The Dynamic Evolution of College or University Roles in Aesthetic Education Assistance Projects in China: From Implementers to Co-Creators

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Abstract: The role of colleges and universities as transmitters of knowledge and active participants in aesthetic education assistance projects is pivotal. This study aims to investigate how the roles of these institutions in aesthetic education assistance projects have evolved in China. Through interviews with 10 college educators, students who endorse the project, and local teachers engaged in such initiatives, the research seeks to trace the dynamic shifts in the involvement of higher education institutions in fostering aesthetic education. The findings reveal that colleges and universities have transitioned from being mere implementers to assuming four key roles: resource providers, talent developers, knowledge advocates, and leaders in model practices within aesthetic education. A significant innovation of this research is the application of actor-network theory, which illustrates how these institutions have shifted from implementers to collaborators, creating a flexible network that enhances stakeholder engagement, attracts more participants, and encourages sustained active involvement. Ultimately, this study offers fresh insights into improving the initiative and co-innovation capacities of educational institutions and their networks, providing valuable experiences for future research and practical applications of aesthetic education assistance in developing areas to further aesthetic education's growth.

Keywords: aesthetic education assistance; colleges and universities; actor-network theory; aesthetic education

1. Introduction

Colleges or universities, with their abundant educational resources, have long been recognized for their crucial role in providing assistance to aesthetic education(Caeiro et al., 2020). In 2019, China successively released policies encouraging colleges and universities to assistance rural areas with aesthetic education assistance, recommending the activities of elegant arts on campus, thus improving the level of aesthetic education for students in rural areas (Ministry of Education of the People's Republic of China, 2019). Due to increased government focus, there has been a growing number of discussions about how to enhance assistance for aesthetic education (Department of Education of Guangdong Province, 2021).

However, for a long time, colleges and universities have often played the role of executors in aesthetic education assistance, driven by relevant policies of the education sector, and colleges and universities may face problems such as insufficient resource allocation and under-exploitation of their professional strengths when acting as actors(Bray & Lillis, 1988) which limits the overall effectiveness of the project. In response to the current situation, many scholars have conducted thorough research on educational assistance. They have identified critical issues related to the sustainability of these projects, particularly addressing the discrepancies between demand and resource allocation, as well as the challenges associated with fostering collaborative innovation among various stakeholders(Ledoux & McHenry, 2008). However, the majority of these studies primarily focus on the beneficiaries of the assistance, with few research efforts directed at colleges and universities. There is a need to explore ways to stimulate initiative and innovation within these institutions and enhance their role in providing aesthetic educational assistance.

Actor network theory offers a powerful framework for addressing these issues. This theory encourages the analysis of interactions among actors to uncover synergistic mechanisms both within and outside the organization. It emphasizes that organizations are not isolated entities but are embedded in complex networks of relationships and interactions(Corsaro et al., 2012). In the field of education, actor network theory has been successfully applied in various contexts, providing a robust theoretical foundation. Despite this, there remains a significant gap in the in-depth research concerning how the roles of colleges and universities evolve within aesthetic education assistance projects.

Therefore, the primary aim of this study is to thoroughly analyze the evolution of the roles of colleges and universities within aesthetic education assistance projects using actor network theory. The research will focus on how these institutions can innovatively evolve their roles by setting clear objectives, fostering synergy among stakeholders, constructing a flexible

actor network, and enhancing initiative and innovation. This study seeks to address the static and monolithic challenges of the roles faced by colleges and universities in these projects, with the goal of offering new theoretical insights and practical strategies to improve the overall effectiveness of the projects. The central research question is: How have the roles of colleges and universities dynamically evolved in the process of providing assistance for aesthetic education?

2. Literature review

In the past studies, scholars' research on aesthetic assistance from colleges and universities to rural areas has been divided into two parts. The first part focuses on the unequal status of aesthetic education in less developed regions(Li et al., 2020). For example, Mamza (2007) 's study points out that underdeveloped regions often face problems such as teacher shortages and specialized teacher training, resulting in students not being able to enjoy quality education. Other scholars have proposed projects and recommendations to address the disadvantages of rural aesthetic education. For example, in response to the barrenness of aesthetic education in less developed areas, Andang'o and Mugo (2007) suggested that there is a need to strengthen the tripartite relationship between policy makers, textbook writers and teachers in underdeveloped areas so as to improve children's music education. These studies make a significant contribution to addressing the challenges of rural aesthetic education. However, they tend to focus narrowly on the beneficiaries, highlighting the disparities in aesthetic education in underdeveloped areas without fully evaluating the crucial role that colleges and universities play in these projects.

A number of scholars have examined how resources from colleges and universities positively impact underdeveloped areas. One notable initiative is the project that recruits college students to assist in rural regions, which has gained considerable attention(Chen et al., 2023). On the other hand, Preradovic et al. (2022) study shows that some colleges and universities have attempted to improve the educational status of local underdeveloped areas by going into the community to provide service learning and establishing university-community partnerships. However, Preradovic et al. (2022) point out that the efforts of colleges and universities also face the challenge of providing funding in the long term, which becomes one of the biggest barriers limiting the sustainability of the projects. On the other hand, Wu et al. (2022) discusses the recent new momentum of Chinese colleges and universities graduates returning to work in the countryside from the perspective of employment of college graduates. Through a survey of more than 1,200 college students from family backgrounds in less developed regions, it was found that more and more college students would consider returning to their hometowns for employment, seizing the new opportunities for rural development, and also becoming a potential human resource for the overall development of the countryside.

