

## *Retraction*

# **Retracted: On the Training Mode of Innovative and Entrepreneurial Talents in Higher Vocational Finance and Economics Professional Groups under the Background of “Big Wisdom and Cloud”**

### **Advances in Multimedia**

Received 12 December 2023; Accepted 12 December 2023; Published 13 December 2023

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This article has been retracted by Hindawi, as publisher, following an investigation undertaken by the publisher [1]. This investigation has uncovered evidence of systematic manipulation of the publication and peer-review process. We cannot, therefore, vouch for the reliability or integrity of this article.

Please note that this notice is intended solely to alert readers that the peer-review process of this article has been compromised.

Wiley and Hindawi regret that the usual quality checks did not identify these issues before publication and have since put additional measures in place to safeguard research integrity.

We wish to credit our Research Integrity and Research Publishing teams and anonymous and named external researchers and research integrity experts for contributing to this investigation.

The corresponding author, as the representative of all authors, has been given the opportunity to register their agreement or disagreement to this retraction. We have kept a record of any response received.

### **References**

- [1] H. Liu, “On the Training Mode of Innovative and Entrepreneurial Talents in Higher Vocational Finance and Economics Professional Groups under the Background of “Big Wisdom and Cloud”,” *Advances in Multimedia*, vol. 2022, Article ID 9515736, 11 pages, 2022.

## Research Article

# On the Training Mode of Innovative and Entrepreneurial Talents in Higher Vocational Finance and Economics Professional Groups under the Background of “Big Wisdom and Cloud”

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Received 9 July 2022; Revised 31 August 2022; Accepted 15 September 2022; Published 5 October 2022

Academic Editor: Tao Zhou

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The arrival of the era of “big wisdom and cloud” has promoted the restructuring of the industrial system, and the development of the new economy has also brought new changes to the demand for financial and business professionals. With the change of the employment market, the training objectives of financial and business professionals are also changing day by day. Practical teaching is becoming more and more important in the training of financial and business professionals. “Employment” in people’s livelihood has been identified as the main goal of government work. As the main source of economic restructuring, “mass innovation and mass entrepreneurship” has successfully integrated the spirit of innovation into all fields of society. Entrepreneurship has attracted the attention of the whole society. Under the influence of policy factors and various factors during the entrepreneurship period, the source and connotation of China’s entrepreneurship policy have changed significantly. On the basis of summarizing the practical teaching modes of foreign finance and economics majors, this study introduces the training objectives, conditions, and curriculum settings of the practical teaching of finance and economics majors in higher vocational colleges. This paper designs a recommendation algorithm for innovation and entrepreneurship talent training model based on potential Dirichlet distribution (LDA) theme model and alternating least squares (ALS) collaborative filtering, which not only improves the accuracy of the recommendation results of talent training model but also improves the accuracy of the recommendation results of talent training model. On the premise of stable recommendation, the diversity of recommendation results has increased, which meets the needs of innovative and entrepreneurial talent training of higher vocational finance and economics majors under the background of “great wisdom and cloud” and provides a certain reference for the practical teaching reform of higher vocational finance and economics majors in China. The cultivation of compound talents is of great significance to the development of professionals in modern multimedia and advanced e-commerce industries.

## 1. Introduction

In August 2013, Wu Hequan, an academican of the Chinese Academy of Engineering, puts forward the concept of “big wisdom and cloud” at the China Internet Conference [1]. The era of big intelligence and cloud computing refers to the integration and penetration of big data, intelligence, mobile Internet, cloud computing, and other information technologies. While changing people’s lives, it will set off a new round of industrial transformation and enter a new era of development. “Big wisdom and cloud” are interconnected and push the enterprise

informatization into a new stage. In the era of “great wisdom and cloud,” the integration of enterprise software and hardware is accelerated, the traditional production mode is gradually broken, and the business model is innovated [2]. The era of big intelligence moving to the cloud has brought digital dimension upgrading [3]. As the chip manufacturing process enters within 10 nanometers, the traditional computer architecture is facing the challenge of Moore’s law ceiling [4]. Quantum computing will lead the new trend of computing power [5]. The decentralization and distribution of blockchain will subvert the information transmission mechanism of the

Internet, allowing untrusted parties to reach commercial transactions [6]. The financial and medical industries will be the first applications of blockchain [7]. In the industry, an endless stream of innovative technologies will continue to reconstruct and promote the advent of the intelligent world [8]. The era of Dazhiyun is bringing about or will bring earth-shaking changes to all walks of life, and the work mode and work focus of the accounting industry that provides strategic decision-making support for various industries are also transforming [9]. What are the corresponding challenges in the supply of accounting talents, what is the capability framework of the times for the needs of accounting professionals, what are the main ways to train accounting professionals at present, and how to cultivate accounting professionals that meet the needs of the times and other issues have become issues that need to be solved urgently in the training of accounting professionals [10].

Since “mass entrepreneurship and innovation” became a national strategy, the central government to local provinces and cities has successively issued a series of preferential policies to support entrepreneurship and innovation [11]. In March 2015, the government office of the State Council issued the opinions of the government office of the State Council on the guidance of building maker space to promote public innovation and entrepreneurship [12]. In June, the “Opinions of the State Council on Several Policies and Measures for Vigorously Promoting Mass Entrepreneurship and Mass Innovation” was released. In May 2016, the General Office of the State Council issued the “Implementation Opinions on Building Mass Entrepreneurship and Mass Innovation Demonstration Bases,” which pointed out that mass entrepreneurship and mass innovation should be promoted on a larger scale, at a higher level, and at a deeper level and create a new engine for development [13].

Higher technical vocational schools should fulfill the mission of serving regional economic and social construction and building a modern industrial system and actively meet the talent needs of local economic and social development and construction. To meet the demand for talents, cultivate high-quality human resources with rich total and reasonable structure, and make corresponding historical contributions to increasing employment, improving life, and promoting the building of a well-off society in an all-round way.

