

# A New Exploration on the Start-up Mode of Universities' Mass Creation Space based on the Perspective of "Culture+" Cooperative Innovation

Fei Sun

Xi'an Innovation College, Yan'an University, Xi'an, 710000, China

**Abstract:** In order to better promote the development of college students' entrepreneurship, this paper puts forward the mode of university public creation space entrepreneurship based on the perspective of "culture +" collaborative innovation. Firstly, this paper makes a detailed analysis and research on the current popular high-efficiency entrepreneurship model, sets up a collaborative innovation model aiming at the shortcomings of the current entrepreneurship process, and realizes the innovation of the University public-created space entrepreneurship model. Finally, the experiment proves that the university public-created space entrepreneurship model in the perspective of "culture +" collaborative innovation has been higher in universities. Good comments, fully meet the research needs.

**Keywords:** "Culture+"; Collaborative innovation; Makerspace; Entrepreneurial mode; Introduction

## 1. Introduction

Nowadays, the development situation of "big data, big e-commerce and Internet plus" is on the rise. The cultivation of proofreading e-commerce talents in our country's major institutions is the only way to meet the requirements of the development of the social market economy. According to the actual situation of students in higher vocational colleges choosing e-commerce majors, it is not difficult to find that the number and popularity of e-commerce majors are not very optimistic[1]. As an important base area for talent discovery and training, colleges and universities should widely set up e-commerce education. Under the "Internet plus" form, the cultivation of e-commerce talents by universities can correctly guide students to innovate and start businesses, relieve employment pressure, increase the vitality of economic development, and is more conducive to universities' keeping pace with the times, adapting to the driving force of society, improving the quality of university graduates, and promoting students' success [2]. There are still many problems in the cultivation of innovative and entrepreneurial talents for the existing e-commerce majors in colleges and universities. First, the set positioning and training objectives are relatively broad, and the direction of innovation and entrepreneurship is not clear. There is no uniform standard for the purpose of e-commerce training in domestic universities, and there is no clear direction. More emphasis is placed on training technical, transactional and managerial talents. Secondly, the training plan is not compatible with the training of the basic

ability of entrepreneurship and innovation. Some colleges and universities superimpose the e-commerce professional courses and technical operation courses, and arrange a large number of courses, which is difficult to associate with innovation and entrepreneurship courses. Thirdly, due to the single teaching method, it is difficult to adapt to the needs of innovation and entrepreneurship, e-commerce courses in colleges and universities generally continue the traditional teaching methods, teachers rely on simulation software to teach and lack practical experience. Finally, the innovation and entrepreneurship education system is not perfect enough. There is a lack of experienced teaching teachers, and the school fails to give students sufficient time, technology and resources to effectively support entrepreneurship. At the same time, there is also a lack of effective support from the resource platform[3]. These are all the problems existing in current entrepreneurship and innovation. To sum up, how to adapt to the development trend of an innovative society, to cultivate more targeted entrepreneurial and innovative talents in colleges and universities, and to inject fresh strength into enterprises and society are important challenges that must be faced in the era of big data. Therefore, this paper puts forward a "culture+" collaborative innovation perspective of university creator entrepreneurship model, which has provided an important reference for university students in the past.

## 2. Exploration on the Start-up Mode of Universities' Mass Creation Space from the

## Perspective of "Culture+" Collaborative Innovation

### 2.1. Typical model of universities creating space for all

From scratch to rapid development, makerspace reflects the country's full support for innovation and entrepreneurship and the gradual popularization of innovation. Compared with the original incubators and start-up nurseries, makerspace has a wider range of service groups and more comprehensive service contents for innovation and start-up, and has broad development prospects in the future society. Maker space is an important part of makerspace. It not only helps the public to realize creativity, but also can realize knowledge sharing and cross-border cooperation among the public. It plays an irreplaceable role in the "fire" of innovation and entrepreneurship forming the potential to start a prairie fire[4]. The development of makerspace in colleges and universities is not only a response to the country's strategic deployment, but also a requirement for colleges and universities them-

selves to deepen innovation and entrepreneurship education reform. With the strong support of relevant policies of the national and local governments, the number of makerspace in colleges and universities has increased rapidly, and a new way of development with complementary advantages and shared resources has been gradually explored. Its role in training innovative and entrepreneurial talents and serving the economic development of the region has also begun to show initial signs[5]. At present, makerspace has a wide range of operating entities, including government, scientific research institutions, large enterprises, small and medium-sized enterprises, venture capital institutions, intermediary institutions and other entities, in addition to university makerspace. Objectively speaking, makerspace's main role is to promote the development of new technologies, new models, new services and new formats. However, makerspace, founded by different subjects, has different demands and values for promoting economic development. Please refer to the following figure for details:

