

# A Study on Cooperation of Higher Education in Guangdong-Hong Kong-Macao Greater Bay Area from the Perspective of Regional Integration

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**Abstract:** Compared with general cooperation, regional cooperation needs to pay more attention to the complementarity and coordination of resources. GBA's cooperation in higher education is carried out under the background of "one country, two systems, three tax zones and three legal systems", so it is especially necessary to study and analyze it under the background of the country's major development strategy. However, the obstacles and difficulties it is facing are inevitable, and the academic circles need to make suggestions according to the current situation. Firstly, this paper mainly introduces the higher education background of some major cities in GBA, briefly introduces the cooperation status, and puts forward research questions. In the next part, the existing basic conditions for higher education cooperation in GBA will be discussed. In the third part, the goal of GBA's higher education cooperation will be explained, and the current situation and achievements of the cooperation will be introduced. The fourth part will analyze some difficulties and practical problems faced by the higher education cooperation in GBA. The fifth part will put forward reasonable suggestions on the difficulties analyzed in the fourth part to better achieve the goals of cooperation. The last part is a brief summary of this article, and mentions the direction worthy of exploration and attention in the future research.

**Keywords:** Development, Difference, Guangdong-Hong Kong-Macao Greater Bay Area, Higher Education Cooperation, Regional Integration

## 1. Introduction

### 1.1. Background

In recent years, the construction of Guangdong-Hong Kong-Macao Greater Bay Area (GBA) has become an important national plan for regional development. And talent cultivation is a crucial factor economic and social development. Therefore, promoting and perfecting higher education cooperation is undoubtedly a powerful driving force for deepening GBA's economic and social development and cultivation. Outline of Guangdong-Hong Kong-Macao Greater Bay Area's Development Plan and Implementation Plan for Accelerating the Modernization of Education (2018-2022) are two important documents that clearly define the requirements for promoting educational exchange, cooperation and development in GBA. They also specify the specific scope and direction for the development of higher education cooperation among Guangdong, Hong Kong and Macao <sup>[1]</sup>. Promoting the coordinated development of colleges and universities in GBA and fully exploiting the corresponding advantages of higher education in the three places will improve the overall quality of higher education in GBA, cultivate high-quality talents to support the construction of the international first-class bay area, and create an education and talent highland with global influence.

At present, eleven cities in GBA have apparent differences in the development of higher education. Specifically, there are a large number of higher education institutions in Guangzhou. Guangzhou has 82 colleges and universities of various types, with over 1 million college students. The number of pupils constitutes a significant share, and the strength is relatively strong. As far as Hong Kong and Macao are concerned, although the number of universities is small, their teaching and research quality, and internationalization level are very high. Hong Kong's first-class universities are among the best in the rankings of the world's famous universities. Macao educational institutions such as the University of Macau and Macao University of Science and Technology have made remarkable progress and also have their unique subject fields <sup>[2]</sup>. Besides, although the construction of colleges and universities in Shenzhen started relatively late, it developed rapidly. For example, Shenzhen University and Southern

University of Science and Technology have already joined the ranks of Guangdong's key universities for high-level universities. Moreover, with its developed economy and superior location, Shenzhen becomes an important base for domestic and overseas cooperation in running schools. For example, the Chinese University of Hong Kong (Shenzhen) and Harbin Institute of Technology (Shenzhen) were established in Shenzhen. The higher education resources in other cities are relatively scarce, and the development speed needs to be improved. It needs comprehensive and coordinated development with other universities in GBA, and gradually forms complementarity.

The early collaboration in higher education between Guangdong, Hong Kong, and Macao is more inter-subject and one-way. Guangzhou's higher education resources are relatively concentrated and abundant, so the early cooperation mainly focused on some universities in Guangzhou, Hong Kong, Macao and other places. As far as cooperation enthusiasm is concerned, Guangdong is more active in practice and willing to exchange and cooperate. With the narrowing of economic and social development gap between cities in GBA, the current higher education collaboration tends to be regional and bi-directional. More and more cities such as Shenzhen and Dongguan are also taking part in the higher education cooperation, gradually moving towards the goal of "letting a hundred flowers bloom". At the same time, the cooperation enthusiasm and participation of Hong Kong and Macao are also continuously improving <sup>[1]</sup>. Under this development trend, the Guangdong-Hong Kong-Macao University Alliance was formally founded in November 2016, with Sun Yat-sen University as the initiator, and the Chinese University of Hong Kong and the University of Macau as co-sponsors. By December 2021, it had gathered 41 universities in Guangdong, Hong Kong and Macao, including 25 universities in Guangdong, 9 universities in Hong Kong and 7 universities in Macau. The Guangdong-Hong Kong-Macao University Alliance will play an important role in promoting exchanges and visits, scientific research cooperation and industry-university integration in GBA, and help to turn the cooperation vision of the GBA into reality <sup>[3]</sup>.