Higher vocational education has the dual attributes of higher education and vocational education. Carrying out innovation and entrepreneurship education is the meaning of higher vocational education [14]. Vocational education is an important part of the national education system and human resource development and is an important way to cultivate technical skill talents; promote employment, entrepreneurship, and innovation; and promote the level of manufacturing and service industries. In recent years, the state attaches more and more importance to vocational education, auditing as an important part of the party and state supervision system, but also increased the supervision of vocational education schools, the author found in the audit, vocational education schools in the student management, use of funds, skill training, and other aspects of shortcomings and hidden dangers; There are many factors influencing the quality of vocational education and the healthy development of schools, which need urgent attention and regulation. The Ministry of Education’s document

“Opinions on Vigorously Promoting Innovation and Entrepreneurship Education in Colleges and Universities and College Students’ Self-Entrepreneurship” points out that deepening education and teaching reform in colleges and universities, promoting innovation and entrepreneurship education, improving the quality of talent training, and promoting the scientific development of higher education have great significance. Practical significance and long-term strategic significance need to reach a harmonious state. [15]. Innovation and entrepreneurship education should take all students as the basic orientation and integrate “mass entrepreneurship and innovation” education into the whole process of talent training [16]. In order to recommend a personalized innovation and entrepreneurship model for talent training and to greatly improve the management environment of talent training in higher vocational colleges, reduce management, integrate the behavioral characteristics of talent training in the big data environment, and on this basis, it is particularly important to establish a recommendation system for talent training [17]. Therefore, the article mainly analyzes the higher vocational college financial professional innovation entrepreneurship mode, design based on implicit lily dry distribution (LDA) theme model and alternating least squares (ALS) collaborative filtering of innovative entrepreneurial talent training mode recommended algorithm, to meet the “big wisdom shift cloud” under the background of higher vocational financial professional group innovative entrepreneurial talent training needs, for higher vocational business trade professional practice teaching reform to provide certain reference.

## 2. State of the Art

*2.1. Overview of Innovation and Entrepreneurship.* As early as 1912, the American economist Joseph Schumpeter puts forward the concept of innovation in his book “Introduction to Economic Development” [18]. The introduction of “new combination” can include five aspects: or introduce new products, or introduce new production methods, or open up new markets, or obtain new raw materials or the supply source of semifinished products, or the establishment of a new company form. Not only that, Schumpeter also proposed innovations of technical and nontechnical changes [19]. Based on the research of many scholars, it can be considered that innovation is a breakthrough, breaking the original. The core content of the mindset and conventional precepts is “new,” which can be reflected in the breakthrough changes in the external structure, characteristics, and performance of the product and in the breakthrough creation in the external modeling design and content expression methods of the product. Or it is reflected in the enrichment or improvement of product content.

From a broad perspective, entrepreneurship refers to a creative activity, which is a pioneering and innovative social activity with positive significance. It can involve all aspects of human production and life. As long as it is something that people have not done before, activities that have a positive impact on human society can be defined as entrepreneurship in a broad sense. In a narrow sense, entrepreneurship is the creation of a new enterprise by a single person or a team from the perspective of economics [20].

*2.2. Overview of Dazhiyun Cloud.* The interaction of the four technologies covered by “big wisdom mobile cloud” builds the technical foundation of the financial sharing center. Using the characteristics of mobile Internet anytime and anywhere and filtering and analyzing information through cloud computing work functions, it can reduce the fault tolerance rate and effectively improve work efficiency. In terms of operation, the technology of “big wisdom mobile cloud” can not only speed up the accounting informatization process of enterprises but also help improve the real-time competitiveness of enterprises in the market.

*2.2.1. Opportunities and Challenges Faced by Finance and Economics Majors in the Era of Big Intelligence and Cloud.* The arrival of the era of big intelligence and cloud migration poses challenges to the training of accounting talents. Andy Booth pointed out that less than 0.5% of the 2EB of data generated on an average day is analyzed or used. An analysis of a typical company from the Fortune 1000 found that using 10% more data could increase revenue by \$65 million. 90% of accountants and personnel are the “producers” of data, a few accountants are engaged in “porters” or “rough processing” of data, and only a few accountants are engaged in “deep processing.” There is a large shortage of accountants who can identify key data trends, perform data mining and extraction, and perform statistical modeling and data analysis. Financial sharing will also replace the vast majority of accounting personnel. Financial sharing replaces 93% of expense reimbursement work and replaces about 70% of current accounts, general ledger management, asset management, etc., but can only replace about 20% of work such as budget forecasting, data analysis, and management reports.

*2.2.2. Competency Demand Framework of Accounting Professionals in the Era of Big Intelligence and Cloud.* At present, the “CGMA Management Accounting Competency Framework” issued by the Chinese Association of Chief Accountants (CACFO) and the Royal Chartered Institute of Management Accountants (CIMA) points out that management accounting talents should be based on ethics, integrity, and professionalism and have four professional skills: technical skills, business skills, interpersonal skills, and leadership skills. In 2018, the Ministry of Education issued the “National Standards for Accounting Undergraduate Teaching Quality,” which pointed out that accounting talents should have professional ability, comprehensive ability, interpersonal ability, communication and information acquisition ability, independent learning, lifelong learning, and continuous innovation ability. It is proposed that high-quality accounting talents must have “three businesses, five abilities, and seven knowledge.” Zhang Gongfu et al. put forward the skills that accounting professionals need to have: knowledge of strategy, business, fine finance, analysis, and good communication. Vocational college accounting class majors are disciplines that integrate theory and practice and are highly practical and comprehensive. In teaching, theory and practice must be complementary. If only emphasis is placed on the teaching of theoretical knowledge, practical ability cannot be improved simultaneously. It is difficult for students to master the actual work, let alone use theoretical knowledge to

guide practice, and the final graduates are difficult to adapt to job requirements, let alone market competitiveness. Therefore, it is necessary to optimize the major of finance and economics in vocational colleges. The talent training mode of students’ innovation and entrepreneurship ability has important practical significance.

Knowledge entrepreneurship through innovation, change social life, innovation through employment, and reduce the burden of labor force has always been the concern of the national and regional government departments. Policies and measures related to entrepreneurship are gradually formulated, policies to encourage innovation and support employment are gradually implemented, and innovation activities are gradually integrated into all aspects of economic and social activities. The continuous emergence of innovation projects and the gradual exploration of innovation practices have also contributed to the formulation of various innovation policies and regulations and established a relatively complete framework of innovation policies and regulations. In addition, innovation decision-making and entrepreneurial behavior have also received widespread attention from innovation theorists. “National entrepreneurship,” “entrepreneurial policy,” “entrepreneurial environment,” “entrepreneurial activities,” “business model,” and other contents have also become hot topics of concern in the academic community and important areas of concern. By searching the keyword “entrepreneurship” in CNKI library, you can find 1.8 million relevant research materials, as shown in Figure 1. Entrepreneurship policy has a relatively perfect theoretical system.

