

## Development of appreciation of traditional Chinese operas textbooks for undergraduate student teaching

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**Abstract:** This study aimed to explore the development of textbooks for undergraduate Chinese traditional opera appreciation courses and their supporting role in MOOC teaching. Through investigating the teaching problems and students' needs in the drama course, a set of drama teaching materials suitable for the MOOC environment was researched and developed, and its effectiveness in practical teaching was evaluated. A combination of questionnaire surveys, expert interviews, and teaching experiments was used to investigate undergraduates and teachers from three universities in Zhejiang Province. The results show that the opera textbooks developed not only effectively enhance students' interest and understanding of traditional Chinese opera but also provide effective support for the MOOC platform, enrich the teaching content and form, and promote students' inheritance and identification of opera culture.

**Keywords:** MOOC teaching, Opera appreciation, Textbook development, Traditional Chinese opera.

### 1. Introduction

As a treasure of Chinese culture, traditional Chinese opera has a long history and diverse forms, integrating various art forms such as literature, music and dance. However, with the acceleration of modernization and the diversification of entertainment methods, the audience of traditional Chinese opera is gradually decreasing, and the inheritance is facing challenges. The aging audience group and the lack of awareness of opera among young people make opera education particularly important in the contemporary era. In order to cope with this dilemma, how to stimulate the interest of college students in opera art through education has become a key link in the inheritance of opera.

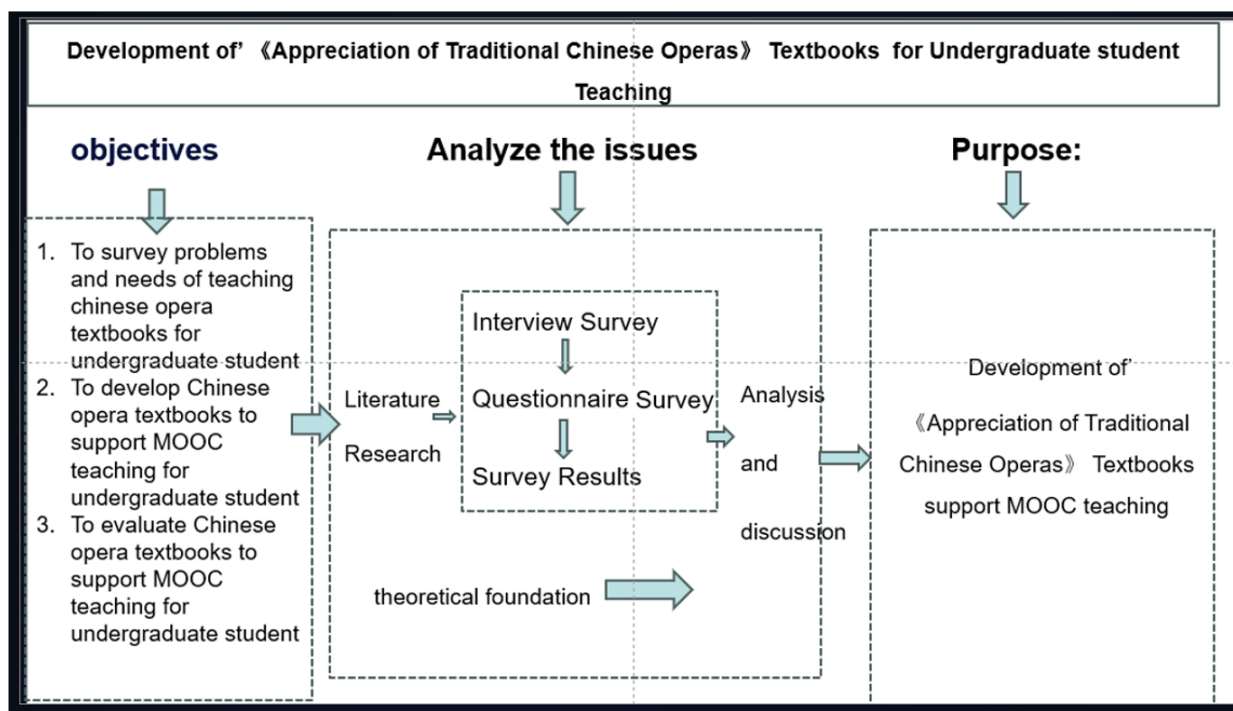
Higher education plays an important role in the inheritance of traditional culture. However, due to the limitation of academic system and insufficient allocation of resources, the promotion of opera education is faced with many difficulties. Zheng [1] pointed out that to enhance the interest and appreciation of opera among college students, teaching strategies that adapt to the learning characteristics of modern students are needed. Therefore, developing a set of teaching materials for opera appreciation that suit the needs of contemporary college students has become an urgent problem in the field of opera education [2].