## **1.2. Research Questions**

In comparison to general cooperation, regional cooperation must focus more on resource complements and coordination, as well as effective resource integration and exploitation. In addition, the collaboration in higher education in GBA is carried out with the background of "one country, two systems, three taxes zones and three legal systems". As a result, the challenges and hurdles it encounters are unavoidable. In order to better study the development of higher education in GBA and give reasonable suggestions, this paper puts forward the following two research questions:

What difficulties does GBA encounter in higher education cooperation?

To what extent does the higher education cooperation in GBA promote the regional integration?

## **2. The Existing Basis of Higher Education Cooperation in GBA**

### **2.1. Geo-cultural Basis**

Guangdong, Hong Kong and Macao are geographically adjacent to each other, which facilitates the exchange of visits and cooperation. In addition, Guangdong is a famous hometown of overseas Chinese in China, especially with many Hong Kong and Macao compatriots. Their kinship can promote higher education cooperation in GBA to a certain extent. As early as 1959, the Guangdong Higher Education Admissions Committee set up the Steering Committee for Overseas Chinese, Hong Kong and Macao Students to Return to China and Go to the Mainland for Further Studies, which pointed out the way for Hong Kong and Macao students to go to Guangdong for further studies. Geographical proximity, common language and kinship have become the bridge of higher education cooperation in GBA, making Guangdong's colleges and universities the places for many students from Hong Kong and Macao to study. These advantages will also be extended for a long time, and the closer and more practical cooperation in higher education will be firmly promoted <sup>[1]</sup>.

### **2.2. Basis of Policy Advantage**

GBA plays a key strategic role in the development of the country and is widely respected by the people of the country and all areas. Outline of Guangdong-Hong Kong-Macao Greater Bay Area Development Plan clearly proposes to "promote the development of education cooperation in GBA and create a high ground for education and talents" <sup>[4]</sup>. This can be seen from the requirements and

expectations of the national policy for higher education cooperation in GBA. The report of the 19th National Congress of the Communist Party of China also stated that the construction of GBA and the collaboration between Guangdong, Hong Kong and Macao should be the focus of regional development. All these reflect that GBA's higher education cooperation and regional integration have a good policy foundation and political guarantee [2].

### 2.3. Economic and Industrial Base

The advantageous resources of economy and industry provide the development space and support for the higher education cooperation in GBA. GBA is one of China's areas with the most economic vigor, the most rapid development, and the greatest degree of openness (see Figure1). Hong Kong and Macao have strong economic strength. Hong Kong is a significant international financial, commerce, and shipping center and a global innovation and technology hub. Macao's light industry, service industry, entertainment industry, tourism and hotel industry make it last forever. Guangdong Province has had the highest Gross Domestic Product (GDP) in the country. It is in the period of transformation and upgrading of manufacturing industry, further improving the quality of service industry and improving the industrial system. Guangdong's economy is experiencing increased development chances as a result of GBA's in-depth development. Economic and industrial advantages are favourable to boosting the growth of Industry-University-Research and establishing a larger platform for higher education collaboration to explore breakthroughs [1].