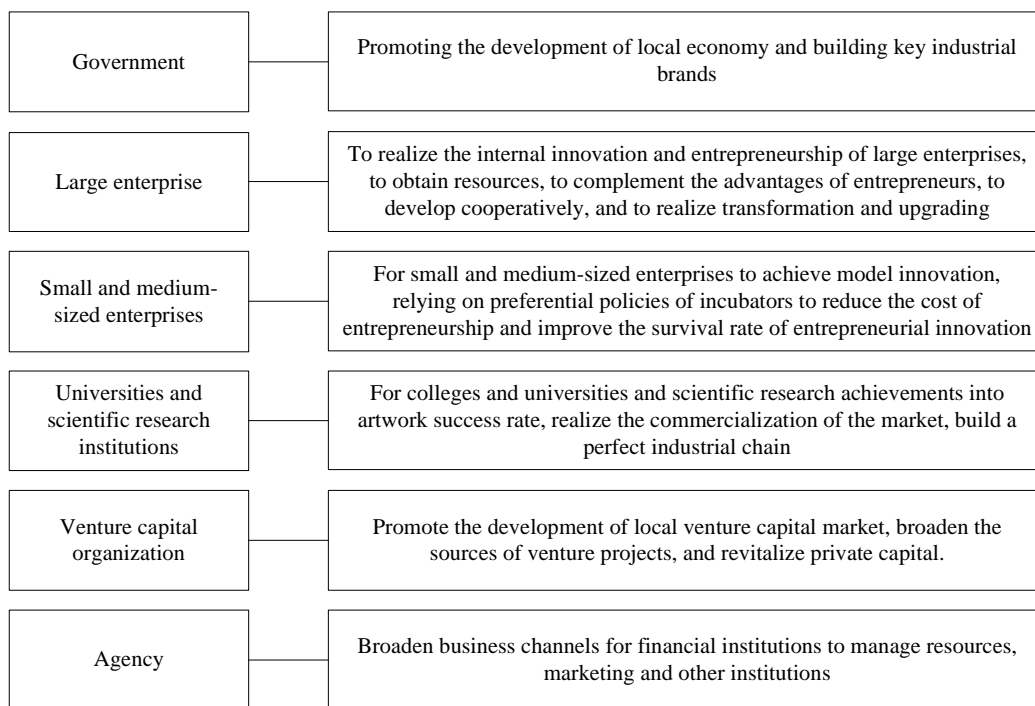


Figure 1. Analysis of appeals, the main body of makerspace construction

Based on the different subjects of Appeals, maker space in the world can be roughly divided into two categories according to the founding subjects: private and palace[6]. According to the source of funds can be divided into for-

profit maker space and non-profit maker space, according to the crowd can be divided into two categories, facing the society and facing the school to the main mode is:

