Statistical Analysis of Poverty Alleviation Demand in Innovation and Entrepreneurship Education and Teaching Design

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Abstract. Innovative entrepreneurship education is an effective means to achieve precise poverty alleviation for the rural poor. This paper chooses the theme of poverty alleviation through innovation and entrepreneurship, discusses the role of poverty alleviation demand statistics in innovation and entrepreneurship teaching, and analyses the methods, ideas and problems of poverty alleviation demand statistics. On the basis of in-depth investigation, the necessity of carrying out innovative entrepreneurship education is analyzed from the point of view of the needs of poor people, the basic steps of poverty alleviation demand investigation and statistics are put forward, the objects of innovative entrepreneurship education based on poverty alleviation demand are defined, several poverty alleviation programs based on demand statistics are designed, and the support is discussed. Poverty demand statistics is helpful to innovative entrepreneurship teaching in Vocational colleges, in order to think about the development of innovative entrepreneurship teaching in the era of big data and promote the realization of precise poverty alleviation in China.

Introduction

Innovation and entrepreneurship education is essentially a practical education, which aims at cultivating talents with the basic qualities of entrepreneurship and pioneering personality. It is not only necessary to cultivate students' entrepreneurial awareness, innovative spirit and entrepreneurial ability, but also to face the whole society, aiming at those entrepreneurs who intend to start or have already began, and succeed in starting their own businesses, to carry out innovative thinking training and entrepreneurship education in stages and levels [1,2]. Innovation and entrepreneurship teaching has become a research topic and major setting direction that many vocational colleges attach great importance to.

Every effort to reduce the number of people living in poverty and make people live a good life has been the direction of governments all over the world [3-6]. In 2015, the State Council promulgated the Decision of the Central Committee of the Communist Party of China and the State Council on Winning the Strong Fight against Poverty. The goal of it is to ensure that those groups who are living below the poverty line in China will remove the poverty hat by 2020. The most important thing to realize the poverty alleviation plan is to do a good job of investigation and statistics and achieve precise target of poverty alleviation. Clear objects and accurate requirements become the focus of statistics.

Poverty alleviation needs' setting and innovative entrepreneurship teaching are two different but interrelated fields. Through education, the poor generation should be lifted out of poverty, and the new generation should strive hard to get rid of the poor group.

In education, the establishment of any direction and mode of education requires market research. Statistical analysis, on the one hand, determines the direction of students' development based on statistical analysis; on the other hand, trains students to become the best high-skilled talents in the contemporary era according to demand statistics. The paper mainly discusses the help of poverty alleviation demand statistics to innovative entrepreneurship teaching in vocational colleges. Through poverty alleviation demand statistics, the development of innovative entrepreneurship teaching and the realization of precise poverty alleviation are combined together in the era of big data [7].
The Role of Poverty Alleviation Demand Statistics in Innovation and Entrepreneurship Teaching

Education is an activity that changes people's destiny. The value of education lies in excavating and guiding people's value in a positive direction. In poverty alleviation activities, education is an important way and means [8,9].

According to the four steps of demand analysis (collection, analysis, derivation, and transformation) and the practical education direction of innovative entrepreneurship teaching (consciousness cultivation, ability enhancement, environmental awareness and practice simulation), it can be seen that the indispensable links include: market survey, data collection and practice transformation, and finally the project landing. For example, the teaching of innovation and entrepreneurship requires students to learn a lot of data collection, especially the most popular news, national current affairs, and according to the information to determine the direction, make innovative entrepreneurship projects, fight for their future, and also provide innovative entrepreneurship project practice for the country [10,11].

Innovation and entrepreneurship teaching is a kind of practical teaching, which needs careful design to enable students of vocational skill schools to rely on their own strength and locate accurately. Similarly, a reasonable curriculum design can provide learners from all walks of life with the guidance and help they need.

Poverty alleviation is a key project dealing with national development, which collects the needs of poverty alleviation and analyzes the difficulties in poverty alleviation to avoid wasting of resources, and to determine the teaching direction of innovation and entrepreneurship [12,13]. The students of vocational colleges are encouraged to undergo fundamental changes to improve the courage and ability of innovative entrepreneurship projects [14,15].