### 3. Methodology

*3.1. Overview of the LDA Topic Model.* LDA is a model of document topics. The training part mainly studies the distribution of topics. In the exercise set, because people can not directly measure and see the topic distribution, the topic distribution can also be regarded as a potential Dirichlet distribution. Each aggregate file in LDA contains a probability topic distribution, and this layout is mainly composed of three elements: document, document vocabulary, and text theme. Through the expression of words, a two-level distribution of “document subject” and “subject words” is formed. The former refers to the probability distribution that all keywords in the document can be expressed, while the latter refers to the probability distribution that each subject can be expressed by the vocabulary.

The concept of LDA topic pattern is as follows: this pattern regards the full text of an article with complete semantics as a random collection of independent contents composed of multiple independent words. In this way, the independent text description can be mathematically processed, and the design model can be used to convert the specific text data into an abstract digital model for data analysis. The probabilistic design model diagram of LDA is shown in Figure 2. The parameters of LDA diagram model are shown in Table 1.

From the simulation process of the dice game, it can be found that there is no interference between these steps. The derivation process of LDA is generally considered as a

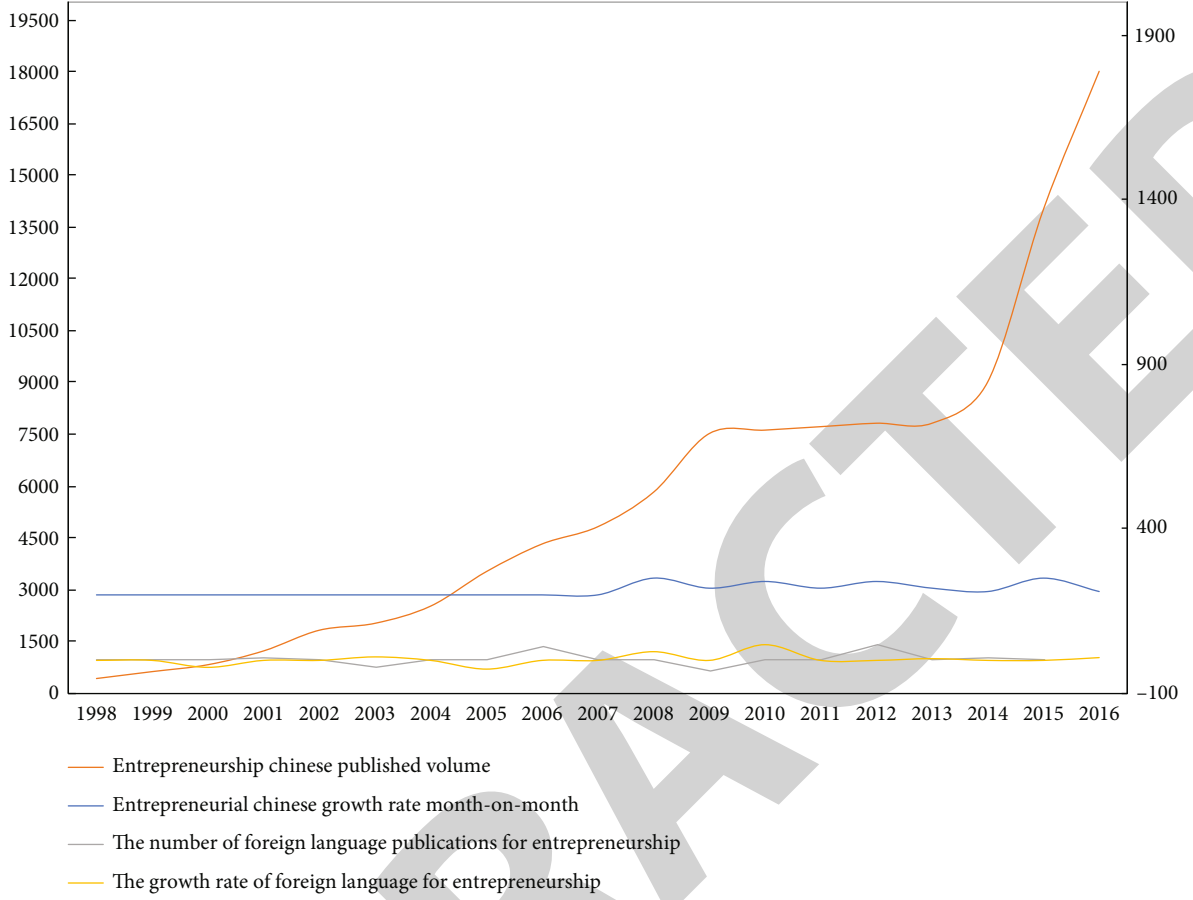


FIGURE 1: Academic attention to entrepreneurship policy research.

model formed by the conjugate relationship of M+P Dirichlet.

- (1) In the first physical process  $a \rightarrow \theta \rightarrow Zmn$ ,  $a \rightarrow \theta$  is a Dirichlet structure,  $\theta \rightarrow zmn$  is a multinomial structure, and this process is a DirichletMultinomial structure, as shown as follows:

$$p\left(\frac{\vec{z}_m}{\vec{\alpha}}\right) = \frac{\Delta(\vec{n}_m + \vec{\alpha})}{\Delta(\vec{\alpha})}. \quad (1)$$

The dice tossing game can be optimized by using the independent  $M$  mutually independent documents are  $M$  DirichletMultinomial, so the topic generation probability of document is as

$$p\left(\frac{\vec{z}}{\vec{\alpha}}\right) = \prod_{m=1}^M p\left(\frac{\vec{z}_m}{\vec{\alpha}}\right) = \prod_{m=1}^M \frac{\Delta(\vec{n}_m + \vec{\alpha})}{\Delta(\vec{\alpha})} \quad (2)$$

- (2) The dice tossing game can be optimized by using the independent physical process of DirichletMultinomial.