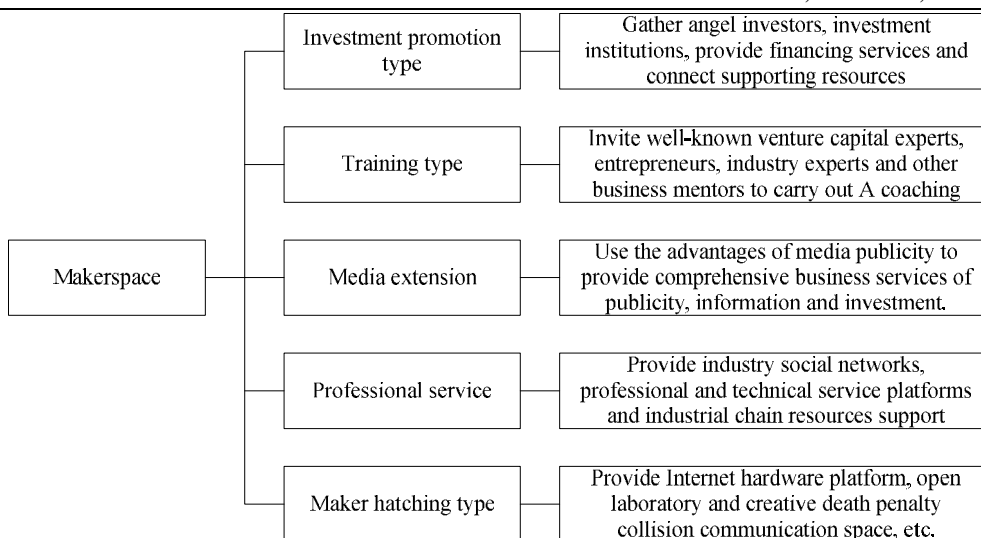


Figure 2. Traditional university entrepreneurship space model

On the basis of the existing entrepreneurial space model, combined with the principle of "culture+" collaborative innovation, the innovation of makerspace's entrepreneurial model is proposed.

**2.2. Analysis on characteristics of entrepreneurial ecosystem in makerspace**

The uniqueness of "culture+" based innovation and entrepreneurship activities is the foothold for the extension and development of the concept of innovation and entrepreneurship ecosystem. It is precisely because innovation and entrepreneurship activities have the attribute characteristics that other management activities do not have that this field can better adapt to the relevant theories and analysis frameworks of ecology. Innovation and entrepreneurship activities are similar to the formation process of living organisms, and will generally go through several basic stages from gestation to maturity[7]. The identification of entrepreneurial opportunities is the starting point of innovation and entrepreneurship. Entrepreneurs need to identify effective information and opportunities of innovation and entrepreneurship in numerous market information and personal network resources. This stage can be roughly regarded as the gestation period of inno-

vation and entrepreneurship activities[8]. The following is the seed stage of innovation and entrepreneurship. The market orientation and direction of innovation and entrepreneurship have been initially determined in this stage, and they have begun to seek partners, raise necessary resources, set up enterprises, and actively achieve initial sales. Some have begun to pay attention to the problem of enterprise development strategy after experiencing impacts. Therefore, this stage is the development stage of innovation and entrepreneurship activities. Finally, the enterprise will enter the mature period, at which time the main products of the enterprise have already occupied a large market share, and the enterprise will have enough cash flow accordingly[9]. The development of new ventures and the growth of organisms need to continuously absorb external nutrition and resources and form close ties with external support elements, so as to help them grow and expand. The internal main bodies of makerspace's innovation and entrepreneurship ecosystem are constantly interacting with each other, sharing resources and services with each other, and establishing the operating framework of makerspace's ecosystem under the perspective of collaborative innovation.

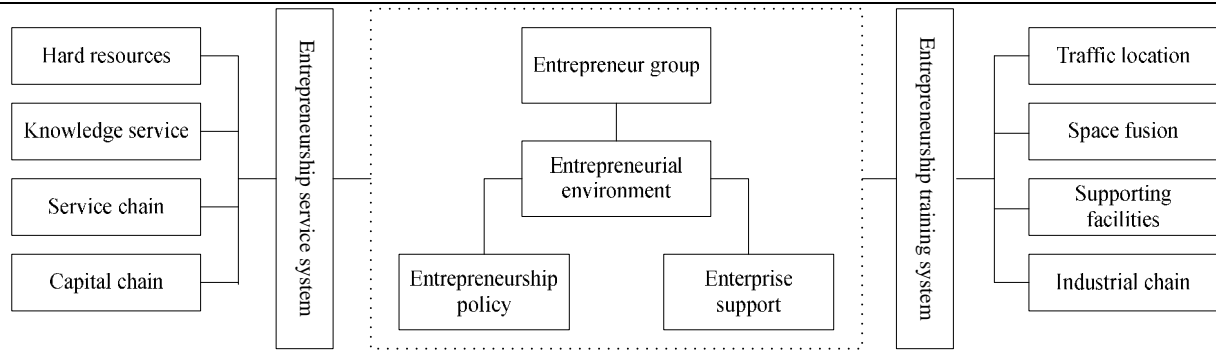


Figure 3. Operating framework of makerspace ecosystem from the perspective of collaborative innovation

For the meaning of the innovation and entrepreneurship ecosystem in makerspace in the above picture, the following points can be helpful to understand.

