

Overview of the Poverty-Alleviation by Supporting Education in China

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Abstract: Poverty is a complex social problem, which has always attracted attention. 2020 is the year of a decisive victory for the Chinese government to alleviate poverty. Education plays a fundamental role in the fight against poverty and is the foundation for eradicating poverty and stabilizing poverty alleviation. Based on the literature in the CNKI database, this study took “poverty-alleviation by supporting education” as the subject, and conducted a bibliometric analysis of the publications in the field of China’s poverty alleviation by education during 1988-2020. Through analyzing the research time distribution and keyword, the results of poverty-alleviation by supporting education were sorted out and analyzed around three hotspots: the main framework of poverty alleviation, key models, and technical support. It is proposed that the research and development of China’s poverty-alleviation by supporting education should pay more attention to its evaluation and sublimation of empirical theory.

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Introduction

THE lack of education is called “capacity deprivation poverty” because education can affect intergenerational mobility in society. The positive effect of education is to influence the income of individuals by improving their abilities, thereby supporting the development of those at the lower levels of the social pyramid. According to the World Bank’s poverty line standards, its research found that if the labor force in the family has less than 6 years of education, the incidence of poverty is greater than 16%. If the education years are increased by another three years, it will drop to 7% (Liu, 2016). However, the 2018 China Rural Poverty Monitoring Report pointed out that only 14.2% of the permanent labor force in rural areas in China has a middle school education level or above (China Statistics Press, 2019). In addition, in poverty-stricken areas, problems such as children being out of school, unequal education opportunities for men and women, and fewer opportunities for higher education are more prominent. This will lead to poverty-stricken areas that have been in a vicious circle of lack of education and low income, that is, “low education level → low labor quality → low-income → poverty → low education investment → low education level”.

Education can not only improve personal qualities and promote intergenerational mobility, but effectively promote economic development. Schultz believed that economic development depends largely on the quality of people, rather than the abundance of natural resources or the amount of capital stock (Li, 2017). UNESCO’s study showed that educators at different levels have different levels of improving labor productivity, with undergraduate level 300%, middle and high school 108%, and elementary school 43%. Yao (2012) further subdivided the contribution rate of the human capital of middle school and high school to economic growth from 1981 to 2006 and found that the role of human capital in high school was a lot higher than that of middle and elementary schools.

Therefore, how to improve the quality of human capital of the population in poverty-stricken areas and how to realize “poverty alleviation” through education is an important theme of China’s targeted poverty alleviation. Poverty-alleviation by supporting education is a kind of poverty alleviation method, which refers to the education investment and education subsidy services for the poor people in poverty-stricken areas so that they can master the knowledge and skills of poverty alleviation, and promote the local economic development by improving the knowledge quality of the local population, and finally get rid of poverty (Xie, 2012).

2020 is the final year of China’s poverty alleviation work. Poverty-alleviation by supporting education, as an important starting point of China’s poverty-alleviation



strategy, is considered to be “the key to eradicating poverty and stabilizing poverty alleviation”, and is also a fundamental means and an important way to block the intergenerational transmission of poverty (Bao & Zhang, 2018). Therefore, by analyzing relevant research and understanding the status quo of China’s poverty-alleviation by supporting education, clarifying its progress and direction is of great significance to promoting the effective development of poverty alleviation in China. This study used the Chinese National Knowledge Infrastructure (CNKI) and the quantitative analysis software CiteSpace to organize and analyze the research in this field in recent decades. Based on this analysis, China’s existing achievements in poverty-alleviation by supporting education can better clarify the direction of future improvement and provide a reference for subsequent theoretical research and related policy formulation and implementation.

Methods

The research data in this article comes from CNKI. Set the subject to “poverty-alleviation by supporting education” and the document source to “all journals”. In order to show the research context and latest progress of China’s poverty-alleviation by supporting education, after screening and deleting conference proceedings, reports, announcements, and other low-relevance materials, a total of 2,458 articles from 1986 to 2020 were obtained.

Analysis of the Number of Articles Published in Poverty-Alleviation by Supporting Education

From the perspective of scientific research, the change in the number of articles published in a certain field can reflect the development history and mechanism of the field, the evolution process, and the future dynamic development trend. Therefore, in this study, the literature related to the poverty-alleviation by supporting education research from 1988 to 2020 that can be searched on CNKI was screened and counted.

As can be seen from **Figure 1**, the number of articles published in China’s poverty-alleviation by supporting education is roughly divided into two stages. The first stage (1988-2015) is a slow development stage, with fewer than 50 articles published each year and small changes every year. The second stage is the accelerated development stage. The number of articles published in 2016 directly rose from 47 in 2015 to 231.