The independent nature determines that the order of dice tossing can be exchanged. The optimized structure of the LDA model is

$$p\left(\frac{\vec{w}_{(k)}}{\vec{\beta}}\right) = \frac{\Delta(\vec{n}_k + \vec{\beta})}{\Delta(\vec{\beta})}, \quad (3)$$

where  $\beta$  represents the Dirichlet distribution parameter of topics-words. The second physical process can be represented by  $K$  DirichletMultinomial structures. To sum up, the generation probability of words in the entire corpus is shown in

$$p\left(\frac{\vec{w}}{\vec{z}}, \vec{\beta}\right) = \prod_{k=1}^K p\left(\frac{\vec{w}_{(k)}}{\vec{z}_{(k)}}, \vec{\beta}\right). \quad (4)$$

To sum up, combining the two physical processes, Equation (5) can be obtained:

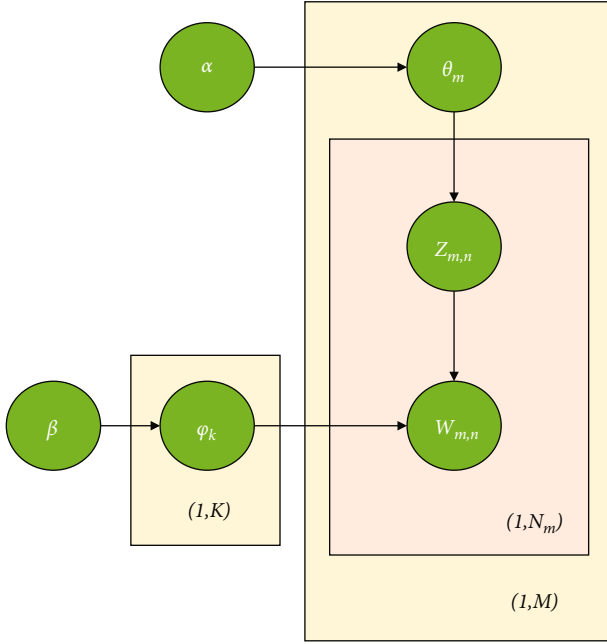


FIGURE 2: LDA Bayesian graph model.

$$p\left(\frac{\vec{w}}{\vec{z}}, \vec{\beta}\right) = \prod_{k=1}^K \frac{\Delta(\vec{n}_k + \vec{\beta})}{\Delta(\vec{\beta})} \prod_{m=1}^M \frac{\Delta(\vec{n}_m + \vec{\alpha})}{\Delta(\vec{\alpha})} \quad (5)$$

### 3.2. Spark's Parallel Computing and Task Scheduling

- (1) The MapReduce computing framework will persistently store the intermediate results on the hard disk after mapping the data, so as to perform fault-tolerant and storage operations. A simple map reduce program will have multiple map and reduce steps, which will consume a lot of disk I/O time. However, Spark's RDD operators can be connected in series and executed in parallel without saving the intermediate results directly to the hard disk
- (2) Spark also does not need to be deliberately arranged like map reduce's shuffle program. The data of each shuffle is directly cached in the memory or saved to the hard disk using code control
- (3) The extreme phenomenon of data skew occurs in MapReduce batch processing, which is also a common and troublesome process in large-scale data analysis. Spark computing framework supports a large number of thread pools, which can realize the resource consumption of threads, thus reducing the repetition and pollution of many threads and reducing the operation cost
- (4) Hadoop also realizes fault tolerance through multi-machine backup and error rollback of digital blocks. Spark also obtains a fault-tolerant mechanism by

maintaining the inheritance of RDD conversion. When the RDD operator operates incorrectly or the data block on the access node fails in the data processing flow, the lineage reconstruction data task can be used. Figure 3 is the Spark task scheduling sequence diagram

The biggest advantage of spark is its excellent data structure design. The emergence of elastic distributed storage data RDD has fully considered the difficulties in programming, distributed thinking, data storage, and execution strategy faced in big data analysis and can better reflect spark. This paper analyzes the main characteristics and advantages of the distributed big data processing computing architecture.

**3.3. The Solution of the LDA Model by the Gibbs Sampling Method.** Gibbs sampling is often used in statistical inference (especially Bayesian inference). This is a randomization algorithm that distinguishes it from deterministic algorithms in statistical inference such as the maximum expectation algorithm. It can be derived by the properties of the Markov chain and the probability transfer matrix, and its sampling distribution finally converges to the joint distribution. The Gibbs sampling is applicable to the multivariate distribution whose conditional distribution is easier to sample than the marginal distribution. According to Bayes' rule, if the observed word  $w_i = t$ , then Equation (6) can be obtained:

$$p\left(z_i = \frac{k}{z_{-i}}, \vec{w}\right) \propto p\left(z_i = \frac{t}{z_{-i}}, \vec{w}_{-i}\right), \quad (6)$$

where  $i$  represents the topic of the  $i$ -th word in the corresponding corpus.

Since  $z_i = k$ ,  $w_i = t$  only involves the  $m$ -th document and the  $k$ -th topic; the above formula only involves two Dirichlet-Multinomial conjugate structures. Other DirichletMultinomial conjugated structures are independent. Then, the posterior distributions all satisfy the Dirichlet distribution:

$$p\left(\frac{\vec{\theta}}{\vec{z}_{-i}}, \vec{w}_{-i}\right) = \text{Dir}\left(\frac{\vec{\theta}}{\vec{n}_{m,-i}} + \vec{\alpha}\right), \quad (7)$$

$$p\left(\frac{\vec{\phi}}{\vec{z}_{-i}}, \vec{w}_{-i}\right) = \text{Dir}\left(\frac{\vec{\phi}}{\vec{n}_{k,-i}} + \vec{\beta}\right). \quad (8)$$

According to the above engineering design ideas and methods, Gibbs sampling method of LDA theme model can be obtained:

$$P\left(z_i = \frac{k}{z_{-i}}, \vec{w}\right) \propto p\left(z_i = k, w_i = \frac{t}{z_{-i}}, \vec{w}_{-i}\right). \quad (9)$$

The above mathematical logic derivation process can clearly see the derivation of the two physical processes from the derivation process: the probability of  $z_i = k$  and  $w_i = t$  is only two DirichletMultinomial conjugate structure associations, and the

TABLE 1: LDA graph model parameter description.

Parameter name	Parameter description
$K$	Number of topics
$M$	Number of documents
$V$	Number of words in thesaurus
$N$	Number of times in part $m$ document, i.e., $N = \sum_{m=1}^M N_m$
$\alpha$	Dirichlet distribution parameters of docs topics
$\beta$	Parameters of Dirichlet distribution of topics words
$\theta_m$	Topic distribution parameters of the $m$ -th document
$\varphi_k$	The $k$ -th topic-multiple distribution parameters of feature words
$z_{m,n}$	Topic of the $n$ th word in part $m$ document
$w_{m,n}$	The $n$ th word in part $m$ document, $w_{m,n} \in V$