These studies recognize the contributions of colleges and universities to aesthetic education, highlighting from various perspectives the positive impact these institutions have on the development of underdeveloped regions and the challenges they encounter. However, most of these studies focus solely on the current situation, neglecting to consider the dynamic role of colleges and universities in this process or to conduct systematic research on it. Henderson et al. (2016) and Verlinden et al. (2023) propose that as role clarity increases, the effectiveness of the role's functioning in the system shows a positive correlation. And the clarity of the evolving roles of colleges and universities as knowledge transmitters and social actors in aesthetic education assistance projects is critical to the success of the overall project.

By dissecting in detail the experiences of colleges and universities' participation in the project, we provide substantive recommendations for future aesthetic education assistance projects and emphasize the key role of colleges and universities in improving aesthetic education. This study aims to answer the question of the changing role of colleges and universities in aesthetic education assistance projects. Through this study, it addresses the gap in the role of colleges and universities that exists in previous studies, and is expected to provide more systematic and comprehensive theoretical assistance for the design, implementation, and evaluation of future aesthetic education projects, which will assistance to explore in depth the substance of aesthetic education assistance and provide a new perspective for improving educational equity.

3. Conceptual framework

Actor network theory (ANT) was chosen as the theoretical framework for this study, aiming to deeply analyze the dynamic evolution of the roles of colleges and universities in the aesthetic education assistance project and to reveal the internal mechanism of this evolution. Actor network theory originates from science, technology and society studies, emphasizing that in any social phenomenon there are various associated actors, including human and non-human actors(Crawford, 2020). The theory provides a unique perspective that can assistance understand the evolution of the role of colleges and universities in aesthetic education assistance projects.

Translation: Translation is the most central step in the formation of actor networks(Crawford, 2020). Translation is the

process of translating the interests of the core actors into the common interests of the other actors. Translation is based on the translation of the interests of the core actors into the common interests of the other actors, to the point where all actors are willing to actively participate in the network(da Silva, 2020). Within the framework of actor network theory, from the standpoint of colleges and universities as central figures in aesthetic education assistance, it is crucial to establish and maintain the dynamic evolution of networks built by these institutions. This requires a focused analysis of the translation process within colleges and universities. The translation process is divided into four stages: Problematization, where the issue is defined; Interessment, where stakeholders are attracted; Enrolment, involving the negotiation and alignment of interests; and Mobilization, where the network is actively engaged in addressing the problem.(Shree & Singh, 2019).
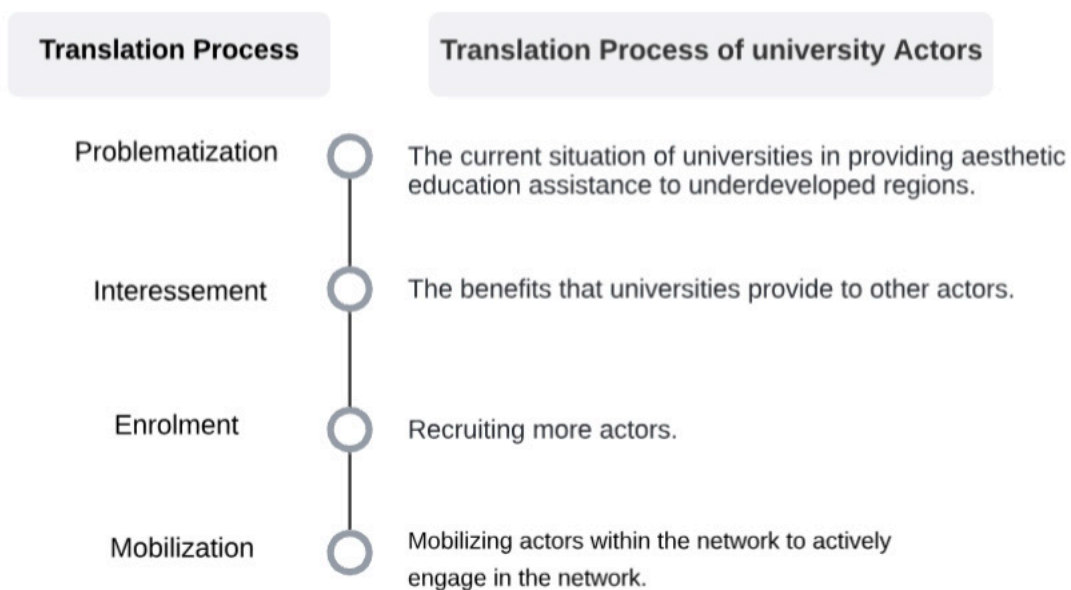

Figure 1. Translation map of the network of actors in colleges and universities

Explaining key concepts of actor network theory using colleges and universities as core actors:

Problematization: The depth of problem presentation will affect the subsequent roles and actions of colleges and universities in the aesthetic education assistance project. Colleges and universities are able to propose solutions in the aesthetic education assistance project in a more targeted way, making their actions more forward-looking and strategic. Colleges and universities need to analyze the current situation of colleges and universities' aesthetic education assistance in less developed areas.