This research trend is closely related to China’s poverty alleviation policies. In December 2013, in response to the bottleneck restricting the development of poverty-stricken areas, the General Office of the Central Government and the General Office of the State Council issued Document No. 25 and proposed for the first time the implementation of the “Poverty-alleviation by supporting education project”. However, the rapid increase in the number of articles published is more related to China’s 2015 policy

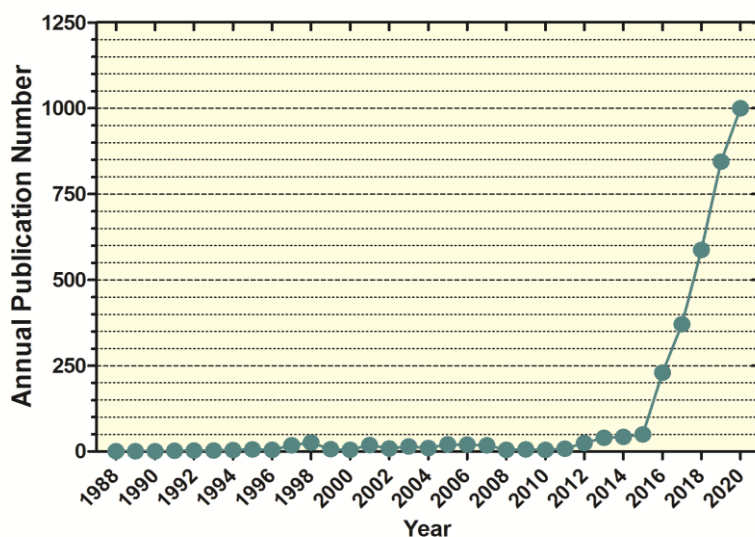


Figure 1. Annual Publication Number in Poverty-Alleviation by Supporting Education during 1988-2020.

of “Decision of the Central and State Council on Winning the Fight against Poverty”. The document clearly requires that “we must focus on strengthening education to alleviate poverty, speed up the implementation of the poverty-alleviation by supporting education project so that children of poor families can receive a fair and quality education, and block the intergenerational transmission of poverty.” In addition, 2016 China’s 13th Five-Year Plan for National Economic and Social Development (referred to as the “13th Five-Year Plan”) puts forward the goal of all poverty-stricken counties to solve the overall poverty of the region, and also promoted the research on the poverty alleviation by education.

Keyword Analysis

In research, high-frequency keywords are usually used to determine the composition of hot spots in the research field (Qi et al. 2016). Therefore, we conducted an analysis based on the CiteSpace software, and extracted the top 20 keywords with high frequency and attention for research, to further determine the hot spots of concern for researchers in the field of poverty-alleviation by supporting education in China. The results are shown in **Table 1**.

It can be seen from **Table 1** that China’s related research on poverty-alleviation by supporting education is closely related to keywords such as targeted poverty allevia-

Table 1. Frontier Keyword Highlighting Statistics of Poverty Alleviation by Supporting Education.

#	Frequency	Centrality	Keyword
1	869	0.07	Targeted poverty alleviation
2	653	0.5	Poverty alleviation by supporting education
3	285	0.09	Vocational education
4	138	0.05	Targeted poverty alleviation by education
5	116	0.03	Education
6	112	0.18	Poor households
7	106	0.14	Poverty alleviation
8	76	0.04	Countermeasure
9	59	0.03	File establishment
10	84	0.09	Intergenerational transmission of poverty
11	39	0.04	Educational information
12	38	0.05	Education equity
13	37	0.01	Rural revitalization
14	36	0.03	Colleges
15	30	0.06	Compulsory education
16	30	0.03	Vocational colleges
17	29	0.01	Country teacher
18	29	0.06	School
19	26	0.02	Internet+
20	24	0.01	Left behind children

tion, education equity, education informatization, vocational education, poor households, and left-behind children. These keywords reflect the focus, hotspot, concern, theoretical basis, and application direction of the research.

Excluding the keyword results of “poverty-alleviation by supporting education” that are directly related to the search topic, the first keywords with higher frequency and centrality are “countermeasures”, “file establishment”, “education fairness”, “rural revitalization” and “rural teachers”. Reflected in the poverty-alleviation by supporting education, researchers pay more attention to its specific measures rather than theoretical construction. In terms of the implementation of the measures, it also includes government behaviors and non-governmental behaviors of society and universities. Therefore, research on participating subjects of poverty-alleviation by supporting education is one of the focuses in this field.

Secondly, the keywords of “vocational education”, “compulsory education”, “colleges” and “higher vocational colleges” reflect the analysis of Chinese scholars on the different roles of current education categories in poverty-alleviation by supporting education. Among them, the coordinated vocational education precision poverty alleviation system of secondary vocational, higher vocational, and technical vocation is the focus of current research. Vigorously supporting vocational education is considered one of the troikas in China’s poverty-alleviation by supporting education measures (Yuan, 2013).