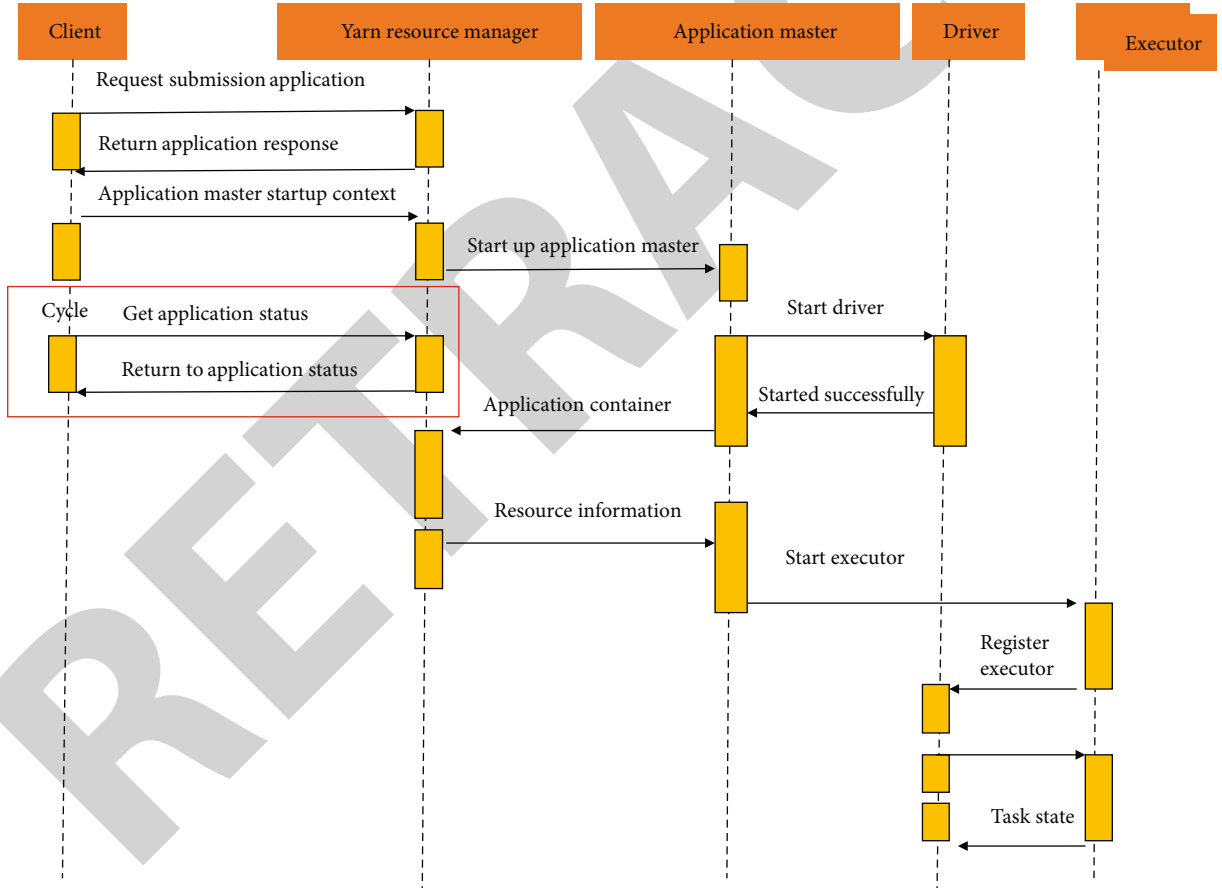


FIGURE 3: Spark task scheduling sequence diagram.

final result  $\hat{\theta}_m^{(k)}$  and  $\hat{\phi}_k^{(t)}$  is the corresponding two Dirichlet. The formulas for parameter estimation are shown in

$$p(u|\alpha) \propto \prod_{k=1}^K u_k^{\alpha-1}, \quad (10)$$

$$\text{Dir}(u|\alpha) = \frac{\Gamma(\alpha_0)}{\Gamma(\alpha_1) \cdots \Gamma(\alpha_k)} \prod_{k=1}^K u_k^{\alpha-1}. \quad (11)$$

## 4. Result Analysis and Discussion

4.1. Source and Processing of Experimental Data. This paper chooses R language to preprocess the innovation and

TABLE 2: JGibbLDA class file description.

Class file name	Class file description
Conversion.java	Assembly file name
Dictionary.java	Design the mapping between word items and word item numbers. There are two functions in the class, namely, writeWordMap and readWordMap. Responsible for writing and reading mapping relationships
Document.java	Represent the input file in the corresponding format based on the program
Estimator.java	Design topic word matrix and document topic matrix
LDADataset.java	LDA data structure class, which represents the contents of the input file as dictionary and document
Model.java	Save and train the LDA model, and save and read the LDA model file
LDAMdOption.java	LDA model parameter class
LDA.java	Program entry

entrepreneurship texts of higher vocational colleges. The programming language integrates processing, operation, image display, and other capabilities and has strong statistical analysis characteristics, so it can more effectively display the analysis process and conclusions. This paper chooses R language as the programming language. RStudio is a powerful and easy-to-use programming method, so RStudio is used as the main content of the corpus, and word segmentation is carried out in this paper. Since the theme modeling of science and technology entrepreneurship in higher vocational colleges established in this paper uses Java programming language and Eclipse is an open and usable design method using Java, this paper selects Eclipse as the main design method of LDA theme model. Compared with other methods, Gibbs method is more scientific, more secure, and less time-consuming, so this paper uses Gibbs sampling algorithm to statistics modeling data. At the end of sampling, the topic is represented by the position of keywords, and the data is represented by the number of keywords. Through LDA theme model, we can intuitively calculate the number of keywords of the corresponding theme, and in the process of studying the changes of China's entrepreneurship policy, we can make use of the current higher vocational education.

This article mainly analyzes more than 40 Chinese national entrepreneurship policies from January 2006 to May 2017. The basic principles and methods for selecting policy samples include as follows: through summarizing and analyzing the articles and books related to the formulation process of entrepreneurship laws and regulations and the research of policies and regulations, as well as relevant legal research materials, we can fully understand the definition and theoretical basis of entrepreneurship policies and regulations and specific legal issues. After in-depth study of the topic and repeated debugging in the early stage, the search term is set as "entrepreneurship." After consulting and screening the policy documents of the above principles and collecting the selection data, 40 samples were finally selected.

Our main research direction is to use the method of R sentence in word segmentation system. When using the R language, you can add the rJava package and the rwordseg package. The rwordseg software package implements all references to the ansj software package. However, because the ansj software package adopts the nlpir of the Chinese Academy of Sciences, combines the hidden Markov model, and

uses the Chinese word segmentation algorithm of Java programming, the rwordseg software package is used as the interface to the ansj software package in the R language.

The LDA model refers to the LDA model JGibbLDA using the Java language and uses the Gibbs sampling for parameter estimates and derivation. Tables 2 and 3 are detailed descriptions of the JGibbLDA parameters.

