of flipped classroom requires teachers to adopt students who have carefully prepared and observed, and must highlight their subject status. However, they must also have a certain degree of initiative in the classroom to ensure the success of flipped classroom. Before teaching, students should be required to preview the content of this lesson in advance, mark any questions they still cannot understand, and be able to learn in a targeted manner in class to improve learning efficiency and classroom participation. Therefore, students need to browse certain digital resources during the preview process, and improve their ability to discover, analyze, and solve problems and overall quality through a cycle of preview classroom review.

ISSN: 2710-0170

6.4. Evaluation and Assessment Methods for Course Grades

To ensure the effective combination of process evaluation and outcome evaluation, and to ensure the fairness and impartiality of logistics management professional course evaluation, teachers can conduct reasonable evaluations based on students' performance in daily learning when conducting course evaluation assessments, achieving a combination of objective and subjective evaluations. Especially the evaluation and assessment methods for course grades must be diversified. In addition to traditional chapter tests, daily assignments, group assignments, attendance, classroom performance, business training, final exams, etc., in the perspective of the digital economy, the evaluation and assessment of course grades should focus on online learning. This new assessment method helps students pay more attention to their performance in daily learning and actively participate in the classroom.

7. Conclusion

This study conducted field research and analysis on the development of digital resources for logistics management courses, clarifying the necessity and urgency of educational digital transformation in the teaching of this major. A set of optimization plans was designed and targeted teaching reform measures for logistics management from the perspective of digital economy were implemented. Taking some universities in Yibin University Town as an example, it has positive reference significance for the teaching practice of logistics management major, and also provides ideas for the development of digital resources for other regions or similar courses.

There are certain limitations in the survey scope and sample size design of this study, with insufficient coverage area and number of surveyed teachers and students. Therefore, the universality of this study needs further testing. Future research can expand the scope and sample size of the survey, deepen the understanding of the research question, and thus design more cutting-edge digital resource development examples and teaching reform plans.

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ISSN: 2710-0170

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