Finally, keywords such as “education informatization” and “Internet+” reflect the search for more efficient methods for poverty alleviation information management in the context of the times. The previous model of poverty-alleviation by supporting education largely remained at the material level such as resource development and capital investment. The main emphasis is on the role played by human, material, and financial resources, but it is impossible to judge the accuracy of the assistance target, that is, whether the assistance target really lacks material assistance, nor can it answer whether material assistance can solve the problem of intergenerational transmission of poverty (Chen, 2017).

Analysis of Research Hotspots of Poverty-Alleviation by Supporting Education in China

Through the analysis of the above keywords, we found that the research related to China’s poverty-alleviation by supporting education mainly focuses on three aspects: research on the responsibilities of participating entities in China’s poverty-alleviation by supporting education, and the direction of China’s poverty-alleviation by supporting education and methods of informatization and targeted poverty alleviation.

Research on the Responsibilities of Participating Entities in China’s Poverty-Alleviation by Supporting Education

Targeted poverty alleviation through education is a systematic undertaking, involving a wide range of interests and numerous interest groups. Facing a complicated situation, a diverse group of subjects is required to participate together. Therefore, the research on the implementation subject of poverty-alleviation by supporting education in China has become one of the hot spots of concern.

Xie (2012) started from the theory of system poverty and believed that poverty is the result of the systemic operation of many comprehensive factors, such as macro-level natural conditions, historical starting points, economic development policies, environmental and cultural qualities, and micro-level family and school education. Therefore, we not only need the government to guide the direction of poverty governance at the macro level, but also need to rely on the participation of multiple subjects to coordinate, manage and govern in order to face the multi-dimensional, diversified and dynamic poverty patterns. Xia (2020) also believed that the top-down governance model

of poverty-alleviation by supporting education is prone to rigidity, and many tasks may not truly understand its needs, so diversified forces are required to provide targeted assistance. Therefore, Dai et al. (2017) proposed that the main body of China's poverty-alleviation by supporting education should be a framework led by the government, with the participation of multiple forces such as social organizations and individuals.

Research on the Government's Responsibilities for Poverty Alleviation

As the leader of poverty-alleviation by supporting education, the government bears the responsibility to ensure the scientific formulation and effective implementation of its policies. Judging from the research status of domestic scholars, since 1994, China's first clear national poverty alleviation plan "National Eight-Seven Poverty Alleviation Plan" was proposed (Hu, 2016), through continuous enrichment and improvement of its guiding ideology, work content, and implementation Means, etc., thus forming a set of policy systems with Chinese characteristics of poverty-alleviation by supporting education (Xiang & Lin, 2018) with a full range of objects, enriched content, socialized subjects, diversified methods, and targeted methods.

In the process of implementation, through financial support and tilt, efforts have been increased to improve financial expenditure on education, and a student subsidy system from preschool to postgraduate education has been established, which effectively guarantees the smooth attendance of students from families with financial difficulties (Wu & Fan, 2020). The "Implementation Plan for Educational Poverty Alleviation in Extremely Impoverished Areas (2018-2020)" states that preschool education shall establish and implement corresponding funding policies in accordance with the principle of "local first, government subsidies"; compulsory education implements the "two exemptions and one subsidy" policy, Secondary vocational education implements tuition exemption and national scholarship policy, high school exempts students from financial difficulties from tuition and fees and implements national scholarship policy; higher education and postgraduate education implement "scholarships, bursaries, loans, work-study, subsidies, exemptions" and "green channels for admission" Such "multi-mixed" funding methods must ensure that students from poverty-stricken families in the "three districts and three states" filed and registered to get the student funding policy (Ministry of Education of the People's Republic of China, 2018).

In addition, the construction of educational infrastructure based on financial support is also one of the measures taken by the government to carry out poverty-alleviation by supporting education. In particular, improve the basic conditions for running schools and teaching sites in remote areas, and improve the teaching rooms, student dormitories, and auxiliary facilities such as laboratories, playgrounds, canteens, etc. in schools lacking compulsory education in rural areas. As far as possible, broadband networks should cover all elementary and middle schools and teaching points, so that the construction of "class-to-class access" covers all classes, so that students in poor areas can get high-quality educational resources (Yang, 2017).

Facing the problem of the shortage of teachers in poverty-stricken areas, the government has launched the “Special Position Program” and “Free Normal School Student” training measures aimed at supplementing the number of teachers in rural poverty-stricken areas. By increasing teacher salaries, encouraging outstanding teachers in the eastern region to support teaching in the central and western regions, organizing various forms of teaching and research activities between central schools and supporting schools in the region, strengthening teachers’ professional capabilities, and improving the quality of teaching in poor areas (Ministry of Education, Ministry of Finance, Ministry of Personnel, etc., 2006).