*4.2. Experimental Results and Analysis.* This paper collects nearly 40 innovation policy articles of national higher vocational colleges and financial disciplines under the background of "great wisdom moving cloud" and calculates the average time of each innovation policy every year. The data results are shown in Figure 4. At the same time, we also found that before 2007, China's innovation policy research was still in the initial stage, and the number of articles published each year was relatively low. After the 17th National Congress of the Communist Party of China determined the policy guideline of "promoting employment through entrepreneurship," the number of entrepreneurship policies issued in China each year is as follows. In March 2013, the state organs and the National Committee of the Chinese people's Political Consultative Conference completed the replacement of the old and the new. In September 2014, Premier Li Keqiang issued the slogan of "mass entrepreneurship and innovation," which was rapidly launched throughout the country. Moreover, from the perspective of China's macroeconomic growth, the rapid growth of China's macroeconomy has also directly caused the prominent phenomenon of innovation. The original innovation policies and regulations can no longer meet the new needs of entrepreneurship development under the new situation. New entrepreneurship policies are needed to address this situation. Since then, the number of documents related to innovation and development has risen sharply since 2013, providing a basis for the future development of innovation in China.

In the text of entrepreneurial government, 27 governments announced by one organization, accounting for 68% of the total. There are very few governments jointly issued by multiple institutions, and among the market entities that jointly issued government texts, the government texts issued by the two market entities are the largest, accounting for 15% of the total government. The total amount of government policy documents formulated by three departments or more is the total amount of texts. Among the departments



TABLE 3: JGibbLDA parameter description.

Parameter	Parameter description
est	The parameter value is true or false. If it is equal to true, it means the first training model
estc	The parameter value is true or false, equal to true, that is, the new data is retrained on the trained model
inf	The parameter value is true or false. If it is equal to true, it is inferred from the previously trained model
dir	String variable, i.e., input data location, and save model results
dfile	String variable
modelName	String variable, that is, the name of the inferred model
K	Number of model topics
alpha	Model super parameter, usually $\alpha = 50/k$
bata	Model super parameter, usually $\text{bata} = 0.01$
niters	That is, the number of Gibbs sampling iterations
savestep	That is, how many iterations to save the training results
twords	That is, select the number of saved word items for each topic
withdrawdata	The parameter value is true or false, which is equal to true, that is, there is original data in the model input
wordMapFileName	String variable, that is, the name of the by-product file generated by the training model

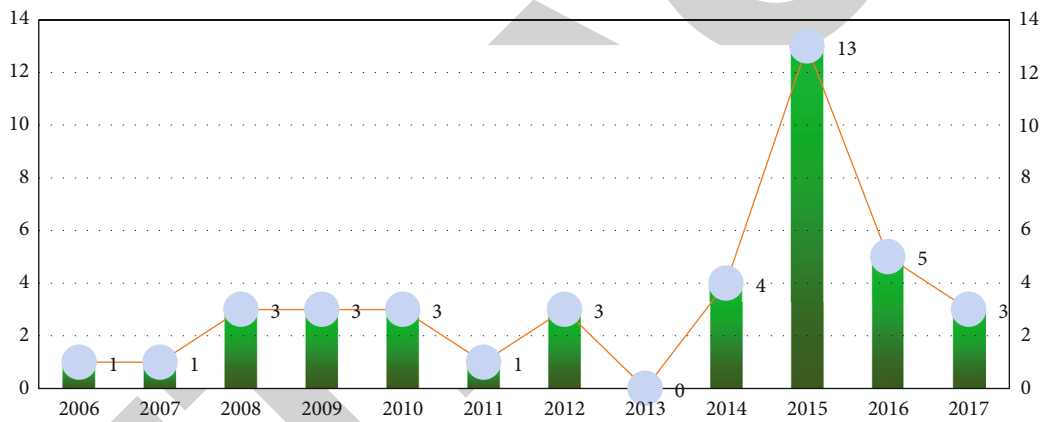


FIGURE 4: Innovation and entrepreneurship policies of higher vocational colleges under the background of big intelligence shifting to cloud.

issuing government documents (see Figure 5), a large number of policies and measures jointly issued by the State Council, the National Development and Reform Commission, the Ministry of Finance, the Ministry of Science and Technology, and the Ministry of Human Capital and Social Security are determined according to the responsibilities and characteristics of the above institutions.

In order to verify the talent training mode recommendation algorithm in this paper and suppress the recommendation risk, an improved ALS collaborative filtering algorithm (LDA-UI-ALS) with dynamic weighted fusion of user and item characteristics is used. This study compares the collaborative filtering plan recommendation method based on dynamic weight (LDA-UI-ALS), the collaborative filtering recommendation algorithm (LDA-ALS) used to cultivate innovation and entrepreneurship talents with fixed weight, and the collaborative filtering recommendation method based on dynamic weight and fixed weight. In December 2018, the recommendation effects of such algorithms (hybrid ALS) as “research and implementation of spark based hybrid recommendation algorithm” were pub-

lished in the Journal of Electronic Technology for comparison. The performance evaluation reference values include MAE, precision, recall number, coverage, and the characteristics of the analysis algorithm. Test requirements: study the change of implicit factors by setting the regularization parameters and iteration times of collaborative filtering, and use MovieLens 100k data set as test data.

According to the experimental results in Figure 6, the conclusions can be drawn. When preprocessing the score matrix with LDA’s theme model, the promotion results of LDA-ALS method and LDA-UI-ALS method are compared with the methods in “research and implementation of spark based hybrid recommendation algorithm” (hybrid ALS) in this paper. The promotion effect is significantly improved. When the implicit factor is less than 9, the MAE value of LDA-UI-ALS method is 0.78, which is 8.4% higher than that of mixed ALS method. It further introduces the combination of LDA-UI-ALS and dynamic weight collaborative filtering in LDA theme module, as well as important improvement measures in selection results. After the successful use of the dynamic