Interessment: Clarifying the benefits that colleges and universities should offer to other actors in order to build reciprocal relationships and the willingness of other actors to join the network.

Enrolment: How other actors are brought into the projects of colleges and universities, including whether they are passively involved or actively engaged, and the motivation behind it.

Mobilization: Exploring how colleges and universities can mobilize internal departments and groups to collaboratively participate in aesthetic education assistance projects.

Based on the specific case studies in this research and following the principles of Actor-Network Theory (ANT), the establishment of a stable and sustainable network primarily considers the following four aspects: the connections between actors; mechanisms for disputes and resolutions; the presence and role of mediators; and resources and environment (Bilodeau et al., 2019).

4. Methodology

This study sheds light on the issue of the transformation of the role of Chinese colleges and universities in aesthetic

projects and reveals the key drivers behind this evolution. This study adopts a qualitative research methodology, using in-depth interviews as the main tool and actor network theory as a guide, with the main objective of exploring the dynamic evolution of the role of colleges and universities in the aesthetic education assistance project.

Case Study. This study adopts a case study design, which has the advantage of providing a detailed description and in-depth understanding (VanWynsberghe & Khan, 2007), which is in line with the concept of actor network theory. This study selects an aesthetic education assistance project in Guangdong Province, China, which has been implemented for many years, as a representative case study of a one-to-one aesthetic education assistance program between universities and underdeveloped areas that covers the whole province and will continue to be implemented for a long time.

Interview Questions. In order to answer the research question, based on the principle of ANT, this study designed different interview questions for participants of different identities. Through interviews with university representatives, we will gain an in-depth understanding of the positioning and responsibilities of colleges and universities in the overall aesthetic education support program. Through interviews with volunteer students, local students and local aesthetic education teachers, we will learn about the interaction between universities and other actors. To verify the validity of the interview questions, peer review was introduced in this study, in which the validity of the interview questions was reviewed by three PhD students from the University Malaya, all of whom have completed quantitative and qualitative research courses at the PhD level and are using similar research methods for thesis writing. Through the design and implementation of in-depth interviews, the aim is to obtain sufficient and detailed data on the evolution of the role of universities, and provide a reliable data basis for subsequent data analysis and theoretical analysis of actor networks.

Data Collection. By means of purposive sampling, 10 participants were interviewed from the aesthetic assistance project at A colleges. These included three local aesthetic education teachers, three university students providing assistance to the university, two local students, and two university teachers. Each interview, which lasted about one hour, focused on how colleges and universities provide assistance in aesthetic education. Conducted in a classroom at School B, which is receiving assistance, the interviews will be recorded with the permission of the participants.

Table 1. Coding table for interviewees

Serial number	Nicknames	Dignity
1	CST-1	University students in assistance of education
2	CST-2	University students in assistance of education
3	CST-3	University students in assistance of education
4	LST-1	Local students
5	LST-3	Local students
6	CT-1	Colleges and universities teachers
7	CT-2	Colleges and universities teachers
8	LT-1	Local aesthetic teachers
9	LT-2	Local aesthetic teachers
10	LT-3	Local aesthetic teachers

Data analysis. The data recordings were converted into text versions and then imported into NVIVO 12. The interview data were coded and classified based on the principles of ANT, and were pre-conceived into the following categories: the connection between actors; the existence and resolution mechanism of disputes; the existence and role of mediators; and the coordination of resources and environment. Perform a saturation test on the coding results. When the coding reaches saturation and no valuable data can be added, data collection will stop.

Ethics. This study was approved by the Ethics Committee of the University Malaya, and all participants provided written informed consent. The interview process was strictly in accordance with the informed consent form, and all participant information was recorded using codes to protect their privacy.

5. Findings

In this study, 10 participants from university A who were deeply involved in the aesthetic education assistance project were interviewed one-on-one, and the interview results were analyzed and coded. Guided by the theoretical framework of ANT, we explore the changing roles of colleges and universities in aesthetic education assistance project, and the internal mechanisms that produce these changes. The results show that in the actor network constructed with universities as the core actors, many actors jointly construct an interactive map of aesthetic education assistance projects through benefit granting,

recruitment and mobilization. In this process, the role of universities has gone through a process from passive participants to co-creators, which is mainly reflected in four aspects: resource providers, talent developer, knowledge leaders and leading demonstrators.