Research on the Duties of Poverty Alleviation in Universities

Since universities are the centers of knowledge gathering and talent training, they must assume the responsibility of developing new technologies, cultivating and delivering outstanding talents, and providing training opportunities and platforms for poor areas. Only in this way can it effectively play its role in serving society in the process of poverty-alleviation by supporting education (Xiong, 2014).

Shi (2019) believes that when participating in poverty-alleviation by supporting education, colleges and universities should adopt strategies such as determining precise goals, developing drip irrigation methods, and improving the assessment mechanism to better assist in poverty alleviation in extremely poor areas.

Liu et al. (2019) took universities in Fujian Province as an example and proposed a four-dimensional optimization path of poverty-alleviation by supporting education in colleges and universities in the context of major poverty alleviation. This includes: optimizing the training and evaluation system of colleges and universities; enhancing the motivation of assistance; optimizing the linkage between colleges and other social forces to form a combined assistance force; optimizing the poverty-alleviation by supporting education platform of universities to realize the docking of knowledge and information between schools and villages; optimize the government’s guarantee system for the government’s poverty-alleviation by supporting education to ensure the stable implementation of funding policies.

Research on the Responsibilities of Social Forces for Poverty Alleviation

As an integral part of society, social forces can make up for the lack of government poverty-alleviation by supporting education to a certain extent and inject vitality into targeted poverty alleviation through education.

School-enterprise cooperation is also one of the important ways for society to promote poverty-alleviation by supporting education. Li et al. (2017) viewed enterprises as an important tool for poverty alleviation from the perspective of the mechanism design and model innovation of enterprises’ participation in poverty alleviation. Generally speaking, excellent managers or technologists of enterprises come to the school to teach, promote mutual employment between the school and the enterprise; the engineers of the enterprise walk into the school to teach the students, and the school teachers train the

employees of the enterprise to improve the quality of the employees. Through mutual employment between the school and the enterprise, the process of students gaining skills training in teaching is not only a process of improving professional skills but also a process of producing products and creating value for the enterprise; this solves the contradiction of the shortage of training materials. It also trains students' excellent skills, so as to truly realize income-generating in education and education in income-generating.

Liu (2018) took "Project Hope"¹ as an example. According to the statistics, the project has raised more than 5.3 billion CNY in donations, built 15,444 Hope Elementary Schools, more than 14,000 Hope Libraries, and trained more than 52,000 rural elementary school teachers. More than 3 million poor students in rural areas have been subsidized. Therefore, Liu believed that social fund organizations represented by the "Project Hope" have played an important role in promoting poverty alleviation by supporting education in China.

At the same time, some scholars pointed out that social organizations still need to further improve their poverty-alleviation by supporting education model due to issues such as a single source of participation funds, lax fund management, and lack of professional managers (Li & Xie, 2019).

It can be seen from the above research that the main body of China's poverty-alleviation by supporting education is diversified, forming a framework that is led by the government and participated by multiple forces such as social organizations and individuals. Under this framework, all subjects work closely together, actively play the role of each subject, and promote the development of poverty-alleviation by supporting education from different levels.

Research on the Key Directions of the Poverty-Alleviation by Supporting Education in China

According to the relationship between the educational level of human capital and economic growth, vocational education is considered to be the most direct, quick, and effective way to help the poor. Therefore, in the direction of poverty-alleviation by supporting education, a Chinese-style poverty-alleviation by supporting education with vocational education as the focus has been formed.

Research on the Significance of the Poverty-Alleviation by Vocational Education

Starting from the relationship between human resources and economic development, Yao (2012) found that human capital at the high school level has the highest contribution to economic growth, and the permanent labor force in rural areas in China is also in urgent need of middle school education (China Statistics Press, 2019). Yao & Dou (2018) conducted a survey of 13,488 left-behind students in 197 rural middle schools in Henan Province and found that these students dropped out more due to individual characteristics. When their academic performance and self-confidence are low, students

with the low family financial background are more likely to choose to drop out. Because under the influence of the free environment formed under the “Migrant Working Economy”, these students will consider the potential cost of completing their studies, and students with the low socioeconomic background will enter schools with low teaching quality and poor school atmosphere, all of these will further deepen their dropout mood. Therefore, in addition to the “Compulsory Education Project” implemented at the elementary level to ensure the basis of nine-year compulsory education (Wang et al., 2019), it is believed that vocational education in middle and high schools should become the focus of poverty-alleviation by supporting education.

From the perspective of the overall strategy of poverty-alleviation by supporting education, vocational education, as an important starting point for targeted poverty alleviation and intellectual improvement, is of great significance in the national strategy of targeted poverty alleviation and decisive battle against poverty.

