

Research on the development of online resources of "Basic Principles of Marxis" course based on AI hologram technology

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Abstract. Based on holographic imaging technology, the online resources of "Basic Principles of Marxism" course generate intuitive images from abstract theories, create present situations from past history, and vivid thoughts from famous people's speeches. It creates a holographic image database of historical artifacts, creatively constructs virtual reality scenarios, enhances the three-dimensional, experiential interactive nature of course display, and makes the courses more logical and systematic. The use of online small-class courses meets personalized learning needs, enhancing students' cognitive abilities and fostering a better understanding of how theoretical principles emerge from practice and evolve through real-world applications. This approach cultivates practical talents with strong analytical skills and achieves notable educational outcomes.

Keywords: AI hologram technology, "Basic Principles of Marxism" course, online resources

1. Introduction

The 'Basic Principles of Marxism' course is of profound significance, providing students with a theoretical foundation to analyze the world, understand societal structures, and explore human development patterns [1]. Through this course, students develop independent critical thinking skills, analytical abilities, and a deeper understanding of societal dynamics and global issues [2]. These abilities equip students with powerful analytical tools to better comprehend and transform the world. How to teach this course deeply, thoroughly, and engagingly to maximize its educational value and enhance students' ability to apply this thinking patterns in analyzing and solving practical problems is of great practical significance.

Holographic Imaging Technology (HIT) is an emerging digital information technology that combines virtual reality with media. By utilizing 3D modeling to process real-world and physical information, HIT projects digital content into actual physical environments through laser or LED light sources. This allows audiences to see lifelike images that appear to float in the air, creating a vivid, three-dimensional experience [3]. Integrating HIT with the 'Basic Principles of Marxism' course enables the seamless fusion of modern technology with classical thinking patterns. This innovative approach optimizes course design and teaching methodologies by creating virtual, immersive teaching environments and fostering diverse and interactive teaching models. By doing so, educators can provide students with a more engaging, vivid, and personalized learning experience. Furthermore, this integration helps enhance students' ideological and political literacy, improve their ability to apply theoretical knowledge and drive innovation and development in the field of education [1].

2. The significance of integrating AI holographic imaging technology into curriculum development

2.1. Enhancing teaching interaction and experience

AI HIT significantly changes the traditional reliance on static, flat teaching resources. The conventional methods, which often involve simple textual descriptions, two-dimensional images, or monotonous video displays, are replaced by dynamic and three-dimensional presentations. This innovative approach enables the presentation of complex philosophical concepts, multifaceted economic theories, and historical developments in a more engaging and accessible manner. As a result, students gain access to a new and enriched channel for acquiring knowledge.

2.2. Improving students' cognitive and comprehension abilities

With the integration of holographic technology, students can genuinely 'witness' theoretical concepts in action rather than merely imagining their implications. For example, students can visually explore how theoretical principles arise from practice and how they are subsequently tested and developed. Abstract ideas become tangible and complex logical relationships are clarified, allowing students to grasp the core tenets of this thinking patterns quickly and effectively. This interactive learning method not only makes theoretical study more appealing but also transforms it into an intellectually engaging and enjoyable process, enhancing students' understanding of the knowledge.

2.3. Boosting teaching efficiency and quality

The application of AI holographic imaging technology in teaching the 'Basic Principles of Marxism' course eliminates the constraints of time and space. Fixed schedules or locations no longer bind students; instead, learning becomes a flexible and autonomous activity that can occur anytime and anywhere. For challenging concepts, students can replay holographic demonstrations at their own pace to reinforce their understanding, revisit course content, and solidify their knowledge retention. This technological approach improves overall teaching efficiency and effectiveness.

3. Developing online resources for the course

3.1. Establishing clear teaching objectives

3.1.1. Meeting the needs of the modern era and cultivate a new generation of talent

Educators should fully utilize AI holographic imaging technology to develop cutting-edge online teaching resources. By constructing virtual scenarios, students can experience historical events personally, fostering deeper engagement. Interactive learning modules encourage critical thinking and exploration, while AI-powered analytics provide insights into students' learning progress and ability levels. Based on these insights, educators can set personalized learning goals that are both attainable and challenging, aligning teaching content and methods with students' individual needs. This approach places students at the center of the learning process, encouraging self-directed exploration and meeting the demands of contemporary students for digital, personalized education.

3.1.2. Enhancing teaching efficiency and promoting the inheritance and development of the thinking patterns

AI holographic imaging technology transcends the limitations of traditional teaching methods by creating realistic three-dimensional virtual scenarios. These scenarios allow students to feel as though they are traveling through time and space, experiencing the historical and social contexts in which the thinking patterns were developed. By immersing students in these settings, the concepts resonate more deeply, triggering profound reflection and emotional connections. This approach encourages students to recognize societal trends, reflect on historical developments, and apply analytical methods to solve practical problems effectively. This approach not only strengthens students' understanding of the thinking patterns but also ensures their extensive inheritance and development in the modern era.