5.1 Actor Network Construction

This study conducted semi-structured interviews with 10 participants from Colleges A, all of whom were deeply involved in the aesthetic education assistance project. The objective was to gather insights into the roles played by the universities during the assistance process and the experiences of the students involved. Utilizing Actor Network Theory as the theoretical framework, the study aims to explore ways to enhance the role of colleges and universities in aesthetic education assistance. The analysis is structured into two main stages: the first focuses on the core actors, examining the challenges faced and the essential access points established by colleges and universities in the translation process. The second stage broadens the scope to multiple actors, investigating how these educational institutions can more actively engage in interessment, enrolment and mobilization. This analytical approach allows for a thorough examination of the evolving role of colleges and universities in aesthetic education assistance, uncovering the dynamic mechanisms at play and offering theoretical insights to enhance their effectiveness in aesthetic education.
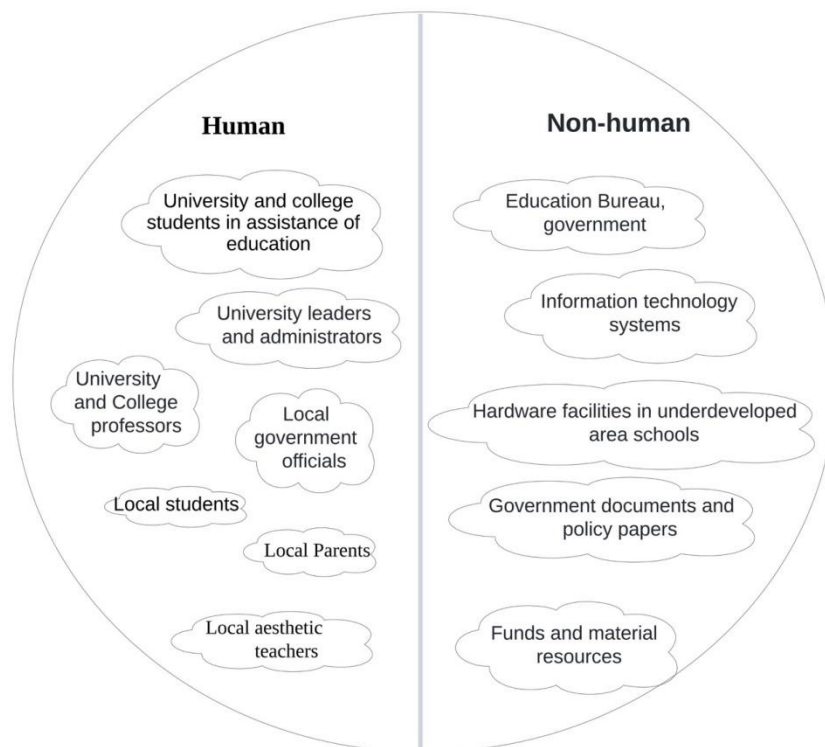

Figure 2. Map of all actors

5.2 Problematization faced by colleges and universities presented

Colleges and universities encounter several strategic challenges in assistance aesthetic education. Primarily, there is a significant communication gap between higher education institutions and local schools, leading to mismatches between the needs and the allocation of resources. For instance, there are issues in the deployment of university students for teaching assistance roles, compounded by the absence of a scientifically based mechanism to allocate resources according to actual demand. This disconnect hampers the effectiveness of assistance initiatives and undermines the potential impact of these educational partnerships. The local MET teacher3 pointed out:

"I think the universities providing assistance also need to communicate and follow up a bit. The Education Bureau they are actually not particularly knowledgeable about the situation of the schools,...... after the allocation is not necessarily reasonable, you see like now, the elementary school side of the art teacher is very full, but the middle school side is very insufficient." The mismatch between demand and resource allocation is also reflected in the fact that the colleges and universities' assistance training courses are too deep in content for local students and teachers. "It's better to be related to our classroom teaching,...... or some basic aesthetic training, not to say that the lecture is too deep, too deep knowledge in

teaching we can't use." (Local Aesthetic Education Teacher 2)

Secondly, the potential role of colleges and universities in the project was not fully realized. While the project was active, these institutions made various adjustments in management and organization, such as frequent changes in the personnel assigned to the project, underutilization of teachers' capabilities, and inefficient distribution of government grants. These issues led to suboptimal outcomes and hindered the effectiveness of the collaboration.

"We received a string of several regions need to carry out aesthetic education assistance, the project leaders are not the same, we all have a competitive relationship, and this year I am responsible for, next year is not necessarily me, this project for three years, every year to change the leadership and the person in charge, we all take a step to look at a step, explicitly made to assistance is the first step up, the first do not want to think about the long-term plan. " (Colleges and universities teacher 1)

Thirdly, the actual contribution of colleges and universities has not fully leveraged their professional strengths and unique characteristics. The distinctive academic disciplines of these institutions have not been effectively incorporated into the assistance projects. Furthermore, there has been a lack of integration with the local aesthetic education landscape to provide personalized aesthetic education tailored to the needs of local schools. This missed opportunity has limited the potential impact of their involvement in enhancing aesthetic education at the community level.

"I do hope that some teachers who can teach traditional Chinese culture can come to....... Teachers or students are fine, at least let the students over here know what real theater is, because our local teachers are not very good at it, and let the students know what real theater is, and how different it is from what they have heard and what they have read in books." (Local Aesthetic Education Teacher 3)

With increased governmental assistance and national focus, Colleges and Universities A began reevaluating their roles to address the issues of unequal needs and resource distribution and the underutilization of their potential and professional capabilities more effectively. As a key player, University A has initiated the "Establishment of a Feasible Aesthetic Education Project." This project serves as an obligatory point of passage (OPP) within the network of actors involved in aesthetic education. It aims to facilitate a long-term, mutually beneficial cooperation and significantly enhance local aesthetic education collectively. This strategic approach underscores their commitment to harnessing their institutional strengths to foster substantial improvements in the aesthetic education landscape.