Ranking	City	GDP(Hundred Million Yuan)	GDP Growth Year-on-year
1	Shenzhen	27670	2.8%
2	Guangzhou	25019	5.9%
3	Hong kong	22972	3.0%
4	Foshan	10817	0.6%
5	Dongguan	9650	1.8%
6	Huizhou	4222	1.1%
7	Zhuhai	3482	3.0%
8	Macao	3458	2.0%
9	Jiangmen	3201	2.2%
10	Zhongshan	3152	1.5%
11	Zhaoqing	2312	2.8%
	Total	115955	—

Figure 1: GBA City's GDP Ranking in 2020 [5]

## 3. The Goals and Current Situation of Higher Education Cooperation in GBA

On the basis of geo-cultural foundation, policy advantages, and economy and industry base, the existing conditions for higher education cooperation in GBA are relatively adequate. In regional integration and regional development, promoting talent cultivation, scientific and technological innovation, cultural unity and social stability are the important goals and missions of GBA's higher education cooperation, which lead the direction and path of cooperation. At present, the cooperation in higher education in GBA has shown certain achievements under the guidance of the overall national policies and strategies, which are reflected in the gradual increase of cooperation subjects, more diversified cooperation platforms and forms. The cooperation in higher education has become an indispensable part in the socio-economic integration and development of GBA.

### 3.1. The Goals of Cooperation

#### 3.1.1 Promoting Talent Cultivation

GBA's cooperation in higher education is conducive to the efficient dissemination of knowledge and the exchange of knowledge and technology, so as to effectively cultivate talents and attract high-end talents, provide intellectual support for the economic and social development and enhance the core competitiveness of GBA. GBA is a significant gateway to the outside world and a vital entry point

to worldwide information sources. These are GBA's advantages in regional cooperation. However, the higher education resources in GBA are not all self-sufficient at present, and talents also need to be further cultivated, especially innovative, technical and research-oriented talents. Only by integrating the higher education resources, strengthening interactive cooperation and innovative exchanges, can better cultivate talents and attract high-quality international talents, so as to adapt to the overall development of GBA [6].

### ***3.1.2 Promoting Scientific and Technological Innovation***

Domestic demand of GBA needs to further deepen the cross-fertilization of knowledge, technology, market and talents. Specifically, Guangdong currently has a relatively sound industrial base, especially the high-tech innovation industry in Shenzhen, which has a promising development trend and has gradually cultivated an environment for innovation and entrepreneurship. However, the local university level, higher education platform and institutional development in Guangdong are still not prominent, and it is difficult to promote the development of knowledge economy in the whole region with scientific research and innovation technology on a sustainable basis. On the other hand, Hong Kong has very high-ranking universities in the world, and Macao also has educational institutions with a high level of internationalization. But the development of scientific research achievements and innovative industries in the two places are not sufficiently motivated [6]. Therefore, in order to further develop the economic and industrial transformation, GBA needs to integrate the exchange of people, knowledge and technology, and utilize the scientific and technological innovation platform, to further stimulate innovation elements and strengthen innovation foundation capabilities. At the same time, it is necessary to deepen the cooperation among enterprises, schools and scientific research institutions in GBA, in order to create new scientific and technological forces in Industry-University-Research [7].

### ***3.1.3 Promoting Cultural Unity and Social Stability***

GBA's current economic construction has reached a certain height, but there is still a long way to go in terms of cultural communication. Since the return of Hong Kong and Macao, the people of both places have not had a strong sense of national identity and sense of belonging. Cultural estrangement and value conflicts are also reflected in many aspects, such as lack of recognition with the system and culture, and even resistance and rebellious mentality, which may lead to regional development difficulties and even be detrimental to social stability. For example, the illegal unrest in Hong Kong in recent years has done great harm to the political, economic and cultural development of the region and the country [8]. Education is a project that conforms to the aspirations of the people and meets their needs. Faced with the dilemma of cultural alienation, higher education institutions in GBA can enhance the cultural identity and resonance of the people in the three places through various forms of communication, cooperation and interaction, further enhancing national pride and cohesion. Only by gradually breaking down the barriers and frictions in social psychology and cultural values can social development enjoy long-term stability and win-win results with economic development [9]. In addition, although the cultural components of Guangdong, Hong Kong and Macao have overlapping parts, they also have many different backgrounds. In particular, Hong Kong and Macao have integrated Chinese and Western cultures. The cooperation in higher education in GBA is conducive to the integration of Chinese and Western cultures, absorbing different essences, and accepting positive cultural elements in an inclusive and open manner, so as to realize the vision of cultural prosperity and lay a good foundation for creating a new culture [8].

## ***3.2. The Current Situation of Cooperation***

According to the cooperation as mentioned earlier objectives, under the national strategic background, GBA has achieved certain achievements in higher education cooperation. Through the joint efforts of different disciplines and mutually beneficial cooperation of different platforms, major breakthroughs have been made in cross-border enrollment and cooperation in running schools, which has further realizing the complementarity of educational resources, and enhancing the comprehensive strength of GBA.