This study aims to combine modern teaching tools and methods to develop a set of teaching materials for the Appreciation of Traditional Chinese Opera for undergraduates, aiming to help students systematically master the basic knowledge and artistic characteristics of opera within a limited teaching cycle. This textbook will introduce the five major types of Chinese opera and various local opera types in Zhejiang Province, trying to stimulate students' interest in learning and improve their appreciation of opera through the combination of theory and practice. In addition, the study will explore the application of MOOC (Massive Open Online Course) teaching mode in opera education, and expand the coverage and influence of opera education with the help of modern scientific and technological means.

Taking Zhejiang Yuexiu University of Foreign Languages as a case study, the textbook will adapt to the teaching cycle of 8 weeks and 16 class hours, and fully consider the school's teaching arrangement and students' learning needs in the design. Through the systematic teaching design, the textbook not only provides rich content support for classroom teaching, but also provides more possibilities for distance and independent learning through the MOOC teaching mode. The development of this set of textbooks not only responds to the needs of the national cultural inheritance strategy, but also provides a practical basis for promoting the innovation of opera education.

### 1.1. Research Objectives

1. To investigate the problems and demands of teaching materials of Chinese opera for undergraduates
2. Develop drama teaching materials to support undergraduate MOOC teaching:
3. Evaluation of Chinese opera textbooks supporting undergraduate MOOC teaching



**Figure 1.**  
Conceptual Framework.  
Source: Yan [3].

### 1.2. The Development of Traditional Chinese Opera Teaching Materials

The teaching materials should fully use the multi-functionality of traditional opera art and its profound cultural influence. Through careful selection of teaching contents and in-depth analysis, the teaching materials aim to convey the core values of truth, kindness, and beauty and meet the needs of modern education Zhang and Yuan [4]. Chen [5] advocated the use of diversified teaching modes in the teaching of opera appreciation, such as combining appreciation and analysis, explanation and performance, which would not only improve students' artistic quality but also enhance their understanding and recognition of traditional Chinese culture Chen [5]. Zhang [6] research reveals the importance of combining opera appreciation with ideological and political education, highlighting the potential of opera education in delivering moral education Zhang [7]. Xiao [8] explores opera

appreciation courses as an effective way to pass on traditional Chinese culture, emphasizing the need to integrate traditional art education into the modern education system [8].

Chinese opera music has experienced profound innovation and development in social changes since modern times. From the improvement of the Shanghai School of Peking Opera in the early 20th century, the innovation of Qinqiang Yi Custom Society, to Mei Lanfang's theory of "moving without changing shape," and then to the reform of modern Peking Opera, the exploration of opera music has spanned more than 100 years. These reforms not only promoted the development of opera music, but also gradually changed the listening habits and aesthetic concepts of the Chinese people. In this process, traditional operas such as Kunqu Opera and Gaoqiang Opera retained more traditional musical characteristics. In contrast, active operas such as Peking Opera and Henan Opera, and emerging local operas showed significant musical changes.

### *1.3. The Development of Contemporary Chinese Opera Teaching Materials*

In the context of higher education in China, Zhou [9] analyzes the current situation and challenges of opera appreciation courses. He points out that with the advancement of educational reform, the content of opera education has decreased, which makes the status of opera appreciation courses more prominent in cultural inheritance. He advocated that textbook design should be closely aligned with educational goals and students' needs, and student-centered teaching methods, such as project-based learning, should be adopted to promote students' sense of participation and interactivity [9].

On the other hand, Zhang [10] explores the application of opera in teaching Chinese as a foreign language, suggesting that opera teaching can enhance students' language ability and deepen their understanding of Chinese culture. This mode of opera education in cross-cultural communication demonstrates the potential of opera education in the international context. It provides a new path for teaching Chinese as a foreign language [10].

Liang [11] focused on implementing Opera Appreciation in colleges and universities, and proposed the necessity of innovative teaching models. She emphasizes that the introduction of multimedia teaching means can effectively improve the diversity of teaching materials and, at the same time, put forward higher requirements for the professional level of teachers [11]. This mode enriches the teaching form and enhances students' interest in and understanding of opera art.

From the current teaching situation, Li [12] points out that opera appreciation courses are crucial in improving students' artistic and cultural literacy. He suggested improving teaching facilities and reasonably designing textbook contents to improve the teaching effect and students' learning experience [12]. These measures aim to better respond to the needs of students and enhance the inheritance effect of opera culture in teaching.

To sum up, the research on developing contemporary Chinese opera teaching materials focuses on enhancing students' appreciation ability through innovative teaching materials and teaching methods while inheriting traditional culture. These studies emphasize the richness and practicability of the content of the textbooks and combine them with modern teaching methods to make opera education more in line with the learning needs of contemporary students. Through the student-centered teaching concept, the research provides theoretical support and practical guidance for improving the effect of opera education, which is of great value for promoting students' understanding and appreciation of traditional Chinese culture.

### *1.4. The Development and Innovation of Local Traditional Opera Teaching Materials*

The development and innovation of local opera teaching materials is one of the important research directions of contemporary Chinese opera education. Through many studies, it can be seen that local opera is not only the core content of art education but also plays a vital role in promoting the inheritance of opera culture. Luo [13] in his research on "Opera into campus" music school-based teaching materials in Guilin City, discussed local opera teaching materials as an important medium to promote opera art on campus. The research shows that Guilin's high school drama music textbooks

emphasize combining classics and teaching in content. Although there are some limitations in practice, the textbooks play a positive role in improving students' cognition of opera culture [13].