5.3 Interessment, enrolment and mobilization

The next step in building an Actor Network is to interessment, enrolment and mobilization based on the needs and OPP of each actor.

5.3.1 Motivation within colleges and universities

Even though Colleges and Universities are already core actors, the allocation of interessment within universities is a key link in ensuring the participation of all actors and the coordinated promotion of aesthetic education assistance projects. First, there are multiple levels of actors within universities, including university teachers, university leaders and management personnel, and university students who provide teaching support.

"In fact, exactly how to implement the aesthetic education assistance is still mainly within our colleges and universities whether there is smooth communication......" (Colleges and Universities Teacher 1)

Firstly, incentivizing college or university teachers by offering interessment such as enhanced prospects for title evaluation, opportunities for professional development, and bonuses can significantly boost their motivation to participate actively in the project. These incentives not only enhance their commitment but also improve the quality of the assistance they provide. Secondly, by recognizing advancements and providing rewards, along with securing additional financial and material resources from the government for college or university administrators, an internal incentive mechanism can be created. This mechanism encourages administrators to more effectively assistance and promote the smooth operation of aesthetic education assistance projects. Finally, offering students practical opportunities and rewarding outstanding contributions can ignite their enthusiasm for teaching and increase their willingness to participate in aesthetic education assistance projects. Such measures not only enrich their educational experience but also bring new energy and perspectives to the project, enhancing its overall impact. This stimulation of internal kinetic energy not only assistances to reduce internal problems and improve communication efficiency, but also enables colleges and universities as a whole to better fulfill their role as core actors and enhance the overall effectiveness of the aesthetic education assistance project.

5.3.2 Government directs resources, document sets implementation

"Not only A-schools come to assistance, but also the education bureaus of several developed cities came to assistance us in the previous years. " (Local Aesthetic Education Teacher 3)

In addition to fostering intrinsic motivation within colleges and universities, the engagement and guidance of government

bodies, the Education Bureau, and national policy documents are critical. These actors play a pivotal role in steering the project's direction. The interessment of the government and the Education Bureau receive assistance in two main ways: First, for these entities, the success of the project is directly linked to the development of regional education. Effective implementation of the project offers a chance to advance education, which in turn enhances the performance evaluations of both the government and the Education Bureau. This alignment ensures that the project's success contributes directly to their goals. Second, the government and its policy documents provide explicit guidance and assistance to education bureaus in less developed regions. By engaging in the aesthetic education assistance project, the Education Bureau not only enacts government policies but also gains additional policy assistance, facilitating smoother and more effective project implementation. Therefore, the involvement of the government and the Education Bureau in the project represents not only a commitment to local educational causes but also a proactive approach to enhancing government performance and adherence to policy initiatives.

The mobilization and enrolment of the Education Bureau of the less developed region and the related policy documents in the aesthetic education assistance project is mainly manifested in two aspects. First, through explicit government assistance and guidance from policy documents, education bureaus are subjected to an explicit responsibility and enrole to participate actively in the aesthetic education assistance project in order to fulfill their mission in local education. Second, the government may, through administrative orders or policy documents, make a specific call to the EDB to mobilize its internal resources and organize its manpower to fully assistance and participate in the cause of aesthetic education assistance. This kind of enlistment and mobilization is based on the government's expectation of the educational cause and the importance it attaches to the project receiving assistance, which prompts the EDB to actively participate in and promote the effective implementation of the project. From this perspective, the mobilization and enrolment of the Education Bureau and the documented policy in the project are concrete manifestations of the government's efforts to promote the development of the aesthetic education assistance initiative.

5.3.3 Resource assistance

"The computers and pianos are ten years old and are subsidized by the government. The Education Bureau over here requires every school to have a music room and an art room, even in rural schools. " (Local art teacher 2)

In the aesthetic education assistance project, resource providers, including hardware facilities, information technology systems, and financial and material resources in less developed regions, play a crucial role in the network of actors. First of all, hardware facilities and information technology systems, as infrastructure providers, supply the necessary venues, equipment, and technical assistance for the project, and create the basic conditions for carrying out activities that require assistance.

Second, the providers of financial and material resources play a supportive and facilitating role in the project. By providing financial assistance, these resource providers enable the aesthetic education assistance project to run smoothly, guaranteeing the needs of human, material, and financial resources, and ensuring the project's sustainability and scale.

In terms of interessment, resource providers can significantly enhance their social reputation and image by participating in the aesthetic education assistance project. Such involvement offers numerous advantages, including opportunities for collaboration with colleges and universities, which can lead to further professional and academic engagements. These benefits are evident not only during the implementation phase of the project but also in its outcomes. As resource providers contribute to the success of these initiatives, their enhanced public image and strengthened community relations position them as valuable partners in educational and social development.

In terms of mobilization and enrolment, the government and relevant organizations play a crucial role in encouraging resource providers to actively participate in aesthetic education assistance projects. By developing and implementing targeted policies and providing incentives, these authorities can effectively motivate providers. The government can issue specific documents or policies that detail the assistance and incentives available for resource providers. This approach assistances ensure that these providers are not only more willing but also more equipped to contribute effectively to the cause of aesthetic education assistance. This proactive integration enhances the overall impact and efficiency of the aesthetic educational assistance initiatives, fostering a more collaborative and resource-rich environment.