Liao et al. (2020) believe that vocational education has become the mainstay of absorbing rural school-age youths to receive skills education. In addition, Tang et al. (2018) proposed that vocational education also plays an important role in the training of farmers’ vocational skills. They believe that by catering to different poverty-stricken areas and different poor people, through vocational theory education, skilled personnel training, professional technical training, industrial paired assistance, etc., they will combine education and targeted poverty alleviation. Realize the improvement of the professional quality and ability of personnel in poor areas, promote their independent employment and entrepreneurship, and achieve economic development. Ultimately, it will achieve the goal of improving the professional quality of the poor, enhancing the professional abilities of disadvantaged groups, and driving and advancing the industrial development of underdeveloped regions in order to achieve the task of poverty alleviation.

Research on the Model of Poverty-Alleviation by Vocation Education

At present, the vocational education aid model in China includes tuition policy for students in extremely poor counties, national scholarship and inspirational scholarship policy, national scholarship policy, rain dew program (for registered middle-aged farmers, demobilized soldiers from poor households, Village cadres and wealthy backbones in key villages for poverty alleviation and development work, children from registered poor families participating in secondary vocational education and higher vocational education), Omni-Ocean Education Program (new students from registered poor families), and other related poverty-alleviation by vocational education Projects (Golden Autumn Aid Project, National Tobacco Educational Aid Project, Dream Aid Project), etc. Through various educational aid programs, to ensure that every impoverished student will not drop out of school due to poverty, and ensure the smooth progress of the poverty-alleviation by vocational education (Liu, 2016).

In addition, vocational education transforms the labor force in poor areas into human capital through the input of technical knowledge, practical materials, and other

elements for labor in poor areas, thereby realizing the growth of human capital in poor areas. Therefore, it is necessary to speed up the establishment of a system of secondary vocational schools with Chinese-style as technology centers, entrepreneurial centers, market information centers, and school farms. Focus on the implementation of professional training courses such as planting-breeding-processing-selling, and use localized human capital to build a team of relevant agricultural vocational and technical teachers (Hu, 2017).

Research on Educational Informationization and Targeted Poverty Alleviation

In the process of poverty-alleviation by supporting education, how to use information technology to solve the problem of talent training and lack of teachers has been concerned for a long time, and it is also one of the key areas of China's information-driven targeted poverty alleviation by supporting education.

Hu (2017) believed that the deep integration of the Internet and poverty-alleviation by supporting education is conducive to accurately identifying poor students and implementing accurate training for them, and based on the development of the future and the creation of new majors. Yu & Xie (2017) also believed that the application of the Internet can stimulate the internal motivation of targeted poverty alleviation in education, break through the constraints of space and time, realize real-time interaction between the subject and object of education, and create wealth for more scholars, excellent teachers, and wealth creators for different professional knowledge backgrounds. Leaders and volunteers participate in the process of poverty-alleviation by supporting education. This will help broaden the content dimension of targeted poverty alleviation through education. Therefore, in the process of targeted poverty alleviation by education in China, informatization has played an extremely important supporting role.

Use Information Technology to Implement Talent Training

1. *Realize classroom resource sharing between urban and rural areas and districts through distance education.*

Zeng (2016) believed that the inability to fully open the curriculum, the low professional level of teachers, and children's moral, academic, safety and psychological problems have always been the shackles of the development of teaching sites in poverty-stricken areas, and also the constraints of the balanced development of China's compulsory education.

In order to achieve the goal of fully opening the national curriculum, high-quality curriculum resources will be sent to weak schools. Wang (2018) proposed that the form of MOOC and micro-class breaks through the traditional classroom teaching model. They filmed the lecture resources of excellent teachers into videos and used online education platforms such as cloud education and distance education to build a high-quality teaching resource library around the real user relationship between teachers,

students, and parents. This meets the needs of students in poverty-stricken areas who need flexible learning time and frequency due to insufficient learning ability and limited learning time.

Lu et al. (2020) took the experience of poverty-alleviation by supporting education in Nanchang City as an example. The city launched the rural online synchronous classroom project and made full use of information technology to realize the remote two-way interaction of speaking and listening. This also solves the plight of teachers in poverty-stricken areas that “cannot be dispatched, retained, and taught poorly”. The overall teaching quality in poverty-stricken areas has been improved, and the constraints on the balanced development of compulsory education have been supplemented.

2. Effectively apply information technology to teaching management and scientific research.

The use of online training platforms to improve teachers’ professional quality is also another application in the talent training process of poverty alleviation education (Jia et al., 2020). For example, Chen (2020) stated that it is necessary to make full use of modern distance education resources to improve the quality of teachers, and form a continuous education system for teachers with the integration of “human net, earth net, and sky net”. With “Teacher Training Platform” and “Teacher Workshop” as the main training bases, a teacher training model combining online and offline is implemented; at the same time, it can reduce training costs, reduce the contradiction between work and study, and ease the pressure of teacher training.