Zheng and He [14] discussed the necessity and current situation of constructing Peking Opera teaching materials from the pedagogy perspective. The research points out that although some preliminary achievements have been made in compiling Peking Opera textbooks, there is still room for improvement in functional clarity and content presentation. They advocate a standardized textbook compilation and evaluation process to ensure that the content can better meet students' cognitive needs and highlight opera's cultural value orientation [14].

Gao [15] research focuses on the analysis of the textbook system of Cantonese opera in Guangdong Vocational College of Dance and Drama. Gao [15] pointed out that in the compilation of Cantonese opera textbooks, we should not only pay attention to the commonality of the textbooks (that is, the universal value in the inheritance of opera culture), but also take into account the personalized characteristics of Cantonese opera itself, especially the inheritance of singing culture. However, the textbook system is also faced with the challenge of content updating and integrity maintenance, requiring regular review and revision of the textbooks to ensure that they meet the needs of modern education [15].

Guo and Huang [16] further explored the teaching model of combining local opera curriculum with talent training. By collecting and sorting out a large number of local traditional music materials, they developed Shaoxing's local opera characteristic curriculum. The course emphasizes the cultural inheritance of local opera and integrates it into students' learning processes through innovative teaching methods. Although the research mainly focuses on positive analysis, it provides important insights for further innovation in local opera teaching materials [16]. Together, these studies show that the development and innovation of local opera textbooks is a complex and diverse task involving multiple levels, such as textbook content, teaching methods, and cultural inheritance. Local opera teaching materials play a role as a tool of art teaching and an important way for local opera culture to be passed on. Through the in-depth study of local opera and the continuous innovation of teaching materials, local opera's educational value, and cultural connotation can be fully brought into play and effectively transmitted among students.

### *1.5. Analysis of Textbook Application of Classical Academic Works on Opera*

Classical academic drama works play a vital role in developing drama teaching materials. These works provide rich academic resources for drama education and key guidance for creating teaching materials. By analyzing the research results of scholars such as Fu [17] this section will explore how these works are applied in the course of textbook development and propose methodological implications for textbook design.

Fu [17] in his review of *The History of Chinese Opera*, emphasizes the uniqueness and importance of opera as a "living stage art". He challenges the marginalization of opera in traditional literary history writing, and puts forward the view that opera should be closely integrated with social history and culture. Fu's research provides a new academic standard for the writing of opera textbooks, suggesting that textbook writers should not only focus on literary features when designing content, but also dig deep into the core value of opera as a performing art [18].

Ren [19] deeply analyzes the History of Opera in Song and Yuan Dynasties and the General History of Chinese Opera, and puts forward the view that opera should be studied as a comprehensive art. This change of perspective expanded the boundaries of the study of opera, and strengthened the multi-dimensional nature of opera as a stage art. Ren [19] research put forward specific directions for the development of drama teaching materials, especially in the compilation process, the comprehensive expression forms of drama and the transmission of cultural connotations should be paid attention to Ren [19].

*Appreciation of College Opera*, edited by Wang [20] emphasizes the balance between theoretical depth and practical guidance in teaching materials. Wang Ning's book shows how to find the best entry

point between professionalism and universality in opera education, ensuring that students can master the theoretical knowledge, but also enhancing their opera appreciation ability through practical operation. This provides important practical guidance for the development of teaching materials and emphasizes the importance of combining theory and practice in opera teaching [20].

An Introduction to Chinese Opera by Wu [21] and a Brief History of Chinese Opera by Wen [22] provide a solid historical and theoretical foundation for opera education. Through detailed historical materials and theoretical analysis, these works help students to improve their artistic aesthetic ability while understanding the historical development of opera. The work of the two scholars provides rich materials for textbook writers and guides how to enhance students' cultural identity through historical context in textbooks [23].

However, as Liu, et al. [24] points out, there are differences in the content system and quality of the opera textbooks currently available on the market. Many textbooks have yet to fully cover the systematic theoretical knowledge and art appreciation methods of opera, and are lacking in enhancing students' artistic creativity. This indicates that the existing teaching materials still need to be further improved to better achieve the unified goal of knowledge transfer, quality improvement and innovation ability cultivation [24].

Several key trends can be seen from the application analysis of classical opera academic works. First, the study of opera is no longer limited to the perspective of literary history, but is explored as a comprehensive art, which requires textbook writers to pay deep attention to the performing arts and social and cultural significance of opera when designing content. Secondly, with the diversified development of academic research methods on opera, the composition of textbook content must also be richer and more comprehensive to ensure that students can understand the art of opera from multiple perspectives. Finally, more attention should be paid to the independence and artistic importance of local opera in the development of teaching materials. Teaching materials should not only cover the mainstream types of opera, but also reflect the unique cultural value of local opera.