3.1.3. Promoting full dissemination of the basic principles of the thinking patterns

By leveraging AI holographic imaging technology, educators can build a robust and diverse online teaching platform that breaks barriers created by geographical, economic, or social disparities. This initiative ensures that all students, regardless of their circumstances, have equal opportunities to engage with the thinking patterns. This platform allows students to develop critical thinking skills, broaden their perspectives, and contribute meaningfully to society [6]. Moreover, the integration of philosophical, social, and scientific perspectives fosters a deeper understanding of socialism with Chinese characteristics, promoting broader acceptance and recognition of its principles.

3.2. Building a holographic imaging educational resource database

Establishing a student-oriented construction concept, this study leverages AI-powered holographic imaging technology to develop a comprehensive, in-depth, and richly diverse holographic projection educational resource database.

3.2.1. Transforming abstract theories into intuitive images

Abstract and critical theoretical concepts can be dissected and elaborated through detailed and vivid holographic presentations, enabling students to understand and master knowledge more effectively [6]. For example, the Basic Principles of Marxism theory of social structures and class relations can be represented as a virtual three-dimensional societal scene. Students can immerse themselves in this environment, directly observing and experiencing the interactions among various social classes. This approach stimulates curiosity, encourages exploration, and significantly enhances students' interest and engagement with philosophical studies.

3.2.2. Recreating historical moments in present-day contexts

Historical events of great significance can be archived and recreated through holographic imaging technology [5]. By reconstructing pivotal historical moments, teachers can create realistic historical, social, or theoretical scenarios that allow students to experience the development of Basic Principles of Marxism theories firsthand. This immersive method helps students better understand the historical background and progression of this thinking patterns.

3.2.3. Revitalizing celebrity speeches and ideas

Diverse content, such as iconic speeches by celebrities, can be incorporated into the educational framework using AI holographic imaging technology. By reanimating these speeches, students can experience the passion and conviction of the speakers, gaining a deeper understanding of the essence of the thinking patterns thought embedded within them.

3.2.4. Developing physical hologram images data

With advanced 3D scanning technologies, authentic holographic representations of historical relics, symbolic scenes, and other key artifacts related to the evolution of the thinking patterns can be created. These holographic archives serve as invaluable educational resources, preserving the richness of historical and cultural heritage for teaching purposes.

3.2.5. Constructing virtual reality scenarios

For content that cannot be directly recreated through scanning, innovative virtual reality scenarios can be developed. These may include dynamic demonstrations of theoretical models, virtual reconstructions of historical events, and even digital immortality projects. By building an extensive and diverse holographic educational resource database, educators provide students with unprecedented learning experiences and access to knowledge, enriching the teaching of Basic Principles of Marxism theories.

3.3. Forming a teaching guidance team and clarifying the self-driven learning model

3.3.1. Forming a teaching guidance team to develop innovative learning methods

The new learning paradigm emphasizes active student participation and interactive experiences. To align with this model, the curriculum content needs to be comprehensively redesigned and adjusted. This includes increasing the proportion of interactive activities, such as group discussions, role-playing, and problem-based explorations. These activities encourage students to think critically, communicate, and collaborate actively while engaging with holographic content. To implement this innovative curriculum design effectively, teachers must master a range of modern teaching methods and techniques. Therefore, during the development of online course resources, a teaching guidance team should be established. This team can include experts who provide advice and conduct workshops to share best practices and experiences among educators, ensuring the continuous improvement of teaching quality.

3.3.2. Establishing a self-driven learning model to promote personalized learning

AI holographic imaging technology, combined with big data and cloud computing, enables precise analyses of students' learning progress and individual needs. Based on these insights, personalized "mini-courses" can be designed to address specific learning objectives. These mini-courses can serve as pre-class preparation or post-class review sessions [4]. The content should be logically organized and systematically structured, breaking down abstract theoretical knowledge into manageable modules. These modules can then be presented in a progression from simple to complex, allowing students to build their understanding gradually. Teachers can also adjust the duration and scheduling of these mini-courses based on student's abilities and preferences. By ensuring continuity between pre-class preparation, in-class teaching, and post-class review, this approach helps students

master the knowledge points and difficulties of the thinking patterns. Through repeated practice and exploration, students can construct their comprehensive learning systems, laying a solid foundation for future academic or professional pursuits.

3.4. Enhancing the utility of digital resources and establishing a diversified teaching evaluation mechanism

The ultimate goal of the teaching reform for 'Basic Principles of Marxism' course is to nurture socially responsible and morally upright talents. To achieve this, it is essential to establish a comprehensive teaching evaluation mechanism. This mechanism should verify the effectiveness of teaching models, course content, and instructional methods and assess the impact of practical explorations in teaching. Based on these evaluations, the online resources for 'Basic Principles of Marxism' course can be adjusted to ensure their dynamism and sustainability over time.