Improve the Efficiency of Poverty-Alleviation by Supporting Education with the Help of Information Technology

In the overall situation of national poverty alleviation and development, the digital processing of poor population information through registration and the formation of a national precision poverty alleviation big data system is an important foundation for achieving precision poverty alleviation (Zhang, 2015). Therefore, Jia & Zhang (2020) considered that in the process of poverty-alleviation by supporting education, various measures should be refined and managed through education information methods and information platforms such as “Internet +”, artificial intelligence, cloud computing, and big data. It has realized the “precise” identification, decision-making, management, and evaluation of poverty alleviation, and the targeted allocation of all resources, so as to maximize the effectiveness of poverty-alleviation by supporting education.

Ren et al. (2017) took Shangrao City, Jiangxi Province as an example. Based on its own characteristics, the city developed a new poverty alleviation solution of “Internet + Education Targeted Poverty Alleviation”. Using the county and school level database and management platform under construction within the city area, a detailed investigation was conducted on the flow of left-behind children who did not enter school among primary school graduates in various districts and counties of Shangrao City in 2016, not only accurately tracked the development status of each student, but

also analyzed the reasons in-depth for the various flows of poor students. This has pointed out the direction for formulating the targeted poverty-alleviation by supporting education projects, exerting the joint efforts of various departments in poverty alleviation, providing accurate data support for scientific decision-making, and making a good pavement and prioritized demonstration for further education and targeted poverty alleviation. Meanwhile, schools can use information processing methods to comprehensively analyze and match the characteristics of poverty information and poverty alleviation resources and use poverty alleviation platforms to accurately connect poor areas, poor individuals, and resource supply, which is to achieve accurate resource allocation.

It can be seen from the above research that we should deepen the integration of information in education, use information technology to implement talent training, and improve the efficiency of poverty alleviation. From this perspective, promote the progress of poverty alleviation, enhance the effect of poverty alleviation, and let poverty-alleviation by supporting education drive into the fast lane, becoming a powerful lever and inevitable choice for targeted poverty alleviation by education.

Research on the Achievements and Problems of Poverty-Alleviation by Supporting Education in China

In addition to the construction measures of poverty-alleviation by supporting education, its construction effectiveness has also become a concern. Research the implementation results of China's poverty-alleviation by supporting education through investigations, experiments, and other educational research methods. It is believed that the current poverty-alleviation by supporting education in China has achieved certain results from system construction to education infrastructure and resource construction, and talent training in poverty-stricken areas, but there are also certain shortcomings.

The Achievements of Poverty-Alleviation by Supporting Education

Ma (2020) believed that since the founding of the People's Republic of China, poverty-alleviation by supporting education has been a core element of China's overall poverty alleviation and development strategy. After decades of construction, the poverty-alleviation by supporting education in China has formed a policy system with unique Chinese characteristics based on the flexible configuration of policy tools. Under this system, China's poverty-alleviation by supporting education work has achieved certain results.

Greatly Improved the Teaching Environment and Facilities in Poor Areas

Since 2013, China has begun to comprehensively improve the basic conditions for running schools in poor areas of compulsory education across the country and has carried

out and implemented a series of major projects such as the renovation of rural middle schools, the construction of rural boarding schools, and the full coverage of digital education resources in teaching sites. Zhang (2019) pointed out in his research that as of April 2019, China had built, renovated and expanded 221 million square meters of school buildings nationwide, and purchased 99.9 billion CNY worth of facilities and equipment. To August 2019, the Internet access rate of primary and secondary schools in all regions of China has reached 97.9%, and there are 3.48 million ordinary classrooms equipped with multimedia teaching equipment. Approximately 93.6% of schools have multimedia classrooms, and 74.2% of them have achieved full coverage of multimedia teaching equipment. The conditions for running compulsory education schools in poverty-stricken areas across the country have been significantly improved (Science and Technology Department of the Ministry of Education of the People's Republic of China, 2019).

Taking local provinces as an example, the Education and Sports Bureau of Liangshan Yi Autonomous Prefecture in Sichuan Province conducted statistics on education from 2013 to 2018 and found that Liangshan Yi Autonomous Prefecture in Sichuan Province arranged a total of 60.462 billion CNY in national financial education funds, and a total of 8.63 billion CNY was invested in improving school conditions. They have successively implemented major projects such as “Comprehensive Improvement of Weakness”, “Three-Year Action Plan for Preschool Education”, “Poverty-alleviation by Supporting Education Improvement Project in Yi Districts of Daliangshan and Xiaoliangshan” and “Ten Year Action Plan”; prefecture-level financial investment of 2 billion CNY for implementation the projects of “One Village, One Kindergarten” and “One Town, One Kindergarten”, and have built a total of 348 township kindergartens. The prefecture has completely eliminated Class D dilapidated buildings in elementary and middle schools, and the gap in school conditions between urban and rural areas and between schools has further narrowed (Education and Sports Bureau of Liangshan Yi Autonomous Prefecture, Sichuan Province, 2019).