First of all, in terms of higher education cooperation in GBA, two-way cross-border enrollment has become the norm. This is an important way to strengthen educational exchanges and cooperation between Chinese Mainland and Hong Kong and Macao, and at the same time, it can enhance the sense of belonging of overseas Chinese youth to the motherland. It also plays a role in introducing and encouraging the return of talents for development. Specifically, at present, candidates with registered permanent residence in Guangdong can enter universities in Hong Kong and Macao through the

national college entrance examination and independent enrollment. At the same time, 22 universities in Guangdong also carry out the mainland joint enrollment examination for students in Hong Kong and Macao. That is, students from Hong Kong and Macao can apply for admission to colleges and universities in Guangdong through independent enrollment, joint enrollment or exemption enrollment plan <sup>[10]</sup>.

In recent years, GBA has also made great progress and achievements in cooperative education. The construction of a new campus of the University of Macao in Zhuhai Hengqin was authorized by the central government in 2009, and the Macao was given control over the institution. In 2014, the Ministry of Education agreed to approve the establishment of the Chinese University of Hong Kong (Shenzhen). After that, the Chinese University of Hong Kong (Shenzhen) has collaboration and exchanges with numerous research institutes and firms in Chinese Mainland, which is crucial to science and technology innovation. For example, in 2019, the Shenzhen Institute of Artificial Intelligence and Robotics and the Shenzhen Institute of Big Data, which were led by the Chinese University of Hong Kong (Shenzhen), were awarded licenses for the construction of basic research institutions in Shenzhen <sup>[11]</sup>. In 2018, the Hong Kong University of Science and Technology (Guangzhou) was officially listed and is expected to start enrollment in September 2022. The Hong Kong University of Science and Technology (Guangzhou) will promote the active interaction between Hong Kong and other GBA cities in teaching and scientific research, make up for the shortage of Hong Kong's high-tech manufacturing industry and promote the cooperation between science, technology and business <sup>[12]</sup>. In addition, the Hong Kong Polytechnic University (Foshan) is also in the process of key preparation, which is also conducive to jointly cultivating talents and promoting industrial linkage development <sup>[10]</sup>.

Apart from cross-border enrollment and cooperation in running schools, the forms of cooperation are becoming more and more diversified. In addition to the usual exchange of students, visits by scholars and academic exchanges, the current forms of cooperation include joint construction of scientific research, university research centers, laboratories, and joint establishment of regional education cooperation organizations <sup>[1]</sup>. For example, in 2016, the Guangdong Provincial Education Department began to promote the establishment of the Guangdong-Hong Kong-Macao Joint Laboratory, which has laid a solid foundation for the development of science and technology innovation in GBA and has become the engine driving the economic development <sup>[11]</sup>.

#### **4. Analysis of the Difficulties Faced by Higher Education Cooperation in GBA**

Although GBA has made some achievements in higher education cooperation, and has been continuously adjusted and developed towards the established goals, it still faces many practical difficulties, such as institutional differences, historical and cultural differences, lack of coordination and cooperation mechanism. These difficulties will restrict the impetus of regional cooperation and hinder the deepening of higher education cooperation to a certain extent.

##### **4.1. System Differences**

GBA's cooperation in higher education is carried out under the background of one country, two political systems, three tax zones and three legal systems. The particularity and complexity of the political foundation determine that there are great differences in the educational systems of the three places, which also add resistance and difficulties to the flow and integration of higher education resources <sup>[12]</sup>.

Even after the return of Hong Kong and Macao, the former colonial system still made them very different from the higher education system in the mainland, including the school-running system, talent cultivation system, teacher training and management system, scientific research management system, and entry and exit approval system for university talents. When universities carry out exchanges and cooperation, these differences may lead to contradictions and conflicts <sup>[1]</sup>. For example, at the legal level, the implementation of different legal systems in Guangdong, Hong Kong and Macao results in their different standards for the identification of intellectual property rights, which may inevitably lead to some differences and conflicts in the process of cooperation between universities <sup>[13]</sup>. In addition, in terms of policy framework, Guangdong's colleges and universities are undoubtedly very familiar with the mainland's legal system and relevant policies, so they can run schools within the established legal and policy framework. However, colleges and universities in Hong Kong and Macao may not have such in-depth understanding of the mainland's policy guidelines and legal system; In contrast, universities in Hong Kong and Macao know how to operate within the framework of their local laws