There are many components of the innovation and entrepreneurship ecosystem based on "culture+". For example, maker space, Maker, colleges and universities, government, innovation and entrepreneurship instructors, etc., all elements have their role orientation, and work together in the construction process of the ecosystem.

The relationship between the components of the innovation and entrepreneurship ecosystem based on "culture+" is the Mutual benefit and symbiosis relationship. Although the positioning of each element in the system is different and has its own characteristics, in makerspace, each element will exchange values with each other and carry out resource docking, thus becoming an integral part of Mutual benefit and symbiosis.

The development process of innovation and entrepreneurship ecosystem based on "culture+" is a dynamic and balanced process. Dynamic changes are characteristic of all ecosystems. If an ecosystem is to exist for a long time, it must follow the law of dynamic balance. To paraphrase natural selection theory, those elements that stand out in the competition of innovation and entrepreneurship ecosystems have stronger adaptability to the environment than those that have been eliminated, and the system can achieve better development and reach a balanced state.

The environment for innovation and entrepreneurship is the foundation and premise for innovation and entrepreneurship activities.

The policy environment for innovation and entrepreneurship, the support of enterprises and the group of innovative entrepreneurs are all elements of the environment for innovation and entrepreneurship. Among them, the innovation policy not only has the function of driving development, but also has the function of stimulating competitive vitality. Obtaining the support of high-quality enterprises and gathering innovative and entrepreneurial teams are conducive to helping makerspace create an ideal environment for innovative activities, accumulate high-quality innovative resources and form a strong atmos-

phere for innovation. The group of innovative entrepreneurs is an important part of the environment for innovation and entrepreneurship. It is generally believed that the younger the group of innovative entrepreneurs is, the stronger the Desire for innovation and entrepreneurship is and the more energetic it is.

In the innovation and entrepreneurship service system, the most basic service is to provide spatial support to meet the needs of innovative entrepreneurs for "hardware resources", such as 3D printers and scientific research equipment. In addition, makerspace can also provide value-added services such as training, consultation and investment for the settled enterprises and Maker, so that the settled enterprises and Maker can devote themselves to creative activities, thus enabling the innovation and entrepreneurship ecosystem to operate well[10]. Providing guarantee and motivation for innovation and entrepreneurship is the role of innovation and entrepreneurship cultivation elements. The functions of innovation and entrepreneurship cultivation elements in the whole operation mechanism system are as follows: makerspace relies on its own industrial park location advantages, such as supporting infrastructure, transportation environment, degree of spatial integration, etc., to provide industrial chain services for start-ups and promote the growth and growth of start-ups.

**2.3. Collaborative innovation and entrepreneurship mode in makerspace**

One of the major prerequisites for innovation is time precipitation. It is not easy to innovate and start a business. makerspace has achieved a dramatic increase in a very short period of time. In the next five years, there will be a large number of makerspace in all parts of the country. However, if we only look at these rapidly rising figures, we simply cannot see what the market really needs and the entrepreneurial market is turning into a bubble. After makerspace implements Business incubator, it can provide a platform and create connections. For many spaces, long-term profits lie in investment and service, while short-term profits lie in rent. Simple induction contains

essence, and through the field investigation of the market, we can see some prospects without considering the advantages and disadvantages of the model. The growth stage of start-up enterprises can be divided into creative stage, seed stage, start-up stage, growth stage and mature stage. In different stages, targeted gathering of various services such as entrepreneurship education, Business

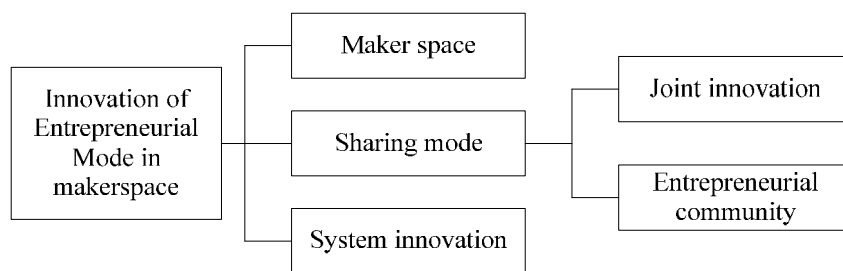
incubator, angel investment, and entrepreneurship community will promote the construction of the ecological chain of entrepreneurship and the formation of a virtuous circle, serving the creative and seed stages of makerspace's main service entrepreneurship enterprises. On this basis, the characteristics of makerspace and collaborative innovation are analyzed as follows.

