Study on the Higher Education Paradigm of Collaborative Cultivation of Media Talents under the 'Four All-Media' Structure

Chen Li[1, a]

[1]The School of Media Engineering at Communications University of Zhejiang, Hangzhou, 310018, China

[a]lilycheng_2002@cuz.edu.cn

Abstract

This paper discusses the research on the teaching paradigm of advanced mathematics in the cultivation of media talents under the "four all-media" framework. With the promotion of smart technology, the media industry has undergone a huge revolution. How to cultivate media talents that meet the demands of contemporary media is an important task for media-related universities. The convergence of politics, production, learning, and research has gradually become a new model for innovative talent training in media colleges. Introducing cross-border thinking and multi-cross-curriculum system construction is the direction of curriculum innovation in media schools. As a fundamental course, advanced mathematics plays a subtle role in cultivating rational scientific thinking and guiding new media technologies and concepts. This paper proposes a "people-oriented" anchoring teaching practice based on the perspective of subjectivity, and a new teaching paradigm of advanced mathematics based on the concept of "meta-universe" of education based on smart technology.

Keywords

Advanced mathematics, Anchor-type teaching, Education meta-universe.

1. Introduction

The "four all-media" is a general term for "all-process media, all-holographic media, all-staff media, and all-effective media". It is a classic discourse on the development of all-media by General Secretary Xi Jinping. Information is everywhere, omnipresent, and everyone uses it, leading to significant changes in the media era's public opinion ecology and communication methods[1]. In the current perspective, the traditional single-skill or theory heavy media talent cultivation model in higher education institutions can no longer meet the new demands of the media industry's development.

Deepening the integration of industry and education, promoting the organic link between the education chain, talent chain, industry chain, and innovation chain, breaking down knowledge barriers, and gradually becoming a new model of innovative media[2]. Talent training through the integration of multiple subjects in politics, industry, academia, and research, the new talent cultivation model emphasizes the introduction of cross-border thinking, constructing a multi-crossing course system consisting of basic courses, general courses, and specialized courses. In particular, as an essential course of the basic discipline--advanced mathematics, it not only undertakes the task of cultivating students' rational scientific thinking ability but also bears the important responsibility of training students to understand new concepts and new technologies such as media big data, artificial intelligence, algorithm recommendation, text generation, and meta-universe.

The concept of personalized and autonomous learning was proposed by Benkiran and Ajhoun in 2002[3]. Based on the foundation of smart education, the concept of the smart classroom

corresponding to the Smart Classroom was formally proposed in 2008[4]. Zhang Xue new and others have made new explorations in the teaching reform of higher mathematics in the divided classroom[5,6]. In the era of the epidemic, online learning platforms (such as MOOCs) have developed rapidly, and more research is focused on the construction of online learning platforms[7]. Although there is a lot of research on the teaching paradigm of higher mathematics in China, there is little exploration of the teaching paradigm for cultivating media talents cooperatively. This paper will start from the construction's background and explore the new teaching paradigm of advanced mathematics in media colleges based on the synergy of multiple subjects in politics, industry, academia, and research.

2. Organization of the Text

2.1. People-oriented, ideological and political education into the classroom.

Based on the elements of education among politics, industry, academia, and research, the main task of media colleges is to cultivate media talents with patriotism and socialist core values. Compared with ordinary technical colleges, its teaching object has a stronger humanistic property. Therefore, to penetrate elements reflecting patriotism and core values into the teaching process of advanced mathematics, based on culture, introduce the development of mathematics through storytelling or painting, find the beauty of mathematical forms from abstract symbols, subtly stimulate students' learning interest and achieve the purpose of education.

Posting beautiful mathematics short articles, microblogs, short videos, or long videos and other media in and out of the classroom uses visualization elements to enrich the imagination and emotional experience of media students and cultivate students' learning autonomy.

2.2. Anchor-based teaching practice based on a subject-oriented perspective

The traditional advanced mathematics mainly uses the "teacher-centric, student-oriented" perspective to construct the "knowledge-oriented" teaching paradigm. The usual teaching method is the "linear" deductive "spoon-feeding" way, that is, the teaching links are carried out one by one according to the chapter, section, and concept. The result is that students can only passively learn some concepts in isolation, unable to form a tight system and use mathematical thinking and methods to analyze and solve problems effectively, and students' subjective initiative is poor.