and policies, but universities in Guangdong may have limited knowledge of their policies <sup>[14]</sup>. On the other hand, higher education institutions in mainland provinces and cities such as Guangdong must obtain the approval of the education departments at and above the provincial levels on the issue of cooperation, while universities in Hong Kong have more autonomy in cooperation. Different education systems and governance styles, coupled with different behavior styles and thinking habits of both parties, may cause certain difficulties for efficient and accurate cooperation <sup>[11]</sup>.

#### ***4.2. Historical and Cultural Differences***

Apart from the differences in political systems, Guangdong, Hong Kong, and Macao have quite diverse historical and cultural backgrounds. Hong Kong and Macao were once colonies with special social development process, but at the same time they also have a high degree of internationalization. Under different historical and institutional environments, different cultures and values have emerged in the three places of GBA, which has caused great difficulties in GBA's higher education cooperation. Specifically, for example, some Hong Kong residents have a low sense of national identity. They do not understand or even reject Chinese culture. Differences in cultural values lead some Hong Kong residents not to even consider themselves as "Chinese". This is definitely not conducive to the stable development of GBA society, and is also a stumbling block on the road to the development of regional cooperation in higher education <sup>[12]</sup>. In addition, the academic culture and atmosphere formed by these three places under their respective historical and cultural backgrounds may not be compatible with each other.

#### ***4.3. Lack of Coordination and Cooperation Mechanism***

There is still a big gap in the institutional cohesion and regional division of labor in higher education cooperation in GBA, which is not conducive to the integration of resources between universities in GBA and the formation of a higher education system with paradigm significance <sup>[1]</sup>. Although the forms of higher education cooperation among Guangdong, Hong Kong and Macao are becoming more and more abundant, there is no perfect communication and cooperation mechanism to further guide and coordinate the overall cooperation development and planning, and there is also a lack of interconnection links. At present, only the education bureaus of Guangdong and Hong Kong hold annual working meetings of the task force on education cooperation to exchange information on higher education cooperation matters. However, there is still a lack of specialized agencies to coordinate and manage cooperation among Guangdong, Hong Kong and Macao, and there is no regular discussion mechanism for the education cooperation among the three places <sup>[14]</sup>. On the other hand, Guangdong, Hong Kong and Macao, as three different stakeholders, will still have their own interests. In the implementation of cooperation, the interests of the three parties will inevitably conflict on some issues. Therefore, if there is no coordination and cooperation mechanism, it may lead to many communication barriers and obstacles in the cooperation, hindering the further optimization and integration of education resources in the region <sup>[15]</sup>.

### **5. Suggestions**

#### ***5.1. Combining Industry with Innovation to Lead the Integration of Production and Education***

GBA should use its own industrial economy and innovative resources to lead and promote the coordinated development of industry and education. Only by further transforming higher education into an advantageous industry, innovation and entrepreneurship can higher education truly become the source of vitality to promote the development of GBA regional integration. First of all, it is necessary to integrate the development of higher education with the economic and social development, and establish a network of regional higher education institutions, regional industrial chains and social undertakings. At the same time, it should further deepen the industrial technology cooperation and exchanges among universities in the three places, and gradually form the Industry-University-Research Alliance on this basis <sup>[1]</sup>. Guangdong is an important manufacturing base in China and even in the world, among which Shenzhen, Dongguan and other places have made great strides in the development of high-tech industries. With these technological innovation and manufacturing advantages, and further building the practice platform and research institutions, it will realize talent gathering, information sharing among universities, and industrial transformation and upgrading <sup>[2]</sup>. It can also actively explore the new direction of cooperation of disciplines and scientific research in higher education according to

the needs of the adjustment and transformation of regional industrial structure, so as to make greater contribution to the regional talent supply and industrial development <sup>[1]</sup>. For example, the great success of the San Francisco Bay Area in the technology industry has benefited from the close cooperation and synergy between Stanford University and nearly 40,000 enterprises <sup>[2]</sup>.