Significantly Improved the Soft Power of Teaching in Poor Areas

Fu et al. (2019) conducted a field survey of more than 180 rural primary and secondary schools in 18 key counties (districts) for poverty alleviation and development in 6 central and western provinces. The professionalism of the team has improved, and the soft power of running schools in poor areas has gradually improved. In 2019, China's digital education public service platform was connected to 73 local platforms at all levels, and the number of online learning spaces for teachers and students increased to 79 million. Through the “One Teacher, One Excellent Class, One Class, One Excellent Teacher” activity, 1 million lessons were released, and 800 national high-quality online open courses were identified, and the ability to provide educational resources and services was continuously enhanced (Ministry of Education of the People's Republic of China, 2019). Through the “Full Coverage of Digital Education Resources in Rural Primary and Secondary Schools” project, a total of 1,212 hours of music and fine arts curricu-

lum resources have been developed, effectively solving the problem of over 4 million students in remote and impoverished areas due to lack of teachers (Ministry of Education of the People's Republic of China, 2019).

At the same time, in terms of the development of the teaching team, Yao & Cao (2020) found through research that 28 provinces attract 41,000 college graduates each year to carry out education in rural areas through tuition exemption, loans, and tuition compensation. This has significantly increased the number of rural teachers; at the same time, the "National Training Program" has trained a total of 41,000 rural teachers and campus leaders, effectively improving the quality of rural teachers.

Improve the Overall Quality of the Population in Poor Areas

Through the construction of a "full coverage" funding system for students from pre-school education to higher education with financial difficulties, the number of people in poverty-stricken areas who cannot go to school due to economic problems has been continuously reduced. According to statistics from the Ministry of Education, in 2019, a total of 105,907,900 students in pre-school education, compulsory education, secondary vocational schools, high schools, and colleges and universities were funded nationwide (Hu, 2020). As of the end of 2019, there were 282 million students in all levels of academic education across the country, an increase of 6,606,200 or 2.40% over the previous year; the gross enrollment rate of preschool education reached 83.4%, and the consolidation rate of nine-year compulsory education was 94.8%. The gross enrollment rate of high school is 89.5% (Ministry of Education of the People's Republic of China, 2020). In the higher education stage, as of 2019, a total of 370,000 rural and poor area students have obtained high-quality higher education resources through the targeted enrollment plan (Li & Wu, 2019).

Increased the Income of People in Poor Areas

Peng's (2019) empirical research based on data from all provinces in China showed that education investment has a stable and positive impact on farmers' income, and the effect of increasing income in poor areas is higher than in other areas. Take the "Three Districts and Three Prefectures"² as an example, between 2002 and 2016, for every 1% increase in education funding, rural per capita net income increased by 1.83%, while in higher-income areas during the same period, education funding increased by 1% with revenue only increased by 0.24%. From the perspective of the effectiveness of each region, Yang (2020) and others studied the balanced data of 13 prefecture-level cities in Jiangsu Province from 2000 to 2016 and found that Jiangsu Province's educational investment has achieved remarkable results in poverty alleviation. According to the household survey data of 350 poor households in Anyi County, Jiangxi Province, Yang et al. (2020) found that education level has a greater impact on poverty alleviation of rural poor households after analyzing the binary logistic regression model.

Insufficiency of Poverty-Alleviation by Supporting Education at This Stage

While achievements in the poverty-alleviation by supporting education work have been achieved, the existing problems have also begun to be exposed. Fu (2019) pointed out in his research that the precise identification mechanism of poverty-alleviation by supporting education at this stage is relatively lagging, insufficient attention is paid to the overall development of poor students and endogenous incentives, and the support measures for poor students are unified. Ma (2020) pointed out from a policy perspective that the current attention distribution of the poverty-alleviation by supporting education policy is obviously unbalanced, the target group identification has hidden dangers of centralized and static, the configuration of policy tools is low, coordination is weak, the connection is broken, and the structure of poverty alleviation methods is also unreasonable. Song (2019) found that poverty-alleviation by supporting education in deeply impoverished areas face three main dilemmas: (i) the mechanism of poverty-alleviation by supporting education is not sound, and the function of “blood-making” for society is weak; (ii) the allocation of educational resources is unbalanced, and the quality of education is not guaranteed; (iii) the endogenous energy is insufficient, and the concept of education for poverty alleviation is still weak.