**Table 1. Makerspace and collaborative innovation characteristics**

Elements of entrepreneurship	University makerspace	Collaborative innovation platform
Service mode	Combining o2o	Under line
Sources of funds	Diversity	Single
Cultural atmosphere	Strong entrepreneurial atmosphere	Entrepreneurial values are not deep

According to the above table, makerspace's service mode mainly provides basic hardware support for entrepreneurs to carry out innovation and entrepreneurship activities through information networks and other aspects. Providing legal, intellectual property, financial, consulting, inspection, certification and technology transfer services to entrepreneurs through self-construction or building corresponding platforms; Support entrepreneurs with venture capital funds, equity investment funds, etc. By inviting angel investors, successful entrepreneurs, etc. to hold sharing and exchange activities, employ tutors and cooperate with their own teachers to provide entrepreneurs with more practical training and guidance. Nowadays, title enterprises in different industries have paid great attention to ecological construction. They have effectively established incubation platforms based on their own advantages, such as Mirinda Healthy Incubation Platform and Beijing Genomics Institute Incubation Platform. Because they have obtained sufficient resources, such as

this, they have advantages in community creation, resource connection and other aspects. However, those incubators that lack industrial entities or technology platforms adopt a strategy of combining online with offline to gather relevant innovation subjects. Some incubators with multi-point layout are selected, and on the premise of connecting communities, various resources can be fully shared among relevant incubators. Entrepreneurial communities can not only gather all kinds of resources so as to effectively connect various industrial chains, but also gather markets, funds and technologies. The increase of various entrepreneurs will make the entrepreneurial community become more and more and mature earlier. If hatching institutions want to better integrate all kinds of resource connection and effectively share resources on the premise of fully considering the needs of all parties, then creating a community can be regarded as a rational choice of talents, technologies and other resources in the field.



**Figure 4. Collaborative innovation and entrepreneurship mode in makerspace**

In view of the industrial subdivision, the upstream and downstream related industries should be connected and developed step by step along the path of "innovation-incubation-industrialization" to realize the "culture+" characteristic entrepreneurship mode combined with the perspective of system innovation, thus further optimizing the makerspace of colleges and universities and the existing entrepreneurship mode and providing important reference basis for future entrepreneurship of college students.

### 3. Empirical Analysis

In order to better understand the rationality and effectiveness of makerspace's entrepreneurship model from the perspective of "culture+" collaborative innovation, an investigation was designed to analyze the feasibility and acceptance of makerspace's entrepreneurship model from the perspective of "culture+" collaborative innovation through questionnaires and interviews. Details of the investigation are as follows:

### 3.1. Interview survey

As the interview process takes a long time and the interview content is rather complicated, only a brief overview will be given here, and the full text will not be presented. Interviews were conducted with the operation team, career guidance teachers, some achievements and entrepreneurs in makerspace.

Contents of the interview: indicators of innovative service capability, number of cooperative organizations, development capability, innovative and entrepreneurial atmosphere and environment, cooperation capability of internal teams, total assets, knowledge level of personnel, graduation number, current team number, employment number, technical level of settled teams, service management capability, effectiveness of communication with settled teams, amount of financing for settled teams, amount of funds raised for settled teams, ratio of managers to settled teams, etc

Interview results:

The Operation Team of University makerspace;

The traditional entrepreneurial innovation model needs to invest too much assets and has great competitive pressure. Relatively speaking, the high-efficiency makerspace entrepreneurial model based on the perspective of "culture+" synergy has certain requirements on the comprehensive ability of entrepreneurs' service level management, which does not meet the entrepreneurial needs of all entrepreneurs. However, on the other hand, the entrepreneurial model is conducive to reducing market competitiveness and greatly improving the technological level management needs of entrepreneurial teams.

Entrepreneurial mentor:

As far as the market development prospect is concerned, "culture+" collaborative innovation is the main trend of innovation and entrepreneurship in the future and is the inevitable requirement for building a civilized society. Therefore, an efficient makerspace entrepreneurial model based on the perspective of "culture+" synergy has a larger development market and a more positive political, economic and cultural environment.