#### *1.6. The impact of MOOC on China's Traditional Education*

The emergence of MOOCs (Massive Open Online Courses) has significantly influenced global education, particularly in China, where their impact on traditional education has garnered attention since 2012. Scholars highlight challenges in localizing MOOCs, such as conflicts in educational ideologies and resource imbalances. Wang [25] emphasized the inevitability of localization but noted conflicts in educational philosophies and resource allocation. Gu, et al. [26] proposed combining MOOCs with traditional and distance education by optimizing local resources. However, rapid MOOC development challenges traditional university education in teaching methods, evaluation, and the roles of educators, necessitating adaptation and reform.

#### *1.7. The Technological Environment of MOOCs*

MOOCs' success heavily relies on technological infrastructure. Early studies addressed platform construction and support systems. Hou [27] suggested enhancing platforms by integrating non-professional resources, while Hou, et al. [28] developed cost-efficient solutions for large-scale queries. Li, et al. [29] introduced a MOOC learning management framework to maximize system advantages. Combining MOOCs with cloud learning, Wu [30] advocated resource-sharing frameworks, enhancing platform collaboration. Mature technologies have shifted focus to cultural and educational functions, emphasizing enhanced interactivity through automation and mobile technology.

#### *1.8. The Teaching and Learning Model of MOOCs*

MOOC teaching models emphasize self-organized and collaborative learning. Fan [18] highlighted balancing autonomy with platform guidance. Liu and Chen [31] showcased large-scale collaborative learning benefits. Xiaoqing, et al. [32] noted a lack of in-depth domestic research on learner experiences and outcomes, contrasting with foreign studies exploring interactivity and evaluation systems.

Researchers like Kop and Hill [33] stressed the importance of learner connections, while Balfour [34] examined automated and peer-based evaluations. Future research should focus on personalized learning and improving teaching effectiveness.

### *1.9. Theoretical Basis of MOOC Construction for Appreciation of Traditional Chinese Opera*

Application of system theory in curriculum design: System theory emphasizes the integrity, diversity and relevance of the system, which provides an important theoretical support for the design of MOOC courses. In "Appreciation of Traditional Chinese Opera" MOOC, the application of system theory is reflected in the integration of course content, ensuring the effective connection and interaction of various elements within the course system, so as to form an orderly and unified whole. This not only requires the course content to cover a wide range to meet the needs of different learners, but also requires the course design to promote the in-depth interaction between learners and learners and the teaching content, so as to enhance the practicality and attractiveness of the course.

The use of psychology of Learning in course design: Theories of psychology of learning, especially behaviorism, cognitivism and constructivism, have guiding implications for the design and implementation of MOOC courses. These theories emphasize that course design should be based on learners' cognitive structure, psychological needs and individual differences, and promote learners' active learning and knowledge construction. By combining these learning theories and adopting diversified teaching methods and technologies, such as video lectures, interactive discussions and case studies, the MOOC of Appreciation of Traditional Chinese Opera aims to increase learners' participation and promote their in-depth understanding and appreciation of opera art.

To sum up, the curriculum of the MOOC for Appreciation of Chinese Traditional Opera has fully absorbed the essence of traditional curriculum theories, especially the application of system theory and learning psychology theory, which provides a solid theoretical foundation for the development and implementation of the course. The integration and application of these theories not only enhances the systematization and scientific of the course, but also improves the learning effect and experience of learners, and helps to better inherit and popularize the culture of traditional Chinese opera.

## **2. Methodology**

This study employs a mixed-methods approach to evaluate the effectiveness of the "Traditional Chinese Opera Appreciation" teaching materials. In the quantitative aspect, we have developed a questionnaire based on a Likert scale, consisting of 20 closed-ended questions. These are designed to comprehensively assess students' satisfaction with the teaching materials' content, the learning methods' effectiveness, and the use of technology. The questionnaire survey targets approximately 120 undergraduate students from three universities to ensure a broad and representative sample. Data will be analyzed using SPSS software, encompassing descriptive statistics and inferential analysis to quantify the impact of the teaching materials and optimize teaching strategies.

## **3. Results**

### *3.1. The Problems and Demands of Teaching Materials of Chinese Opera for Undergraduates*

This study identified several key problems faced by undergraduates in opera textbook teaching through a questionnaire survey and teacher interviews. First, the difficulty level of the textbook content did not match the students' basic knowledge, leading to confusion during the learning process, especially when lacking relevant knowledge, making it difficult to understand the textbook content deeply.

Second, there was a lack of teaching resources, especially multimedia auxiliary materials, limiting students' direct experience of opera performance art. Although the textbook content was rich, it could not effectively present opera music, costumes, and performance styles.

Third, the existing textbook content was insufficiently modernized. It mainly concentrated on traditional repertoires, lacked an introduction to the development of contemporary opera, and was unable to reflect the inheritance and innovation of opera as a living art form.

Finally, the students' individualized learning needs were not met, and the existing textbooks were unable to provide diverse learning paths. This resulted in a single teaching model, which affected the students' learning motivation.