3.4.1. Improving the multi-dimensional course evaluation mechanism

The first is to establish a teaching process evaluation mechanism. A process evaluation mechanism should focus on verifying the teaching models, course content, and instructional methods explored in the course. Additionally, it should assess the outcomes of practical teaching explorations. These evaluations provide a basis for refining the course's online resources, ensuring that resource development remains dynamic and sustainable. This process evaluation should be embedded in every stage of student learning, with the results serving as interim validations of teaching reforms and innovations. The second is to establish teaching outcome evaluation mechanisms. Outcome evaluations should cover multiple dimensions, including students' classroom performance, assignment completion, and teaching practicals. Collaboration with related organizations can provide students with real-world opportunities to apply their knowledge, evaluating whether the teaching aligns with contemporary educational needs and effectively cultivates students' skills [4].

3.4.2. Enriching and diversifying the teaching evaluation mechanism

The evaluation of students' learning outcomes should focus on both their overall performance and the achievement of phased learning goals [4]. Leveraging AI holographic imaging technology, personalized learning portfolios can be established for students in ideological and political courses. These portfolios enable longitudinal comparisons of individual progress across different learning stages, helping students identify challenges and develop solutions. This process continuously enhances students' comprehensive qualities and competencies.

The first is peer evaluations among teachers. They can record their teaching content and methodologies using digital and multimedia technologies, uploading these recordings to a shared platform. This allows other related teachers to review lessons, provide constructive feedback, and offer suggestions for improvement. Such a system promotes professional collaboration and encourages continuous enhancement of teaching quality. The second is peer evaluations among students. Students are encouraged to evaluate each other anonymously, adhering to principles of fairness and objectivity. These peer evaluations help students gain new perspectives on their strengths and areas for improvement while students are motivated to engage in independent learning. The third is teacher-student evaluations. Mutual evaluations between teachers and students play a critical role in continuously optimizing teaching practices. Teachers should fully respect students' personal preferences and opinions regarding reforms in ideological and political education. This shift transforms students from passive recipients of knowledge into active participants in teaching and learning practices. By engaging in this process, students not only deepen their understanding of the course content but also provide valuable feedback based on their personal experiences. Such feedback enables teachers to refine their teaching strategies further. Effective teacher-student interactions foster a positive dynamic that drives teaching reforms toward higher levels of excellence and innovation. Fig. 1 displays the Development of online Resources of Basic Principles of Marxism' Course based on AI Hologram Technology.

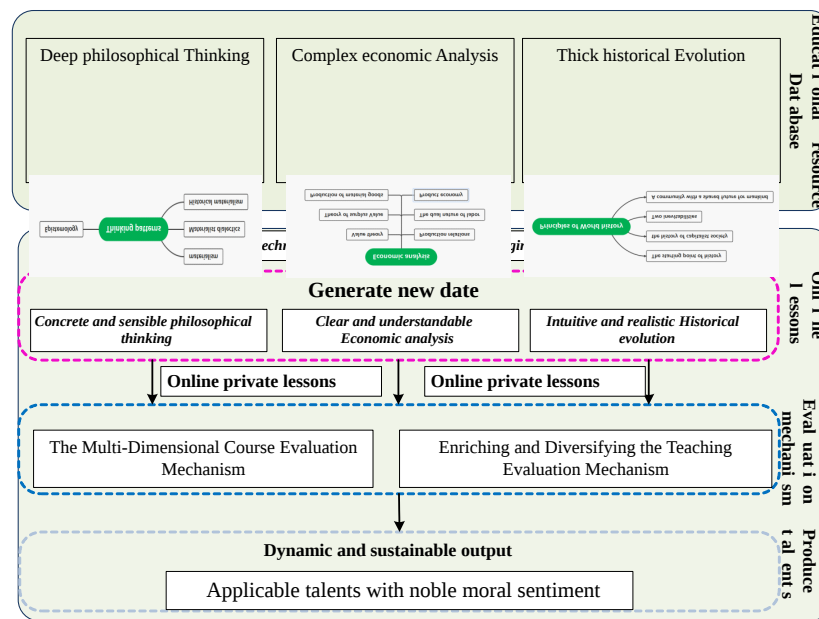


Figure 1. The development of online resources of "Basic Principles of Marxism" course based on AI hologram technology

4. Curriculum teaching practice and reform outcomes

4.1. Enhancing students' understanding of the thinking patterns

By focusing on developing students' abilities and leveraging AI holographic imaging technology, significant improvements have been achieved in the online resource database and teaching methodologies for 'Basic Principles of Marxism' course. Through a comprehensive analysis of students' learning conditions and abilities, targeted teaching objectives have been set. The corresponding teaching content and practical strategies are designed to encourage students' independent learning while benefiting from school-enterprise partnerships. This combination has significantly improved students' critical thinking skills, theoretical understanding, and ability to apply knowledge in practical contexts.

4.2. Boosting teaching efficiency and quality

The adoption of new technologies facilitates interdisciplinary learning among teachers, helping them transform their teaching philosophies and develop diverse skill sets. This process improves their overall teaching proficiency and encourages the mastery of modern technologies. By incorporating these tools, teachers can innovate their instructional methods, expand course content, and ultimately enhance teaching efficiency.

4.3. Innovating teaching formats and content

AI holographic imaging technology has been employed to create online course resources for 'Basic Principles of Marxism' course. These resources support the implementation of diverse teaching methods, enabling a hybrid model that combines online and offline instruction for a more dynamic and comprehensive learning experience.

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