The statistics of poverty alleviation requirements is the cornerstone for innovative entrepreneurship teaching to find the direction and confirm the goal. It is clear that the innovative entrepreneurship teaching is definitely the best way to train students, and help them, the young generation from poor mountainous areas out of poverty.

The rapid development of innovation and entrepreneurship mainly depends on the development of e-commerce and big data [16]. The rapidness and convenience of information makes innovation and entrepreneurship more possible, which brings a change of thinking direction. Of course, innovation and entrepreneurship cannot stop in fantasy, which is also a difficult point in the education. The teaching of thinking is not a fixed course. It is possible to complete the project of innovation and entrepreneurship only by using big data to get more information and perfecting and concretizing the thinking.

Poverty alleviation is made to protect the poor and laborious people. Many students in vocational colleges come from such poor and laborious families. The teaching of innovation and entrepreneurship in vocational colleges should understand and collect poverty alleviation needs from the source and understand and analyze them so that the idea of innovation and entrepreneurship can be carried out according to the statistics of needs. It will not only help the poor people solve their difficulties, but also help the poor people from mountainous areas to embark on the road of becoming rich.

Poverty Alleviation Demand Statistics and Its Problems

Current Situation of Poverty Alleviation Demand

At present, our country has got achievements in precise poverty alleviation. In terms of poverty alleviation demand statistics, it has also made a clear classification and applied big data to complete statistics and analysis. But China is very large and poor areas are scattered. It is not enough to rely solely on the state's policy of poverty alleviation. It is necessary to use the strength of all parties to give realistic help to those needy people.

In order to understand the poverty alleviation needs of the people living in poverty-stricken areas, we, the research group went to Maotang village of Chuanyan village in Dejiang tea-frying area to
conduct an in-depth investigation on local farmers. A questionnaire with 10 questions is designed to investigate the needs of poverty alleviation for the purpose of docking the teaching with innovation and entrepreneurship. The following is the answer statistics of several typical questions in the questionnaire.

One of the problems is "the most urgent need for poverty alleviation". Among the six options, there were separately 25, 20, 25, 10, 10 and 10 percent of people choose "medical treatment", "pension", "education", "drinking water", "dangerous housing" and "disability", shown in Fig. 1.

![Figure 1. The Most Urgent Needs for Poverty Alleviation.](image1)

For the answer to the question "whether to consider the education of innovation and entrepreneurship knowledge", "accept" and "don't accept" were 18% and 16% respectively. The answer to "try" accounted for 43% and to "completely do not understand, undetermined" accounted for 23%, as shown in Fig. 2.

![Figure 2. How about Getting Innovation and Entrepreneurship Education.](image2)

Figure 3 shows "if you have innovation and entrepreneurship education, what do you want to learn"? In this multi choice answering, the percentage of the four options of "innovative thinking", "entrepreneurial theory", "Internet plus technology" and "all want to learn" refers to 10, 15, 67, 75 respectively.
When answering the multiple questions of "What kind of innovation and entrepreneurship support do you hope the poverty alleviation teams provide", it can be seen from Fig. 4 that 86% of the people choose "Creative and entrepreneurship training", 82% for "Communication and coordination with poor communities", 86% of them think that they should "contact experts and technical extension personnel to do technical training", while 78% of the respondents proposed to establish incubation bases for innovation and entrepreneurship and provide information consultation services.

When they first saw the curriculum model of innovation and entrepreneurship in the questionnaire, many respondents said they did not understand very well, but showed strong interest when asked whether they would like to participate. In the case of a number of specific options given in the questionnaire, many people expressed their willingness to choose what they want to learn. This reflects the need for innovation and entrepreneurship education and training, and proves that poverty alleviation needs will in turn promote the development of innovation and entrepreneurship teaching. The relationship between the two is complementary and virtuous circle.