In summary, the study pointed out that the main problems faced by undergraduates in opera textbook teaching included content difficulty, insufficient resources, lagging modernization, and the absence of individualized needs. It emphasized the necessity of optimizing the textbooks and diversifying teaching methods to better meet the students' learning needs.

### *3.2. The Process of Developing MOOC-Supported Chinese Opera Curriculum*

In developing MOOC-supported opera textbooks, the design concept of combining modern digital teaching technology with traditional cultural content was adopted. Students actively participated in learning by utilizing video resources, interactive quizzes, and discussion functions. In particular, their participation rate increased significantly during independent learning time, and online discussion activities were also very active, reflecting their interest in opera content.

Secondly, the effectiveness of knowledge absorption was enhanced. Diverse resources and interactive modes helped students deeply understand the art of opera and its cultural connotations. The video teaching module was particularly popular, as it could vividly display the details of opera performances and enhance students' perception. In addition, interactive learning and self-assessment functions helped students test their learning progress in real-time, significantly enhancing their ability to absorb knowledge.

Finally, the teachers' teaching satisfaction was significantly improved. Teachers generally believed that the MOOC textbook improved teaching efficiency and quality, and the rich resources and flexible teaching methods reduced the burden of classroom lectures and made it easier to monitor students' learning progress. Teacher feedback indicated that the MOOC textbook stimulated students' learning interest and improved classroom atmosphere and teaching effect.

In summary, MOOC-supported opera textbooks have achieved significant results in improving students' learning engagement, enhancing knowledge absorption effectiveness, and improving teachers' satisfaction. They have brought new vitality and development opportunities to traditional opera education and showcased the huge potential of MOOC platforms in opera culture inheritance and education.

### *3.3. Evaluation of Chinese Opera Textbooks Supporting Undergraduate MOOC Teaching*

The study utilized the same test paper for pre-test and post-test assessments to ensure score comparability. The pre-test, conducted before the course, evaluated students' basic knowledge of opera. In contrast, the post-test, conducted after the course, assessed their enhanced understanding and analytical abilities regarding opera performances. Exam formats included multiple-choice questions, judgment questions, and music-listening tests. Data analysis revealed an average score improvement from 61.4 to 80.8, reflecting a 31.6% enhancement in students' opera knowledge, demonstrating the effectiveness of the teaching materials and methods. Additionally, a process rating table was designed to evaluate students' overall performance, integrating their participation in SPOC offline learning, MOOC online learning, and related activities, providing a comprehensive view of their progress.

According to feedback from students and teachers, the MOOC-supported opera textbooks have demonstrated significant advantages in teaching effectiveness, especially in improving students' learning engagement, enhancing knowledge absorption, and increasing teachers' satisfaction.

Firstly, the MOOC textbooks significantly improved students' learning engagement. Compared with traditional classrooms, the MOOC platform provided flexible online learning modes, allowing students to participate in learning anytime. Students utilized video resources, interactive quizzes, and

discussion functions to actively engage in learning, especially increasing their participation rate during independent learning time. Online discussion activities were also very active, reflecting their strong interest in opera content.

Secondly, knowledge absorption was enhanced. Diverse resources and interactive modes helped students deeply understand opera art and its cultural connotations. The video teaching module was particularly popular, providing a direct display of the details of opera performances and enhancing students' perception. In addition, interactive learning and self-assessment functions helped students test their learning progress in real time, significantly enhancing their knowledge absorption ability.

Finally, teachers' teaching satisfaction was significantly improved. Teachers generally believed that MOOC textbooks improved teaching efficiency and quality. The abundant resources and flexible teaching methods reduced the burden of classroom lectures and made it easier to monitor students' learning progress. Teacher feedback indicated that the MOOC textbooks stimulated students' learning interest, improved classroom atmosphere, and improved teaching effectiveness.

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**Table 1.**

Overview of Student Performance on the MOOC Platform.

Name	Video	Quiz	Exams	Note	Overall
Zheng W	10	4.5	40	2	56.5
Wang Siyi	10	5	37	2	54
Fan Jiaqi	10	4.7	37	2	53.7
Zhang C	10	4.9	36	2	52.9

Source: Yan [3].



### 3.4. Teacher Evaluation of the Effectiveness of Textbook Application

**Table 2.**

Data Summary.