In the era of smart technology, technology breaks the barriers of knowledge, the "people-oriented" teaching paradigm breaks the closed nature of the subject, transcends the traditional subject-object relationship, and forms a subject-object relationship model, and teachers, students, and technology are all teaching activities. In the subject, the teaching link is the interaction activity between each subject and each other.

In classroom teaching, we emphasize the "scaffolding" teaching method of throwing anchors, the idea of "double subjects" where teachers lead the teaching process and students star in teaching activities; the teaching process is dominated by the teacher through controlling "teaching content, student activities, and teacher activities", and the four links of "new knowledge introduction, content explanation, method training, and classroom summary". The student as a subject learns actively, participates actively in the "micro context" presented by the application problems of the project or project, and applies the methods of mathematics to solve practical application problems.

2.3. Framework design of the "metaverse" in education

Build immersive cross-temporal and spatial educational "meta-universe" new space to achieve resource interactive sharing between politics, academics, and research

In the "four all-media" framework, smart technologies such as mobile phones, the Internet of Things, virtual reality technology, blockchain, and artificial intelligence have been applied in different areas of education, providing a large-scale learning crowd with immersive learning situations and the possibility of educational "meta-universe" based on distributed collaborative learning methods. The framework of its massive collaborative learning system across domains is shown in Figure 1[8].
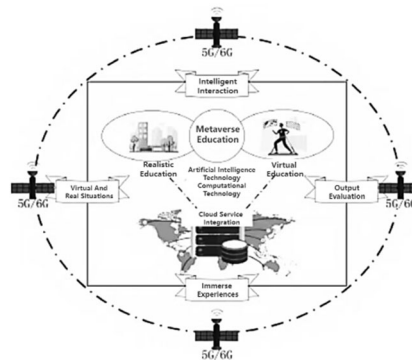
Figure 1. Framework for Large-scale Collaborative Cross-Domain Learning Systems

The ultra-domain learning in this article is the learning space of the "meta-universe" of education, not limited to a specific space, but also including real space, virtual space, and the space where reality and virtuality fuse, learning has initiatively, anytime learning scene is freely switchable, and so on. Under this framework, a new teaching platform for the educational "meta-universe" that meets the characteristics of the media college is designed and built.

Using smart technology, first, objective knowledge is easy to capture network nodes, distributed network node data is generated, collected, and deeply automatically analyzed in real-time. Second, smart algorithms capture the cognitive features and value preferences of the learning subject, form a learning community in personalized content customization and intelligent link, dynamically coordinate and guide students to become participants of teaching value creators, emphasizing the development of identity while also emphasizing the development of differences in teaching practice. Third, the expandable teaching space embeds the practical activities of the policy and research into the student's learning experience in real-time, allowing it to interact with student cognition, promoting the student "all that is learned is all that is used" revenue increase. Students actively participate in the space of the meta-universe and freely create while continuously shaping themselves.

The new teaching paradigm of the education "meta-universe" reflects the value implication of the interconnection and sharing of intelligent technology resources and dynamic coexistence, and the generation teaching concept can cultivate students' creative adaptation ability while also promoting the collision and fusion of practical knowledge and student brain knowledge, thus realizing the creative use of new knowledge by students.

3. Conclusion

There are obvious defects in the current college teaching practices regarding higher mathematics teaching methods, which emphasize standardized teaching methods but are hard to cater to individualized teaching methods, pursue systematic teaching but are hard to accommodate embodied teaching. The nonlinear teaching method empowered by intelligent technology highlights the features of nonlinearity, aptness, and guidance, which is beneficial for teachers to get out of the path dependence of traditional teaching methods.

The educational "meta-universe" new teaching paradigm makes cross-time-space, instantaneous interaction technology makes the participation of teaching in the whole process of knowledge production possible, breaking the paradox between personalized and mass higher education. In the education meta-universe, the teacher's subjectivity is guided by the team's problem list, which promotes objective knowledge and resource sharing between different nodes and organizes teaching content based on real-time data analysis to select key teaching materials. When students as learning subjects independently call for key action knowledge/resources from the core resource library under the guidance of teachers, they independently analyze and integrate related knowledge to obtain personalized action resources for problem-solving.

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