Relevant entrepreneurs:

The interview indicated that the traditional makerspace business model is speculative and fragile. With the development of the times, some innovative contents have not met the needs of the times, and the direction of innovation has slowed down or even stagnated. Relatively speaking, the high-efficiency makerspace entrepreneurship model based on the perspective of "cul-

ture+" collaborative innovation is innovative to a certain extent, and cultural entrepreneurship conforms to the mainstream of the times and has a large development space. To a certain extent, it can effectively promote the development and prosperity of the entrepreneurship market, but in the long run, the model still needs to be further improved.

### 3.2. Questionnaire survey

Randomly select 1000 college students to carry out a questionnaire survey, and set up the content of the questionnaire, as follows:

Do you have any entrepreneurial ideas?

Yes-turn question 5; None-Steering Question 2

Do you pay attention to information and policies related to college students' entrepreneurship?

Do you pay attention to social and economic developments?

What do you think of college students' innovation and entrepreneurship?

If you started your own business, which direction would you choose?

A. cultural field. B science and technology. C finance. D home economics. E specialty f other.

How do you judge the development trend of the start-up industry?

Do you know about the high-efficiency makerspace entrepreneurship model from the perspective of "culture+"? If so, what is your opinion?

According to the results of the above-mentioned questionnaire survey, among the 1,000 college students, 54% have entrepreneurial ideas, 19% choose cultural fields, 17% choose financial fields, 17% choose scientific and technological fields, 16% choose professional fields, 21% choose other fields, 5% choose value fields, and the remaining 5% do not choose. When asked whether they understand the "culture+" entrepreneurship model, 42% said they understand it, 31% said they have heard of it, and 27% said they do not understand it.

### 3.3. Investigation and analysis

In order to further explain and popularize the entrepreneurship mode of makerspace in colleges and universities from the perspective of "culture+" collaborative innovation, on this basis, the willingness to start a business or the attitudes of students, expert teachers and entrepreneurs who have already started a business are investigated respectively, and the following figure is obtained:

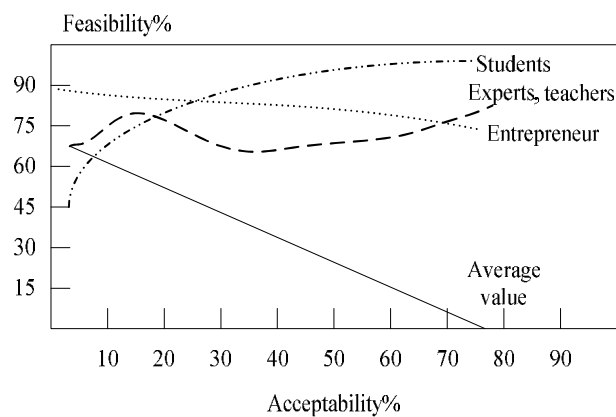


Figure 5. Statistics of survey results

According to the above figure, compared with the evaluation curve of the traditional entrepreneurial model, the innovative vision based on "culture+" collaborative development proposed in this paper has higher acceptance and feasibility among teachers, experts, entrepreneurial students and entrepreneurs. Therefore, the entrepreneurial model of makerspace in colleges and universities based on "culture+" collaborative innovation has better feasibility and means.

#### 4. Concluding Remarks

College students are one of the groups with the most innovative and entrepreneurial potential. Implementing innovative and entrepreneurial education for college students not only embodies the educational concept of all-round development, but also has important significance for economic and social development. University makerspace is an important carrier for college students to innovate and start their own businesses and an important practical platform for innovation and entrepreneurship education in universities. After 2014, colleges and universities in makerspace have developed vigorously, and more and more colleges and universities have established makerspace with their own characteristics. However, due to the short establishment time, there are still many problems in the development of colleges and universities in makerspace, such as small number and single mode, low operation level, poor resource integration ability, etc. On the basis of analyzing the background, current situation and influencing factors of the rise of makerspace, the author, referring to the development models of makerspace at home and abroad, condensed makerspace, a university with its own characteristics, into five basic models of maker space, joint office space and entrepreneurial community, and elaborated the characteristics of these five models in detail.

#### 5. Acknowledgments

Scientific Research Program Project of Shaanxi Education Department in 2018: New Exploration of Universities' Mass Creative Space Entrepreneurship Model Based on the Perspective of "Culture+" Collaborative Innovation (Project Number: 18JK1214)

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