Overall, the role of resources and infrastructures as actors in aesthetic education assistance projects is crucial, not only in providing practical assistance, but also in gaining a range of benefits through project participation and better integration into the overall network of actors through mobilization and enrolment at the government level.

5.3.4 Community co-construction

In the aesthetic education assistance project, local education-related personnel include local students, local aesthetic education teachers, local parents, and local school administrators. They play a multi-faceted role in the project and play a

key role in supporting and promoting the successful implementation of the project.

"We're all too old, so I've learned a lot of new teaching ideas from the college students who teach. Their teaching methods are more alive than us old teachers, they will use the most popular ones to explain, and the students love to listen to their lessons. Even though I am the leader, I love their lessons" (local aesthetic teacher 1)

"We all love our assistance teacher so much, we often call her Fairy Sister......" (Local student 1)

In the aesthetic education assistance project, local education stakeholders include local students, local aesthetic education teachers, local parents, and local school administrators. They play a multifaceted role in the project and are key to providing assistance and promoting the successful implementation of the project.

Firstly, local students are both beneficiaries and active participants in the aesthetic education assistance project. By engaging in these activities, they gain access to a broader array of educational resources, which not only enhances their learning experience but also injects new energy into the assistance process as a whole. Secondly, local aesthetic education teachers serve as providers of professional guidance and assistance within the project. By collaborating with faculty from colleges and universities, these teachers can elevate their own teaching skills and knowledge. This partnership enables them to offer more specialized and professional aesthetic education to local students, enriching the educational landscape and fostering a more vibrant learning environment.

Local parents also play the role of assistants in the project. By understanding and supporting the aesthetic education project, they motivate their children to better participate in it, fostering a positive interaction between school, family, and society. Local school administrators are responsible for coordinating and organizing in the project to ensure the normal operation of the project. Through cooperation with colleges and universities, they are able to obtain more resource assistance to improve the overall educational level of the school and promote the development of education.

In terms of interessment, through participation in the aesthetic education project, these local education-related personnel can obtain more professional knowledge, training opportunities and educational resources, and improve their individual quality and overall education level. For students, through participation in the aesthetic education project, they can broaden their horizons, cultivate their interest in the arts, and increase their opportunities for future development. For teachers and school administrators, the success of the project will also enhance the social reputation of the school and contribute to career development.

In terms of enrolment and mobilization, the government and relevant organizations can motivate these local education-related personnel to participate more actively in the aesthetic education assistance project through publicity and reward mechanisms. The government can issue documents or policies that specify assistance and rewards for participants to increase their willingness and motivation to participate.

5.4 The internal operating mechanism of the aesthetic education assistance project

In order to give full play to the advantages of all kinds of subjects within the network of actors and realize the goal of synergistic cooperation, colleges and universities, as the core actors, have taken action. The patterns of these actions reflect the internal operating mechanism of the aesthetic education assistance project. This action covers the launching of the "College Students Going to the Countryside" activity and the formation of a special team to the countryside, which provides an organic organizational structure for the aesthetic education assistance network built by colleges and universities. The aim of this initiative is to build a closer and more synergistic aesthetic education assistance network by integrating the internal resources and strengths of colleges and universities, so as to promote the implementation of the aesthetic education assistance project more effectively and achieve more significant results.