	Evaluation item	1	2	3	4	5	AVG
1	The textbook gives a comprehensive introduction to various kinds of opera and their historical background	1	2	5	15	17	4.10
2	The depth and breadth of the textbook content meet the needs of learning	0	1	7	18	14	4.10
3	The textbooks provide rich practical activities	0	2	8	18	12	4.00
4	The content and structure of the textbooks help to gradually understand the deep meaning of opera art	0	1	6	21	12	4.10
5	The textbook contains elements and examples of modern opera	1	1	7	17	14	4.05
6	The teaching materials are in the form of pictures and video links	0	2	7	19	12	4.03
7	The textbook fully introduces the skills of opera and the aspects of "singing, reading and fighting"	0	1	8	20	11	4.03
8	The textbook encourages the exploration of the connection between opera and modern life	0	2	6	18	14	4.10
9	The cases and stories in the textbooks enhance interest in learning	0	1	7	19	13	4.10
10.	The content of the textbook is moderate in difficulty and easy to understand and absorb	0	1	9	19	11	4.00
11.	Combining MOOCs or other online resources can help significantly in learning	0	2	7	19	12	4.03
12.	Interactive and discussion activities in class effectively increase participation	0	1	8	20	11	4.03
13.	The teaching materials and courses are arranged reasonably	1	2	9	17	11	3.90
14.	The courses use novel teaching methods and online tools	0	2	8	18	12	4.00
15.	The textbooks contain videos and interactive elements of traditional Chinese opera that students enjoy	0	1	7	19	13	4.10
16.	It is satisfactory that teachers adjust the content of the textbooks according to students' needs	1	2	8	18	11	3.95
17.	The textbooks provide sufficient material for in-depth analysis and commentary on traditional Chinese opera	0	1	9	17	13	4.05
18.	Ample opportunities are provided in class to express opinions and suggestions on the content of the textbooks	0	1	7	20	12	4.08
19.	The courses provided ample opportunities for practical opera performance	0	2	8	19	11	3.98
20	The teaching materials focus on the crossover and integration of opera and other art forms	0	1	7	18	14	4.13

Source: Yan [3].

## 4. Conclusion and Discussion

This research focuses on the problems in undergraduate drama textbooks, the challenges and innovations in the development of MOOC textbooks, and the role of MOOC textbooks in improving teaching results. Through further discussion of these problems, we will explain how the research results are closely integrated with the opera education theory and the MOOC teaching theory, and propose reasonable analysis and reflection. Next, we will analyze the discussion content of each research objective one by one.

### 4.1. Analysis Of Problems and Needs in the Textbook

The main problems encountered by undergraduates in the teaching of drama textbooks include the high difficulty of the content of the textbooks, the lack of teaching resources and the lack of modern and diversified teaching methods. These problems reflect the limitations of the existing textbook design, which fails to fully consider the actual cognitive level and learning needs of students.

First of all, the mismatch between the difficulty of textbook content and students' knowledge background is a significant problem. As an important part of traditional Chinese culture, the content of

opera often contains complex historical background, literary elements and characteristics of performing arts. However, many undergraduates have a relatively small reserve of such knowledge at the beginning of their studies, which leads them to encounter comprehension barriers in their studies. According to the constructivism learning theory, students' learning should be based on the existing knowledge, but the existing teaching materials of opera do not fully take into account the starting point of students, and the content of the teaching materials is highly theoretical and professional. This deficiency in teaching design directly leads to students feeling that the content is difficult to understand in the learning process and cannot be combined with their existing knowledge system, thus affecting the learning effect.

Secondly, the lack of teaching resources also limits students' comprehensive understanding of opera, a performing art. Unlike other text-based cultural forms, opera's music, performance and visual effects are an integral part of the learning process. However, the existing teaching materials for opera are mostly text-based and lack the support of multimedia resources. This single form of resources makes it difficult for students to feel the unique artistic charm of opera through teaching materials. As the theory of multimodal learning points out, multi-sensory learning experience is helpful to improve students' learning effect. As a kind of performing art, opera especially needs multi-modal resources to help students understand. The MOOC platform shows great potential in this regard. By introducing video, audio and interactive learning modules, MOOCs can provide students with a more intuitive opera learning experience, enabling them to better understand the performance style and musical characteristics of opera.

Third, textbooks lack modern and diversified teaching methods. The existing teaching materials are still traditional and mainly rely on teachers' explanations in class, and students' independent learning after class is relatively limited. Especially in the art form of opera, which is highly dependent on performance and interaction, the lack of innovative teaching methods makes it difficult for students to deeply understand the essence of opera through traditional teaching modes. According to the theory of interactive learning, students can better grasp the content of knowledge through interaction with learning materials and other learners. The interactive features of MOOC platforms, such as online discussions, quizzes and group projects, can effectively make up for the shortcomings of traditional teaching materials and help students form a deeper understanding in their learning.

To sum up, the main problems in the design of existing drama teaching materials reflect the failure of teaching materials to fully adapt to the learning needs of modern undergraduates. The introduction of MOOC platform provides an effective way to solve these problems. By providing multi-modal learning resources and interactive functions, MOOC can help students better understand the complex content of opera and improve their learning effect. In the future, the design of Xiqu teaching materials should pay more attention to the actual needs of students, combine modern technological means, and provide more flexible and diversified learning paths to improve teaching quality and students' learning experience.

#### *4.2. Challenges And Innovations in the Development of MOOC Teaching Materials*

During the development process of the MOOC-supported drama textbooks, they were faced with the challenge of integrating traditional drama content with modern MOOC platforms, and at the same time demonstrated several innovations in design and implementation. As a digital platform, MOOCs can break the limitations of traditional teaching, but the challenges in their development and integration should not be ignored.

