



# Exploration of Digital Innovation Path for Grassroots Party Building in Music Colleges--A Case Study of Zhejiang Conservatory of Music

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**Abstract.** In the context of strict governance of the Party in the new era, higher music education shoulders the dual mission of cultivating artistic talents and inheriting culture. As professional art education institutions, music colleges need to follow the trend of digital transformation in their grassroots party building work to enhance the effectiveness of party organizations and educational management level. This study is based on the practical experience of digital reform in Zhejiang Province, systematically analyzing the current situation and difficulties of grassroots party building in music colleges, and proposing a digital innovation path that integrates the characteristics of art education. By constructing a smart party building platform, optimizing organizational processes, and strengthening technological integration, we aim to explore the collaborative development mechanism between party building and music education, providing theoretical references and practical paradigms for similar universities, and assisting in the high-quality development of higher education.

**Keywords:** music schools; grassroots party building; digital reform; smart platforms; integration of art education

## 1 Introduction

With the deepening of the comprehensive strict governance of the Party in the new era, the role of higher music education in cultivating artistic talents and inheriting excellent culture is becoming increasingly prominent. As an important battlefield for professional art education, music colleges' grassroots party building work not only relates to the political core role of party organizations, but also directly affects the quality of art talent cultivation and the effectiveness of cultural inheritance [1]. However, the traditional party building work model faces many challenges in the context of rapid development of informatization and digitization. How to enhance the effectiveness of grassroots party building through digital transformation has become an important issue that music colleges urgently need to address.

The rapid development of information and digital technology has provided new opportunities for innovation in grassroots party building work. Digital transformation

is not only about updating technological means, but also about transforming work concepts and models. By building a smart party building platform, intelligent and refined management of party building work can be achieved, breaking the limitations of time and space, and improving the efficiency and coverage of party building work. For example, using big data technology can real-time grasp the ideological dynamics and learning needs of party members, and accurately push learning content; Through virtual reality (VR) and augmented reality (AR) technologies, immersive party member education scenes can be created to enhance the attractiveness and infectiousness of learning; With the help of artificial intelligence (AI) technology, intelligent question answering systems can be developed to provide personalized learning support for party members[2]. The application of these technologies can not only improve the efficiency of party building work, but also enhance the sense of participation and belonging of party members.

## **2 The Realistic Demand for Digitalization of Grassroots Party Building in Music Colleges**

With the continuous development of network technology, update and iteration, and the progress of distance education and teaching, more and more schools connect their branches and branches through the Internet, and build their school private networks [3]. Although traditional IPsec VPN, GRE over IPsec and other technologies can build a safe and reliable single campus Internet private network, its technology itself is mostly used in fixed IP scenarios, which is difficult to meet the more flexible access scenarios [4,5]. Therefore, it is difficult to realize dynamic IP full internet service access and mutual visits between different colleges and universities. Based on Huawei dynamic intelligent VPN technology, DSVPN proposes a high-security private network design scheme to achieve full interconnection communication under IPsec protection [6,7].

### **2.1 Dual Background of Policy Driven and Technological Empowerment**

Since the implementation of the "88 Strategy" in Zhejiang Province, digital reform has become the core engine of regional development. From 2017 to 2022, measures such as the "maximum one run" reform and government digital transformation will provide policy support for party building innovation in the education sector [8]. Music colleges need to leverage digital technology to overcome the limitations of traditional party building models, such as redundant party processes, data silos, and inefficient cross departmental collaboration, and achieve a paradigm shift from experience management to data-driven approaches [9]. In this context, the digitization of grassroots party building in music colleges is not only an inevitable choice to follow the trend of the times, but also an effective way to promote the modernization of school management and improve the quality of education and teaching [10].

## 2.2 Existing Problems and Transformation Bottlenecks

We need to conduct in-depth analysis on the current situation of digitalization of grassroots party building in music colleges. At present, there are still some problems in grassroots party building work in many music colleges: low level of informatization, cumbersome party building management processes, and poor data sharing. These problems affect the efficiency and quality of party organization construction and party member management [11]. At the same time, with the rapid development of information technology, the application of digital means in educational management has become an irresistible trend, and the digitalization of grassroots party building in music colleges urgently needs to be strengthened and improved.

**Insufficient adaptability of the subject.** Some party affairs staff and grassroots party branch secretaries are limited by their technical literacy and find it difficult to effectively use digital tools. They still mainly adopt traditional work modes and lack the ability to use digital technology to solve practical problems in party building innovation work.