The rural team is a specialized team of three senior aesthetic education college faculty members within the colleges and universities and one university administrator. In this team, each position changes to a different person each year. The administrative staff is responsible for coordinating and handling the specific and trivial affairs of the aesthetic education assistance project, such as invoice processing, communication with schools in less developed areas, and reporting to the Provincial Department of Education on the organization of college students who assistance the project. The three senior aesthetic education colleges and universities teachers were then recommended by the leaders of each featured project and took up the teaching of aesthetic education. Their main tasks include setting up specific teaching contents and activities for teacher training in less developed areas to ensure high-quality teaching assistance. Periodically, the Down country Team will hold a general meeting of its members to assign tasks. The role of the Downtown Team is to provide an efficient organization and coordination mechanism, so that the aesthetic education assistance project can be promoted smoothly, and all tasks can be implemented in an orderly manner, providing strong assistance for the long-term development and successful implementation of the project.
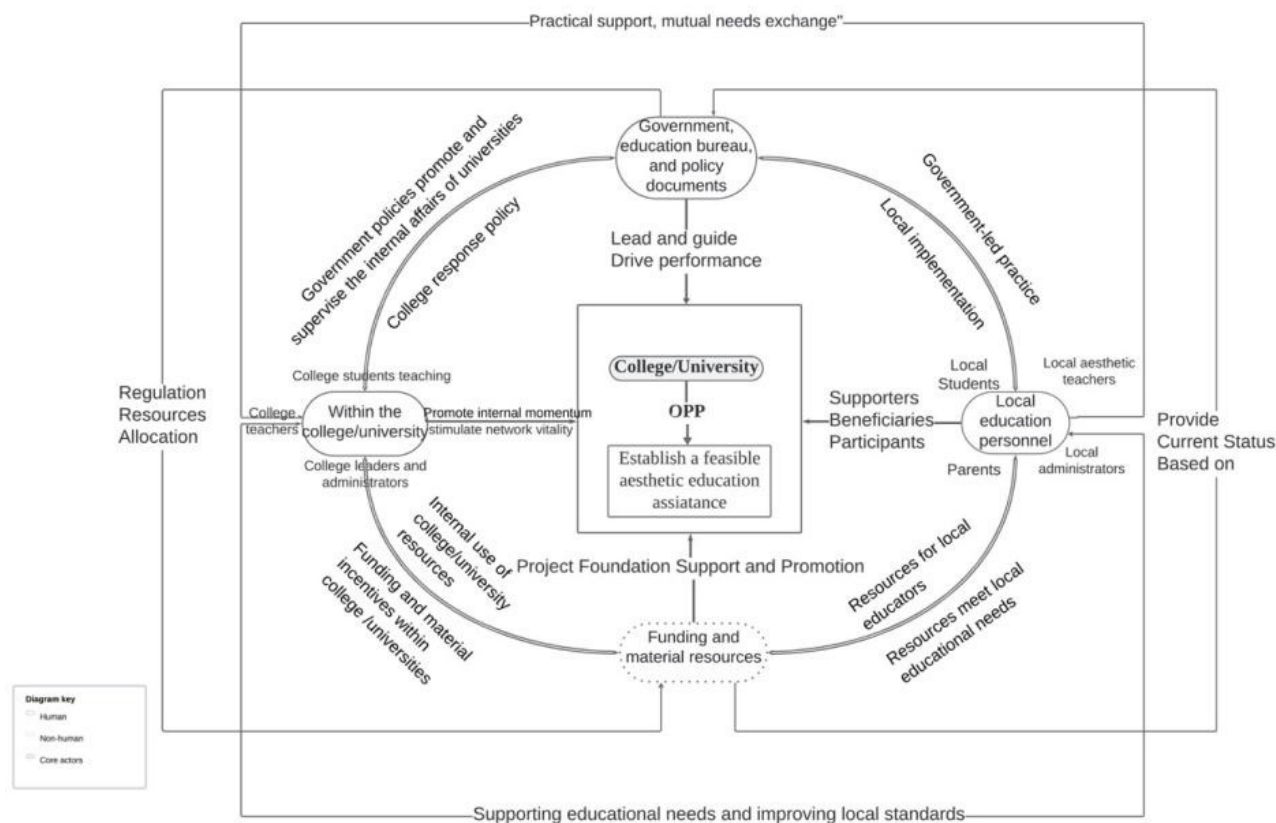
Figure 3. Dynamic network diagram of actors in aesthetic education assistance centered on colleges and universities

The establishment of rural groups within the colleges and universities has effectively promoted stable communication among the actors. In the process of interaction, the actors pursue the common goal of "establishing a feasible aesthetic education assistance project ", forming a picture of interaction, which is shown in Figure 3. The establishment of this organizational structure facilitates the flow of information, coordination and cooperation, thus promoting the smooth implementation of the aesthetic education assistance project.

In this network based at colleges and universities, there is a close interaction between colleges and universities as core actors and other participants. Universities actively respond to and implement government policies; they offer career development opportunities and develop diversified aesthetic education resources to assist college students, faculty, and administrative agencies. They provide resources for aesthetic education in support of government policies; they offer teacher training and develop teaching materials for underdeveloped education bureaus; they extend assistance to underdeveloped schools; and they organize aesthetic education activities for students, ensuring adequate resource and material deployment and utilization.

5.5 The evolution of colleges and universities from implementers to co-creators

According to Figure 3, colleges and universities play an important role in the network of actors in aesthetic education assistance, and their role as core actors is supported by participants from all sides. This process also continuously motivates colleges and universities to slowly change from being implementers to co-creators, which is mainly reflected in four aspects, resource providers, talent developers, knowledge leaders and lead demonstrators, as will be explained in detail below:

Resource provider. According to Menendez (2019)Cite></EndNote> and Russell-Bowie (1993), the uneven distribution of aesthetic education resources has been a challenge for less developed regions. Colleges and universities as core actors act as resource providers in aesthetic education assistance. Their abundant resources such as teachers, curricula, and teaching materials provide strong assistance for less developed regions or schools. By sending assistance teachers, colleges and universities assistance local areas to improve the teaching level of aesthetic education and convey professionalism. At the same time, Xu (2022) also suggested that the effective allocation of resources and the precision of needs can improve the teaching level. By donating aesthetic education resources such as books, audio-visual materials, and musical instruments, the local aesthetic education resource base has been enriched. However, the related curriculum resources are still relatively

single, and colleges and universities need to continue to develop aesthetic education courses continuously in light of the actual situation and realize the differentiated allocation of resources, so as to improve the quality of aesthetic education teaching.