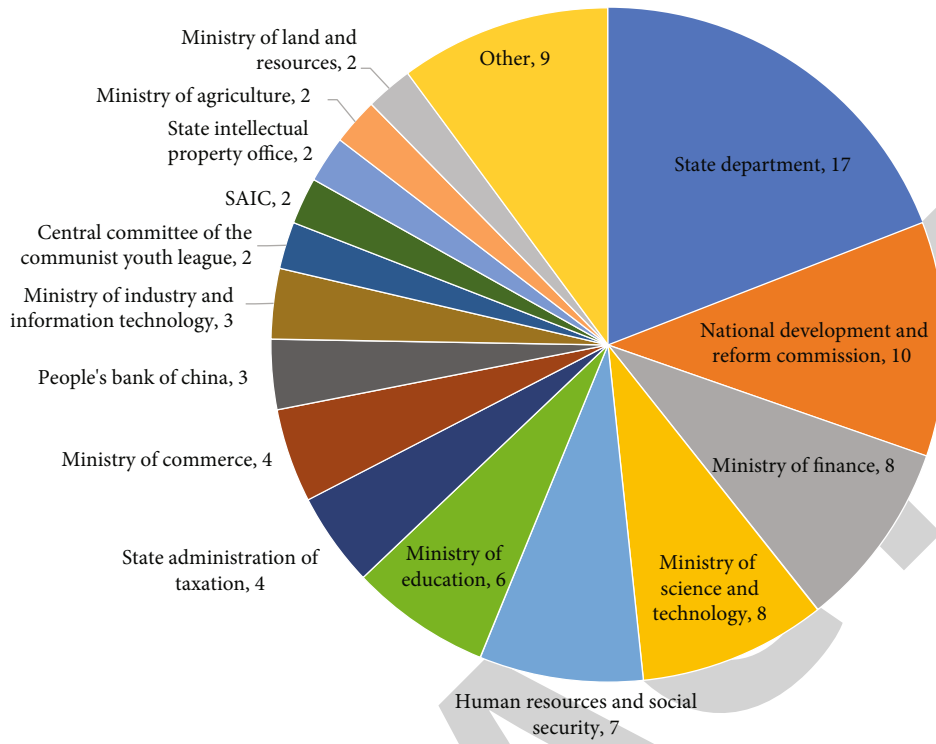


FIGURE 5: Departmental distribution of entrepreneurship policies promulgated in higher vocational colleges.

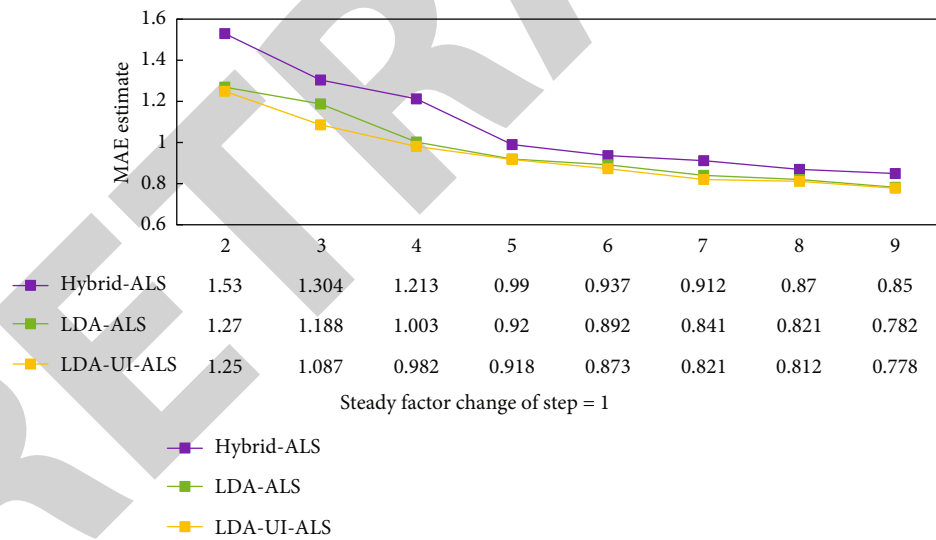


FIGURE 6: Trend chart of MAE results of three algorithms.

weight fusion algorithm, the accuracy range of LDA-UI-ALS algorithm is relatively stable, and the accuracy is slightly improved. The results show that the dynamic weighted fusion strategy will not affect the correctness of the recommendation algorithm after a relatively “novel” training concept is proposed for higher vocational schools. LDA-UI-ALS algorithm not only relatively enhances the recommendation effectiveness of traditional recommendation algorithms but also provides “stability” and “diversity” for the innovative and entrepreneurial talent training mode proposed by higher vocational schools.

Figure 7 shows the effectiveness of the three recommended methods mixed ALS, LDA-ALS, and LDA-UI-ALS under different evaluation references. The evaluation mainly involves three aspects: accuracy, recall, and coverage. The histogram comparison results show that under the same data set, the promotion methods of innovation and entrepreneurship and talent training mode adopted by us have a high selection effect. In addition, through the two indicators of accuracy and coverage, we can find that there is no obvious reduction in coverage when the accuracy is steadily improved. Therefore,

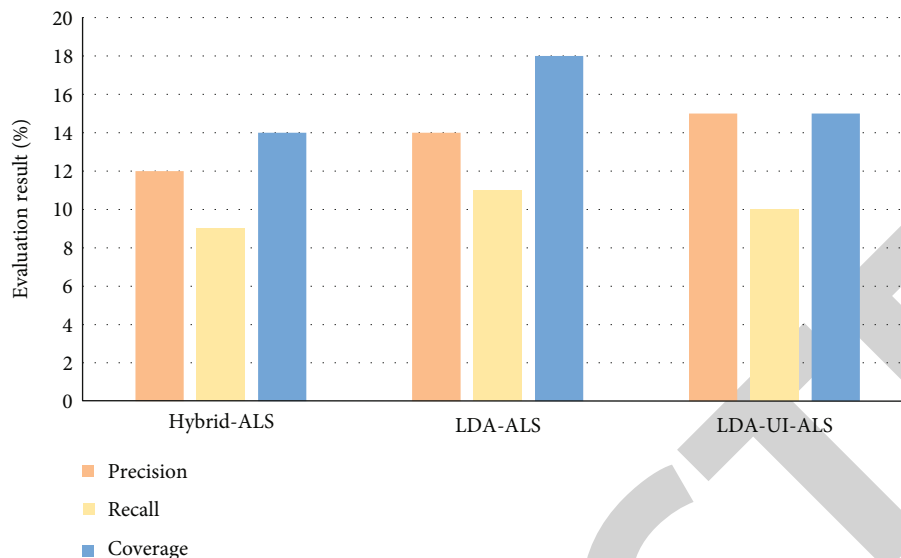


FIGURE 7: Evaluation and comparison histogram of three algorithms under different reference values.

in the ALS collaborative filtering technology used in this paper, the dynamic weighting method not only achieves “stable recommendation” but also enriches the recommendation results to a great extent and realizes “multiple push,” which is in line with the expectations of the algorithm design.