First of all, the digital transformation and integration of traditional opera content is a major challenge. As a performing art, the content of traditional opera is complex and covers a variety of art forms, such as music, dance, performance and literature. How to effectively digitize these contents and present them through the MOOC platform is a major challenge in the development of teaching materials. Existing literature shows that traditional opera teaching materials are usually text based, but this form is difficult to convey the multi-sensory artistic experience of opera. He [35] proposed in his research that the presentation of visual and auditory effects should be fully considered in the

digitalization of opera music and performance, and suggested the use of high-quality video and audio resources to make up for the shortcomings of traditional teaching materials [35]. The multimedia function of the MOOC platform can provide students with a more intuitive opera learning experience by integrating video resources and interactive teaching modules. However, how to ensure the quality of these resources and the smoothness of integration is a technical challenge that cannot be ignored during the development process.

Secondly, students' acceptance of the MOOC platform and adjustment of learning habits are also an important challenge. According to the Technology acceptance model (TAM), students' perceived usefulness and perceived ease of use of a MOOC platform directly affect their willingness to use it Davis, et al. [36]. Traditional opera teaching materials are usually taught face to face, while the autonomous learning mode on the MOOC platform requires students to have strong self-management ability and technology adaptability. Li [37] research pointed out that when facing the MOOC platform, students may have anxiety because they are not familiar with the online learning environment, which will affect the learning effect [37]. Therefore, in the development process of MOOC drama teaching materials, apart from the digital transformation of content, the user-friendliness of the platform and the design of the learning support system are equally important. Developers should ensure that the platform is easy to operate, and provide students with technical support and study guidance to help them transition smoothly to the MOOC learning mode.

In the process of addressing these challenges, the development of MOOC drama textbooks has demonstrated several innovations. First, the textbook development team has greatly enriched the teaching content of the drama textbook by introducing multi-modal teaching resources. The MOOC platform not only provides traditional text materials, but also integrates video, audio, pictures and interactive tests to enhance students' learning experience. Liang [38] emphasized in his research that diversified learning resources can stimulate students' learning interest and help students better master the art of opera through a multi-sensory learning approach [38]. This innovation breaks through the limitations of single content presentation in traditional teaching materials, enabling students to deepen their understanding of opera art through richer sensory experience.

Secondly, the interactive function of the MOOC platform also provides a new teaching model for the development of traditional opera textbooks. Through online discussion boards, tests and group projects, MOOC courses promote interaction and cooperative learning among students, which improves learning results. According to the theory of interactive learning, students can better internalize and apply what they have learned by interacting with others during the learning process [39]. The interactive design of the drama textbook in MOOC, for example, students can have online discussion after watching the drama performance video, share their learning experience, and test their mastery of the drama knowledge through quizzes. This design effectively compensates for the lack of interaction in traditional textbooks, making the learning process more dynamic and personalized.

Finally, MOOC textbooks also meet the learning needs of different students through the design of personalized learning paths. Students have the flexibility to choose different learning modules according to their learning progress and interests. This personalized learning style not only improves learning efficiency, but also enhances students' autonomous learning ability. Research shows that the design of personalized learning path helps to improve students' learning enthusiasm and learning effect [5].

To sum up, in the development process of MOOC drama teaching materials, despite facing challenges such as digital transformation of traditional content and technological adaptability of students, it has successfully broken through the limitations of existing teaching materials by introducing innovative measures such as multi-modal teaching resources, enhanced interaction and personalized learning paths, providing new ideas and solutions for the modernization of drama education.

#### 4.3. *The Teaching Effect and Reflection of MOOC Teaching Materials*

The drama textbooks supported by MOOCs have shown remarkable results in improving students' autonomous learning ability and teachers' teaching efficiency. This teaching model based on modern technology not only optimizes the teaching process, but also provides a new direction for the development of opera education in the future. The following is a discussion based on the research results and literature.

First of all, the improvement of students' autonomous learning ability is one of the important results of MOOC materials. Traditional classroom teaching is often teacher-centered, and students' learning initiative is low. However, MOOC platforms offer a wealth of learning resources and flexible learning arrangements, enabling students to learn according to their own interests and pace. According to the self-regulated learning theory, students can improve their learning results by setting goals, monitoring progress and reflecting on learning strategies during self-directed learning [40]. By introducing self-regulated learning modules, MOOC textbooks encourage students to conduct in-depth learning after class, especially by watching videos, participating in online discussions and completing quizzes, which further solidifies their understanding of opera knowledge. This self-guided learning mode not only enhances students' knowledge mastery, but also cultivates their ability to think independently and solve problems independently. The research of Zhang and Hu [41] points out that the autonomous learning module of MOOC platform can effectively improve students' learning autonomy, especially in art courses, and students' interest in and participation in the content can be significantly improved [41].