### ***5.2. Establishing a Scientific and Technological Innovation Platform***

The establishment of a scientific and technological innovation platform is conducive to the effective integration and coordination of high-tech elements and international innovative talents in GBA, in order to encourage the industrialization of scientific and technical achievements, and the rapid growth of a high-tech and innovative economy. Guangdong-Hong Kong-Macao University Alliance can give full play to its role here, build a scientific and technological achievements transformation center and incubation base, and continuously improve the level of transformation of research and development achievements <sup>[13]</sup>. Through this measure, it is also possible to attract global high-tech enterprises to invest and set up branch in GBA, attract more experts and talents, and facilitate the participation of university talents in industrial cooperation and international scientific research cooperation <sup>[2]</sup>. With a good ecological environment for scientific and technological innovation, it can further cooperate in exploring common standards for the identification of intellectual property rights <sup>[13]</sup>.

### ***5.3. Establishing a Coordination and Cooperation Mechanism***

GBA needs to establish a good coordination and cooperation mechanism to further clarify the division of labor and positioning of higher education cooperation, and promote interaction and collaborative innovation <sup>[12]</sup>. Under different political systems, economic, social and cultural environments, the three different stakeholders of Guangdong, Hong Kong and Macao may face problems such as unclear division of labor, unclear rights and responsibilities, and unbalanced distribution of interests among higher education cooperation. It is necessary to break down various barriers to promote regional integration and balanced development <sup>[15]</sup>. The systematic coordination and integration through the coordination mechanism can bridge some differences and remove some obstacles <sup>[1]</sup>. For example, professionals from Guangdong, Hong Kong and Macao can establish a coordination mechanism or administrative organization for the integration of GBA higher education to clarify the division of labor, and coordinate the interests and resources of all parties. It is also necessary to hold regular meetings to discuss major GBA higher education cooperation projects and their processes, which can enhance the exchange of information and resources <sup>[15]</sup>.

### ***5.4. Strengthening the Curriculum Setting of National Education***

Strengthening the national education curriculum and deepening patriotic education are conducive to the cohesion of GBA's core values, thus providing spiritual impetus for the rapid development of higher education, and also an important way to realize cultural integration and social stability. At present, some citizens in Hong Kong and Macao do not have a strong sense of national identity and do not have a thorough understanding of the country's culture. This requires the thorough implementation of national education. Although some schools and some grades in Hong Kong and Macao have been gradually carrying out national education, the scope of popularization is not wide enough, and the curriculum is not perfect and comprehensive. If the educational institutions pay more attention to it, and add relevant Chinese history and culture courses and Mandarin courses, it is believed that some political and cultural prejudices and misconceptions will be gradually eliminated imperceptibly <sup>[9]</sup>. In addition, it can promote a number of exchange programs, summer camps for cultural tours or study tours for college students in Guangdong, Hong Kong and Macao. It may improve the acceptability and identity of college students in Hong Kong and Macao via cultural tracing and cooperative exchanges, therefore establishing a spiritual basis for the region's harmonious development <sup>[10]</sup>.

## **6. Conclusion**

The cooperative development of higher education in GBA needs to be studied and analyzed under the background of the major national development strategy. Under the objective reality of "one country, two systems, three tax zones and three legal system" of GBA, it should focus on the analysis of the difficulties and problems in the cooperation of higher education in GBA, and what improvements and measures can be adopted to solve these problems, so as to further promote the integration and

development of the region and ultimately improve the comprehensive competitiveness of the region.

This paper first analyzes the three existing basis of higher education cooperation in GBA, defines the important goals of cooperation, then combs the current situation and some achievements of higher education cooperation in GBA, and further analyzes several major difficulties facing now: different systems, great differences in history and culture, and lack of coordination and cooperation mechanism. Finally, it initially puts forward some feasible suggestions and measures for future improvement in the hope of achieving the objectives of talent cultivation, scientific and technological innovation, and cultural unity and social stability. In fact, regionalization is a gradual process, which requires step by step exploration and experience accumulation. GBA is a young bay area, and has little experience in higher education cooperation. The other three Greater Bay Area regions in the world-- San Francisco Bay Area, New York Bay Area and Tokyo Bay Area, apart from their respective advantages in science and technology, industry, and finance, are also worthy of further comparison and discussion by researchers. This may provide experience and inspiration for GBA's higher education to find a new cooperation path and direction, so it can be explored and paid attention to in future research.

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