## 5. Conclusion

With the rapid development of new modern information technologies such as “big smart mobile cloud,” improving the informatization level of universities under the background of big smart mobile cloud has also become an important means to improve the quality of modern financial management in universities. This paper draws on the research results of the informatization construction of colleges and universities at home and abroad and uses the advanced technologies and concepts in the era of big intelligence and cloud to explore the basic situation of innovation and entrepreneurship policies of higher vocational colleges in China. On this basis, this paper also introduces the document data mining method based on LDA theme pattern, conducts theme data mining on the obtained government document data, distinguishes the theme development stages by interpreting the theme keywords and tables in government documents, and analyzes the main keywords of government documents in each development stage, so as to clarify the current situation of innovation and entrepreneurship in China’s higher vocational colleges and the development focus and direction of talent training mode. In this study, the parallel optimization process is realized by spark technology. Spark also uses graphx method to convert the processing mode of LDA algorithm into RDD processing of common graph edges in spark. Using the matrix analysis and design idea of ALS collaborative filtering algorithm, the design goal of collaborative filtering algorithm is transformed from the score matrix to the feature matrix by calculating the feature matrix of the project and the system, and then, the project promotion method is designed. After the later practice, the correctness of the method design is proved, and the effectiveness of the pro-

ject promotion method recommendation is significantly improved. With the support of the development of modern information technology and advanced multimedia technology, it is of profound significance to explore the cultivation mode of professionals in this field for the future social development.

## Data Availability

The labeled data set used to support the findings of this study is available from the corresponding author upon request.

## Conflicts of Interest

The author declares that there are no conflicts of interest.

## Acknowledgments

This work is supported by the Huzhou Vocational and Technical College.

## References

- [1] H. Patzelt, R. Preller, and N. Breugst, “Understanding the life cycles of entrepreneurial teams and their ventures: an agenda for future research,” *SAGE PublicationsSage CA: Los Angeles, CA*, vol. 9, no. 5, pp. 45–52, 2021.
- [2] N. D. Genosas, “Entrepreneurial skills and innovative behavior as determinants on the entrepreneurial performance of business graduate students,” *Management Studies: English*, vol. 9, no. 6, p. 11, 2021.
- [3] F. Bertoni, S. Bonini, and V. Capizzi, “Digitization in the market for entrepreneurial finance: innovative business models and new financing channels,” *SAGE PublicationsSage CA: Los Angeles, CA*, vol. 15, no. 1, pp. 110–115, 2021.
- [4] M. H. Nguyen, T. H. Pham, and M. T. Ho, “On the social and conceptual structure of the 50-year research landscape in entrepreneurial finance,” *SN Business & Economics*, vol. 1, no. 1, pp. 87–95, 2020.

- [5] L. Yuan, J. L. Bin, Y. Z. Wei, F. Huang, X. F. Hu, and M. Tan, "Big data aspect-based opinion mining using the SLDA and HME-LDA models," *Wireless Communications and Mobile Computing*, vol. 2020, Article ID 8869385, 19 pages, 2020.
- [6] A. Bhattacharyya and N. Kumar, "Who is more entrepreneurial? A comparative study of vocational and academic students," *Asia Pacific Journal of Innovation and Entrepreneurship*, vol. 14, no. 1, pp. 15–30, 2020.
- [7] Y. Rokhman and F. Subyantoro, "The procedure and explanatory texts based on entrepreneurial content for SMK students as effective facilities for improving character in educational conservation," *International Journal of Scientific & Technology Research*, vol. 7, no. 1, pp. 14–20, 2020.
- [8] R. Karyaningsih, A. Wibowo, A. Saptono, and B. S. Narmaditya, "Does entrepreneurial knowledge influence vocational students' intention? Lessons from Indonesia," *Entrepreneurial Business and Economics Review*, vol. 8, no. 4, pp. 138–155, 2020.
- [9] C. Lievore, L. A. Pilatti, and J. A. S. Teixeira, "Shaping for the future: professionalizing higher education and implications on the scientific policies of Brazil and Portugal," *SN Social Sciences*, vol. 1, no. 1, pp. 17–25, 2021.
- [10] K. B. Mbore, "Effect of entrepreneurship education on innovation capability of technical and vocational and education training (TVET) graduates in Kenya," *International Journal of Research in Business and Social Science*, vol. 10, no. 5, pp. 2147–4478, 2021.
- [11] S. B. Jamil and Z. Iqbal, "Evaluation of vocational training programs for developing," *Entrepreneurial Skills among Women in the Punjab Evaluation of Vocational Training Programs 198*, vol. 8, no. 25, pp. 33–41, 2020.
- [12] H. Perera and B. Nishantha, "Determinants of entrepreneurial intentions: technical vocational education and training (TVET) in Sri Lanka," *International Journal of Management Innovation & Entrepreneurial Research*, vol. 6, no. 1, pp. 78–87, 2020.
- [13] G. Alhajeri, "Achieving youth empowerment in UAE through incorporating entrepreneurial skills in technical vocational education and training," *International Business Research*, vol. 14, no. 4, pp. 101–140, 2021.
- [14] D. U. Tatpuje, A. Kakade, V. Jadhav, and A. Ganbote, "A comparative study on advanced skills of technology and entrepreneurial skills with the awareness and preparedness among the rural youths," *Entrepreneurship Education*, vol. 5, no. 1, pp. 21–35, 2022.
- [15] S. Kaliyeva, E. Buitek, and M. Meldakhanova, "New trends in the professional training of young people in the modern conditions," *Eurasian Journal of Economic and Business Studies*, vol. 9, no. 2, pp. 77–81, 2021.
- [16] E. Ghlamallah, C. Alexakis, M. Dowling, and A. Piepenbrink, "The topics of Islamic economics and finance research," *International Review of Economics and Finance*, vol. 75, no. 3073, pp. 145–160, 2021.
- [17] K. Pan, "Exploration and innovative research on the training of party branch secretaries of students in colleges and universities in the new era," *Chinese Studies*, vol. 11, no. 2, pp. 90–96, 2022.
- [18] R. Grigg, "EntreCompEdu, a professional development framework for entrepreneurial education," *Education and Training*, vol. 53, no. 10, pp. 20–28, 2020.
- [19] Z. Li and A. Islam, "Entrepreneurial intention in higher vocational education: an empirically-based model with implications for the entrepreneurial community," *SAGE Open*, vol. 11, no. 4, p. 215824402110591-207, 2021.
- [20] C. Jin, Y. Luo, and R. Cao, "Research and practice on the training mode of innovative and entrepreneurial talents in colleges and universities: a case study of academic association of "Federation of Life Science Research and Innovation", " *Asian Agricultural Research*, vol. 13, no. 14, pp. 130–138, 2021.