**Surface level integration of technology.** The lack of deep integration between party building platforms and art education scenes results in a tendency to prioritize form over content. This indicates that some universities lack systematic thinking and scientific planning for other work in the digitalization process of party building, resulting in ineffective integration of party building work into the overall work of universities.

**The sustainability of resource investment is weak.** The contradiction between technological iteration and funding shortage is prominent, and platform construction is prone to lagging behind. Continuous funding and technical support are needed to maintain the modernity and security of the system. However, some universities may have insufficient funding, which has affected the iterative updating of the digital platform construction for party building.

**The decision-making mechanism becomes cumbersome.** Some universities have low decision-making efficiency due to multiple levels of approval and information barriers when making major decisions, which restricts organizational response capabilities. Due to the lack of effective information sharing mechanisms, some party affairs work is repeated between different departments and levels, resulting in resource waste and low work efficiency.

## 3 The Connotation Logic and Value Orientation of Digitalization in Grassroots Party Building

To meet the challenges, we need to conduct in-depth research on the connotation and requirements of digital development, and formulate digital development strategies that are in line with the characteristics of music colleges and universities, based on the actual situation of Party building. Taking advantage of the "88 Strategy", integrate resources, strengthen technical support, and promote the digitization of grassroots party building in music colleges. Only through systematic thinking and targeted actions can we effectively enhance the level of party building, promote music colleges

to move towards a new stage of digital management, and achieve the goal of high-quality development of education.

### **3.1 Strengthen the Construction of Ideological Positions**

With the deepening of reform, the social and economic components are becoming increasingly diverse, and deep-seated contradictions are becoming prominent. At the same time, social consciousness and values are also becoming more diverse, and there is occasional noise and noise in the ideological field. As the forefront of ideological confrontation, universities need to establish a dynamic monitoring mechanism through digital means. For example, relying on the intelligent party building platform to track the ideological dynamics of party members in real time, combined with the construction of the red music resource library, embedding ideological education into artistic practice, and achieving the dual goals of risk warning and cultural infiltration [12]. The "digital+smart party building" model can set up a risk monitoring and warning mechanism to grasp the ideological trends of party members and comrades at any time and anywhere, which can effectively prevent the slightest change and trace back to the source, ensure the ideological progressiveness of party members and the security of party building information data, better deal with the risks and challenges of information on party building, and keep the party organizations in colleges and universities vibrant and vigorous.

### **3.2 Improve the Efficiency of Party Building Work**

The party building work in universities needs to rely on modern information technology for reform and innovation, and improve the level of party building informatization construction. The digital model of grassroots party building is the deep integration of university party building work and information technology, and is an inherent requirement for improving the efficiency of party building work. Digital technology can reconstruct the party affairs process and break through the limitations of time and space. By building a closed-loop system of "online learning data analysis intelligent evaluation", personalized push and accurate assessment of party member education can be achieved. After integrating functions such as volunteer service and micro wish claiming on the "Party Xiaoyin" platform of Zhejiang Conservatory of Music, the participation of party members can be significantly improved. In addition, the digital transformation requires the party building work in colleges and universities to use the Internet and other information technologies to jointly carry out party building activities through online and offline integration. Party members can not only improve their political awareness and ideological cognition through online independent learning, but also the digital model of grass-roots party building [9] can break the time and space constraints of traditional teaching, support students to use various terminal devices to carry out online organizational learning at any time and place, solve the problems of too many people gathering, a single form of party teaching, and promote the organic integration of online theory and offline practice.

### 3.3 Practice the Educational Philosophy of "People-oriented"

Party building work should start from the masses, adhere to the online mass line, carry out party member education activities and party building work in a way recognized by the masses, and internalize the conscious actions of the masses with the Party's propositions. As the main battlefield for high-quality and high skilled talents, universities are influenced by modern information technology and prefer intelligent and convenient lifestyles. Guided by the needs of teachers and students, an interactive party building ecosystem is constructed through digital models. Not only can it achieve "face-to-face" communication in party building work, but it can also achieve "key to key" interaction within party members, which can effectively meet the needs of university teachers and students. Secondly, the digital model of grassroots party building can fully collect the practical needs of party members and comrades, develop immersive music party courses using VR/AR technology, combine party history education with art forms such as symphony and opera, and enhance the infectivity and attractiveness of party building activities. Fully reflect that the party building of music colleges in the new era takes "people-oriented" as the starting point and foothold of all work.