Secondly, the improvement of teachers' teaching efficiency is also a significant advantage of MOOC materials. The rich teaching resources and automated assessment tools offered by MOOC platforms reduce teachers' time investment in course preparation and student assessment, allowing them to focus more on teaching interaction and personalized instruction. MOOC platforms not only help teachers effectively manage students' learning progress, but also provide teachers with real-time feedback systems that enable them to adjust their teaching plans according to students' learning. The research of Li [37] shows that MOOC platform improves teachers' teaching efficiency and significantly improves classroom management and teaching effectiveness through automated assessment and real-time data analysis [37]. In opera courses, teachers can provide students with rich performance videos, interactive content and other resources through the MOOC platform, which can greatly reduce the burden of traditional teaching materials relying on teachers' explanation, and make the classroom more flexible and vivid.

However, despite the excellent performance of MOOC textbooks in terms of teaching effect, there are still some areas worth reflecting on and improving. The first is the issue of students' long-term learning motivation. Although the MOOC platform provides rich learning resources and independent learning opportunities, some students may gradually lose their motivation in the long-term independent learning process due to the lack of direct supervision from teachers. According to the self-determination theory, students' learning motivation needs to be maintained through a balance between intrinsic motivation and extrinsic motivation [42]. The lack of face-to-face teacher interaction among students on MOOC platforms may lead to a lack of motivation in the learning process. Therefore, the development of MOOC textbooks in the future could consider introducing more extrinsic incentive mechanisms, such as regular online interactive activities, academic competitions or reward systems, to enhance students' motivation to learn.

The second is the balance between depth and breadth of teaching content. Although MOOC textbooks have increased students' interest in learning through a variety of learning resources, some students have complained that the content lacks depth, especially when it comes to combining theory with practice. Existing MOOCs focus on teaching basic knowledge, but opera, a complex art form, requires students to master basic knowledge as well as a deep understanding of its cultural background and performance skills. The research of Wang [43] points out that theoretical depth in art courses is of great significance to students' professional development, so the development of MOOC textbooks in the future should strike a balance between basic content and advanced theory [43]. By adding more in-

depth discussion modules or practical cases, MOOC textbooks can better help students understand the connotation of opera art.

Personal insight: Although the MOOC platform shows strong potential in opera teaching, the future direction should pay more attention to the individual needs of students, especially through customized learning paths and more targeted learning support to help students overcome motivation issues in independent learning. At the same time, it is crucial to further improve the content of the textbook, which needs to be balanced in breadth and depth to ensure that students can not only master the basic knowledge of the art of opera, but also have a deep understanding of its cultural value.

To sum up, MOOC-supported drama textbooks have achieved remarkable results in improving students' autonomous learning ability and optimizing teachers' teaching efficiency. However, there is still room for improvement in the long-term maintenance of students' learning motivation and the depth of teaching content. In the future, the development of teaching materials should further enhance the interactive and personalized support to ensure the long-term application of MOOC platform in opera education.

## 5. Recommendations

The future optimization of opera textbook curriculum should place greater emphasis on individualized learning needs of students. Currently, textbook design often adopts a uniform model, ignoring the differences in learning speed, interest, and style among students. According to the constructivist learning theory, learners' knowledge construction should be personalized, therefore, future curriculum development should provide personalized learning paths that cater to students' actual needs. MOOC platforms can leverage technological support to enable students to freely choose learning modules, arrange their learning progress, and provide personalized testing and feedback to enhance learning effectiveness and stimulate interest in opera culture.

Specifically, MOOC platforms can utilize learning analytics technology to generate personalized learning reports based on learning data, helping students understand their learning progress and provide suggestions. Future research can further explore how to optimize the personalized teaching modules of MOOC opera courses through learning analytics to enhance learning motivation and efficiency.

In addition, improvements are needed in the application of MOOC technology in opera teaching. Although MOOC provides rich multi-modal learning resources, there is still room for improvement in depth and breadth. Currently, courses are mostly focused on basic knowledge instruction, lacking in the cultivation of students' performance skills and artistic creativity. Future research should explore how to utilize virtual reality (VR) and augmented reality (AR) technology to integrate performance practice with MOOC courses, providing an immersive learning experience.

In summary, future research should strive to combine the advantages of MOOC technology with the artistry of opera teaching to optimize the immersive experience, interactive learning, and personalized support, to better adapt to the learning needs of modern students and enhance the effectiveness of opera culture dissemination.

### 5.1. Policy Recommendations

To promote the integration of opera textbook curriculum with MOOC platforms, policy Finally, policies should encourage cross-departmental cooperation to promote the multi-channel dissemination of opera culture. The inheritance of opera culture is not only dependent on the education system, but also requires support from the cultural and propaganda departments. It is suggested that policies be formulated to promote the dissemination of MOOC opera courses on various cultural platforms and media through cooperation to expand the audience range, such as setting up course experience zones in museums and cultural centers to enable more people to learn and appreciate opera culture.

Personally, it is suggested that in the policy promotion process, attention should be paid to the protection and inheritance of local operas, considering the formulation of support policies to adapt to the

characteristics of different local operas, to ensure that local operas can be widely disseminated and inherited through the MOOC platform and achieve the innovation and continuation of traditional culture.

### Transparency:

The authors confirm that the manuscript is an honest, accurate, and transparent account of the study; that no vital features of the study have been omitted; and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

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