Discussion and Conclusions

Poverty-alleviation by supporting education is considered to be the fundamental need to achieve education equity. It is not only to develop education and help the poor alleviate poverty but also to complete the deployment of justice and educational resources in poverty-stricken areas, the logical relationship between justice and justice, the need to ensure the fairness of education (Feng, 2019); it is also a practical need to accelerate economic construction and an inevitable need to promote social development (Mu, 2019). 2020 is the decisive year of the Chinese government’s poverty alleviation. Poverty-alleviation by supporting education is an important starting point for poverty alleviation and an important position for China’s poverty alleviation work. From the analysis of this article, it can be seen that at this stage poverty-alleviation by supporting education is not only the focus of the national strategy of China but also the focus of academic research. Many scholars have carried out research on the policies, measures, effects, and deficiencies of poverty-alleviation by supporting education, and have achieved certain results.

First, the number of articles published is considerable. In terms of the time distribution of research, the research on China’s poverty-alleviation by supporting education has gradually increased in recent years and has become one of the hot research issues. It is foreseeable that with the in-depth advancement of China’s targeted poverty alleviation work, the research literature on poverty alleviation by supporting education will continue to show an increasing trend in the next few years.

Second, the research perspective is diversified. The research on poverty-alleviation by supporting education is not only limited to education and social aspects, but considers it from the multidisciplinary perspective of economics, sociology, pedagogy, anthropology, and geography. This provides support for the realization of an ideal poverty alleviation framework that integrates the main body, content, and goals of poverty alleviation (Yuan & Zhang, 2018).

Third, research topics are rich. Judging from the existing research, the research on poverty-alleviation by supporting education covers pre-school education, basic education, higher education, vocational education, and special education. The research includes not only its related meanings, value, and other theoretical aspects but also its implementation, effects, and other practical aspects.

Of course, we have also noticed that there are still deficiencies in current research, and the discussion of these deficiencies is to provide directions for our future research.

First, the research direction places too much emphasis on vocational education and underestimates basic education research. Judging from the existing research results, compared with vocational education, there are less researches on poverty-alleviation by compulsory education, and the research form is scarce. However, as middle and high schools are an important period for human capital accumulation, many students still choose to drop out. Therefore, micro-level topics such as the reasons for students dropping out, and the current poverty alleviation effects still need to be further explored.

Second, the research method emphasizes qualitative research too much, despises empirical research, puts too much emphasis on description, and despises the practice. The current research is mainly based on qualitative research, and most of the researches are conducted in theoretical speculative or descriptive methods, and there is a lack of scientific empirical research. At the same time, there are fewer specific case studies. Therefore, future research needs to use a variety of research methods, focusing on the combination of qualitative research and empirical research; modern information technologies and methods such as big data, cloud computing, and artificial intelligence should be actively introduced to strengthen case studies.

Third, the research content emphasizes the form too much and underestimates the endogenous research. In the existing studies, researchers have focused more on the poor as objects, rather than as a unity of subject and object. Research has focused on the leadership and assistance of the government, social forces, and universities while ignoring the endogenous dynamics of the poor. Therefore, in the future, the research on the initiative and demand of the poor should be strengthened.

Fourth, from the perspective of research, there is a lack of systematic and in-depth international comparative research. Poverty-alleviation by education has always been the focus of international organizations and institutions to promote global anti-poverty, and many countries around the world have carried out useful explorations (Tang et al., 2019). A comparative study of the experiences of multiple countries from an international perspective is helpful to build or improve the educational standpoint and practice framework of targeted poverty alleviation based on the effective interna-

tional experience, and promote the effective development of poverty-alleviation by supporting education. Therefore, in the follow-up research, the research horizon should be broadened, based on international experience, and in-depth international comparative research in mutual learning and integration.

Education is always one of the most effective ways to eliminate poverty (Xu, 2016). In-depth reflection on the current poverty-alleviation by supporting education in China from the perspective of education attributes, correcting the phenomena that are not in line with education attributes, and improving the ability and endogenous motivation of the poor through education, so as to achieve poverty eradication and promote economic development. This is an important area discussed by Chinese scholars, especially educational scholars. Therefore, in follow-up research, more attention should be paid to the types of poverty-alleviation by supporting education, based on international experience, and comprehensively using multiple research methods to achieve multidisciplinary and multi-perspective exploratory research.

Notes

1. *The “Project Hope” is a public welfare undertaking initiated by the Communist Youth League Central Committee and the China Youth Development Foundation in 1989 for helping out-of-school children in impoverished areas. Its purpose is to build Hope Elementary Schools, subsidize out-of-school children in poor areas to return to school, and improve the conditions for running schools in rural areas.*
2. *“Three Districts and Three States” refers to extremely poor areas at the national level in China. They are the hardest “bones” for China to build a well-off society in an all-round way. The “three districts” refer to the Tibet Autonomous Region, the Tibetan areas of Qinghai, Sichuan, Gansu, and Yunnan, and the Hotan, Aksu, Kashgar, and Kizilsu Kirgiz Autonomous Prefectures in southern Xinjiang; the “three prefectures” refer to Sichuan Liangshan Prefecture, Nujiang Prefecture in Yunnan, Linxia Prefecture in Gansu”.*

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