### 3.4 Promote the Deep Integration of art and Party Building

With the rapid development of information technology, especially the wide application of Internet, big data, cloud computing and other technologies, the grass-roots party building of music colleges also needs to adapt to the requirements of the digital era, and improve the quality and efficiency of party building through digital transformation. At the same time, the digitalization of grassroots party building in music colleges needs to be closely integrated with the characteristics of art education, deeply integrating party building work with music education, art practice, etc., and exploring the three in one model of "red genes+digital technology+music education" [13]. For example, by using AI technology to analyze the melodic features of classic red works, developing a digital teaching case library, and promoting the creative transformation of party building resources into art courses.

## 4 SConstruction of Digital Innovation Path for Grassroots Party BuildingDSVPN Technical Principle

The application of digital means in grassroots party building in music colleges promotes the scientific and standardized development of party building work by improving management efficiency, facilitating information interaction. At the same time, through data analysis and effectiveness evaluation, timely adjustment of application strategies, continuous optimization of the functions and effects of digital tools, provide stronger support and guarantee for the party building work of music colleges.

#### **4.1 Conceptual Innovation: Coupling Artistic Expression with Digital Thinking**

Music colleges need to firmly grasp the socialist direction of education and strive to sing the main melody of governing the Party. Strengthen political guidance and integrate party building work with art education. Create a brand of "ideological and political courses in music halls", for example, using symphonic works such as "Yellow River Cantata" and opera "Jiang Jie" as carriers to carry out situational party history education, combining party theory with music and art, spreading party ideology through artistic forms, and enhancing the attractiveness and infectiousness of party building activities [14]. Establish an interdisciplinary research team to explore the integration path of artificial intelligence and music creation, such as AI assisted red theme composition, virtual choir performances, etc. For example, Zhejiang Conservatory of Music participated in "Digital Driven Instrument Exhibition" and "Digital Music Special Exhibition" at the 3rd Global Digital Trade Expo. Organize the first AI Song Creation Competition and the world's first piano competition with AI judges. Actively carry out scientific research projects that combine music art with artificial intelligence, digital music processing technology, etc., and explore new projects, products, and experiences that deeply integrate music art with intelligent technology. Simulate networking topology

#### **4.2 Platform Construction: Integrated Intelligent System Development**

In the face of the current situation and problems of traditional party building work in music colleges, we focus on the difficulties and bottlenecks of party building work, use digital thinking, technology, and methods to reconstruct it into scenario based technology, effectively integrate technology platforms and resources, and build a "one center, multiple terminals" architecture through the application of digital technology, integrating party affairs management, learning resources, data analysis modules, etc. Through online exhibitions, virtual performances, and interactive discussions, a wider range of groups can participate in party building activities, expanding the influence of party building activities. Simultaneously introducing blockchain technology to ensure the security of party building data, achieving cross departmental information sharing and hierarchical management of permissions. Breaking through the temporal and spatial limitations of centralized learning and organizational life, providing real-time and high-capacity resource platform support for party members' learning, education, and achievement verification.

#### **4.3 Process Optimization: Matrix Organizational Restructuring**

By using digital means to optimize the internal structure and workflow of the party organization, the matrix management and modular operation of the party organization can be achieved, and the response speed and execution ability of the party organization can be improved [15]. Adjust and optimize the establishment of party organizations, implement the system of "cross appointment of party and government teams",

strengthen the coordination between party building and administration, and ensure that party decisions are effectively implemented in administrative work. Implementing the 'Dual Leaders' Cultivation Project for Teacher Party Branch Secretaries', music colleges should strengthen the training of teacher party branch secretaries, so that they can lead both academically and in party building, and enhance the combat effectiveness of grassroots party organizations. Simplify the online approval process of "Three Meetings and One Lesson" through digital platforms, and improve execution efficiency through automated reminders and progress tracking.

#### **4.4 Evaluation System: Data-Driven Dynamic Feedback**

Design multidimensional evaluation indicators (such as Pioneer Index and Fortress Index), combined with machine learning algorithms to generate a portrait of the effectiveness of party organizations [16]. For example, democratic evaluation and assessment of party members, integration of work (academic) performance data, statistics of volunteer service hours, performance evaluation of grassroots party organizations, supervision analysis, etc., using big data analysis technology for precise education, assessment, and evaluation. Establish a closed-loop mechanism of "problem discovery strategy adjustment effectiveness verification", rely on big data analysis to optimize resource allocation, and ensure the continuous optimization and improvement of party building work.