Talent developer. Colleges and universities play an important role as crucial talent incubators in the network of aesthetic education assistance actors. Colleges and universities improve the level of aesthetic education in underdeveloped areas by establishing aesthetic education majors, such as music, art, dance, and drama courses. Xu (2022) points out that colleges and universities cultivate professional quality aesthetic education talents for the society and also provide strategic assistance for the long-term development of aesthetic education. This also has far-reaching significance for the sustainable development of the network of aesthetic education assistance actors. In addition, by organizing training courses for aesthetic education teachers, colleges and universities not only improve the teaching level of in-service aesthetic education teachers, but also promote specialization and knowledge updating in the field of aesthetic education, which is in line with the current needs of the development of aesthetic education. In addition, by encouraging students to participate in aesthetic education volunteer services, colleges and universities have provided professional aesthetic education services for students in less developed regions or schools, further expanding the social influence of aesthetic education talents. However, it should be noted that although colleges and universities have played a positive role in the cultivation of talents, there are still some challenges in practice, such as the shortage of teachers and insufficient training resources, which need to be explored and solved in greater depth in future research and practice.

Knowledge leader. Colleges and universities play a key role as knowledge leaders in the network of aesthetic education assistance actors. By giving full play to their disciplinary advantages, colleges and universities actively carry out in-depth theoretical research on aesthetic education, providing strong knowledge guidance for the practice of aesthetic education. By publishing academic journals on aesthetic education, colleges and universities disseminate theoretical knowledge and promote the in-depth integration of the theory and practice of aesthetic education, and also cooperate with Andang'o and Mugo (2007) in which the importance of dissemination of aesthetic education theories and academic seminars is discussed. This series of behaviors highlights the positive contribution of colleges and universities in knowledge leadership, providing strong academic and theoretical assistance for aesthetic education assistance.

Leading demonstrators. Colleges and universities occupy a pivotal role as leaders and demonstrators within the network of aesthetic education assistance actors. By organizing exhibitions of their aesthetic education achievements, these institutions not only showcase their extensive capabilities in teaching but also elevate societal awareness of the importance of aesthetic education. Furthermore, they establish demonstration bases that serve as valuable resources for other educational institutions. These bases offer insights and proven strategies in aesthetic education, fostering broader adoption and enhancement of these projects across different schools. Actively engaging in the reform of aesthetic education, colleges and universities gain extensive practical experience, which they then share, contributing significantly to the advancement of the field. Their role as leading demonstrators provides a positive momentum within the network of actors, stimulating ongoing improvement and innovation in aesthetic education.

At the same time, facing the challenge of extending their demonstrative role to more underdeveloped regions represents a new frontier for these institutions. It requires not only adapting their approaches to fit diverse local contexts but also a commitment to overcoming the unique obstacles these regions present. This expansion is crucial for democratizing access to quality aesthetic education and enhancing its impact on a wider scale.

6. Discussion

The evolution of colleges and universities as pivotal entities in aesthetic education assistance projects represents a dynamic and intricate transformation. Particularly as these institutions assume central roles, their identities have notably transitioned from being mere implementers to encompassing four distinct roles: resource providers, talent trainers, knowledge assistants, and demonstration leaders. This transition not only reinforces their fundamental position but also addresses prevalent issues such as the inadequate distribution of needs and resources, and the untapped potential roles along with their professional capabilities. Consequently, this enhances the satisfaction of all stakeholders within the network coordinated by these educational institutions in aesthetic education, leveraging their strengths more effectively. Ultimately, this strategic positioning significantly elevates the quality of aesthetic education in less developed regions.

However, for further improving the initiative of colleges and universities in the project and enhancing the collaborative innovation capacity of the actor network, we propose the following practical suggestions. First, stimulate the initiative of colleges and universities in the project by setting up effective communication, democratic decision-making mechanisms, and reward and incentive mechanisms. Second, establish a feedback mechanism to address equity in resource allocation, pay

attention to socio-cultural differences, and seek a third-party intermediary to promote more effective collaborative innovation in actor networks.

These practice recommendations draw on previous research in related fields such as Caeiro et al. (2020) which emphasized the critical impact of colleges and universities' initiatives in projects on project effectiveness. Meanwhile. Corsaro et al. (2012) emphasizes the importance of collaborative innovation capacity of actor networks and provides empirical studies that establish feedback mechanisms and address resource allocation issues. These practical suggestions synthesize the research findings of different scholars and provide strong assistance for the implementation of aesthetic education assistance projects. Future research directions could focus on more in-depth empirical studies to verify the practical effectiveness of these suggestions.

7. Conclusion

This study insightfully examines the evolving roles of colleges and universities within the network of aesthetic education assistance actors. It highlights how these institutions have transitioned from traditional, singular implementers to multifaceted identities, serving as resource providers, talent developers, knowledge assistance providers, and model leaders. These findings underscore the central position of colleges and universities within the actor network, addressing issues related to resource distribution and the under-utilization of professional strengths, while offering a more dynamic and innovative organizational structure for the entire network. However, the article presents certain limitations, notably the insufficient analysis of additional actors within the network, which impedes a comprehensive understanding of the overall dynamics at play. Future research should endeavor to deepen the exploration of the distinct roles and interactions of these actors within the aesthetic education assistance projects. This enhancement is essential for the advancement of the theoretical framework and for enriching both the comprehensiveness and the analytical depth of the study. Moreover, to address the potential variability in the roles of higher education institutions under diverse conditions, it would be beneficial to conduct extensive case studies. These studies will facilitate a more nuanced comprehension of the operational dynamics of colleges and universities within aesthetic education initiatives.

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