### **5 Practical Case: Digital Party Building Model of Zhejiang Conservatory of Music**

In the context of the "88 Strategy", Zhejiang Conservatory of Music has carefully developed a grassroots party building management platform based on microservice modular architecture through research and exploration, including cadre management and the "Party Xiaoyin" grassroots party building intelligent governance system, covering party information release, party work management, party member development management, party member education and training, party organization performance management, party mass services, party building data cockpit and other contents. It adopts an online and offline dual wheel drive and integrated development model to achieve high-quality development of party building through two-way promotion, linkage evolution, integration and unity. This provides a useful reference for the multi-dimensional, all-round, and digital party building management model of grassroots party building work in music colleges.

#### **5.1 Online: Building an Integrated Party Building Management Platform**

Using a unified identity authentication system as a medium, a big data warehouse as a foundation, and the "Party Xiaoyin" APP handheld and grassroots party building intelligent governance system PC as carriers, the platform integrates seven major func-

tions, including three meetings, one lesson, and party member development. Each major function contains several sub functions, covering all elements such as management, learning, assessment, evaluation, service, and analysis. It covers the school party committee, departmental party organizations, party branches, party members, active party members, and other personnel (members, masses), forming a comprehensive, all inclusive, and integrated management platform. And based on the differences in the roles of party organizations and members at all levels, empowerment management is carried out, and a table of grassroots party organization relationships and party member information is sorted out. At the same time, various types of data are classified and encrypted to ensure the security of party building information, and real-time synchronization is achieved through the integration of mobile and PC terminals.

## **5.2 Offline: Create a 'red' Physical Space**

By integrating the construction of the Party and the masses service center, Zhejiang Conservatory of Music has created six functional areas: "Pioneer Station, Music Party History, Ideological and Political Navigation, Red History Education, Party and Mass Integration, and Teacher Student Enjoyment". These areas have formed eight physical spaces, including the Teacher Student Service Center, Ideological and Political Research Institute, Youth Reading Club, Spiritual Home, Party Building Exhibition Hall, Theme Party Day Workshop, Talent Workshop, and United Front Work Reception Hall. The center and its various sections have truly become a "loudspeaker" for promoting Party policies, a "charging station" for conducting education and training, and an "information database" for understanding the opinions of teachers and students. Through online and offline interaction, party members can participate in party building activities anytime and anywhere. At the same time, party organizations can more effectively manage and supervise the learning and activity participation of party members, achieve resource sharing and information exchange, and improve the efficiency and quality of party building work. This integration model not only enhances the vitality of party building work, but also improves the participation and satisfaction of party members, injecting new impetus into grassroots party building.

## **5.3 Effectiveness: Supported by Data Governance Analysis**

By integrating cross departmental, cross business, and cross system collaborative data synchronization mechanisms such as personnel systems, academic systems, student engineering systems, and graduate systems, and utilizing data analysis techniques such as data mining and statistical analysis, valuable information and knowledge can be extracted from massive party building data [17]. For example, the "Party Xiaoyin" middle-level cadre assessment system can publish assessment forms, upload self-evaluation forms, upload annual work reports, perform multi-mode evaluations, display assessment status, provide warning reminders, and display assessment results in multiple forms. Then, by synchronizing party member information, party organizational structure, activity records, volunteer services, heart to heart talks, pioneer index, fortress index, etc. through the data center, a comprehensive evaluation index is

formed, which constitutes the foundation of the platform's operation. By analyzing the participation, learning outcomes, and activity feedback of party members, it helps party organizations understand the current situation of party building work and identify existing problems and deficiencies. In addition, based on the results of data analysis, party organizations can make scientific decisions, optimize the strategies and resource allocation of party building work, and improve the pertinence and effectiveness of party building work.

## 6 Conclusions

The digitalization of grassroots party building in music colleges is a deep coupling of technological logic and educational laws. Against the backdrop of the continuous development of artificial intelligence technology, music colleges should constantly innovate their party building work models and improve the quality and efficiency of party building work. In the future, it is necessary to further strengthen the scene adaptability of digital technology, explore the application of emerging technologies such as metaverse and generative AI in party building, build a more artistic and intelligent party building system, and inject sustained momentum into the connotative development of higher education. We also need to constantly explore and practice, through systematic thinking and targeted actions, to promote the digitalization of grassroots party building work in music colleges and contribute to the high-quality development of music education.

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