It is proved that for the people at the bottom class, appropriate assistance is needed, which possibly not only in the form of money and goods, but also innovation and entrepreneurship education to help them to get ability of self-reliance and be able to overcome difficulties.
Problems in Poverty Alleviation Demand Statistics

The Backward Areas have not been Trained in Data Statistics and Their Thinking is Outdated. In the context of the times, although the current criteria for meeting the targets of poverty alleviation are based on different regions, different environments, accurate identification, field visits, step-by-step household surveys, and data collection. However, the demand statistics of the current poverty alleviation target only include basic needs, but there are more requirements and expectations in the poverty alleviation plan. Because of the lack of training on data statistics in backward areas, the old thinking has greatly affected the integrity of projects in poverty alleviation demand statistics. For example, in Tangke's concerted efforts to promote information into the villages and households, we can see that the goal of precise poverty alleviation is not only to meet the food and clothing problems of the poor people, but also to enable the poor people to achieve long-term and effective development through industries, employment, entrepreneurship, asset returns and so on, to really off their hats. Therefore, effective development does not exist in the poverty alleviation needs of the poor people, so it greatly increases the difficulties of poverty alleviation.

Statistical means and technology are relatively backward. At present, the rural construction is not perfect, especially in the aspect of data statistics, which still stays in the stage of population transmission. Mobile phones and online shopping are used a lot, but only in games and shopping. Their own technical information has not developed and there is no corresponding training and learning, so it naturally increases the difficulty of data collection and hinders poor people to transform themselves’ thinking into the sense of security, belonging, respect and even self-realization of innovation and entrepreneurship, self-enrichment thinking.

The Current Situation and Existing Problems of Innovation and Entrepreneurship Teaching

Analyzing the Current Situation of Innovation and Entrepreneurship Education from the Poor Population's Demand

Poor people from their own point of view are usually willing to undergraduate innovation and entrepreneurship education, some of them believe that only innovation and entrepreneurship can change the fate, and some hope that children learn innovation and entrepreneurship. Of course, more is due to the increasing demand of the poor, whose demand for poverty alleviation is also increasing. As mentioned above, the implementation plan of precise poverty alleviation is more and more comprehensive. It has become a point-to-point, household-to-household poverty alleviation. The statistics of poverty alleviation needs to be trained in innovation and entrepreneurship, because the poor need not only short-term help, but also long-term self-reliant ones. There is a saying that gives a man a fish and you feed him for a day. Teach him how to fish and you feed him for a lifetime. Therefore, in the teaching of innovation and entrepreneurship, the link between teaching and poverty alleviation is not only the statistics of basic needs, but the training of innovation and entrepreneurship teaching considering the current situation.

Analysis of Innovation and Entrepreneurship Education from the Poor Population's Demand

In the statistics of poverty alleviation requirements, there are a lot of data that really need to be collected, not only in water, electricity, housing, disease and other aspects of life, but also in industry, employment, entrepreneurship and asset income. In principle, the more complete the demand statistics, the better, but in order to fundamentally change their poverty situation, we need to consider the needs or aspirations of poverty alleviation, including entrepreneurship. But this kind of statistics is also problematic, because the poor people themselves do not have high expectations of life and poor attitudes and concepts of learning, so they may not have thought of the problem of "entrepreneurship", and the original data of demand statistics may not contain entrepreneurship needs. At this time, we need to guide them to start thinking about entrepreneurship. At the same time, according to their lack of understanding and experience of entrepreneurship, we need to train and educate them and guide them out of poverty.
Innovation and Entrepreneurship Teaching Design based on Poverty Alleviation Demand Statistics

There is a complementary relationship between poverty alleviation demand statistics and innovative entrepreneurship teaching. On the one hand, poverty alleviation needs the participation of innovative entrepreneurship education. On the other hand, innovative entrepreneurship education also needs to find its own way in teaching to help poor people get rich in employment and entrepreneurship. Through real and perfect data, the demand for poverty alleviation is counted. On this basis, the education and curriculum design of innovation and entrepreneurship are carried out.

Innovation and entrepreneurship education based on poverty alleviation demands has two objectives: one is the young students in school, the other is the poor people who have entrepreneurship needs.

The Method of Poverty Alleviation Demand Statistics

Innovative entrepreneurship education based on poverty alleviation needs is set up by the supporting of data. The formulation of poverty alleviation programs is accomplished on the base of demand statistics. The comprehensiveness and rationality of statistical results directly affect the implementation of poverty alleviation policies.

This paper puts forward three basic steps of poverty alleviation demand survey and statistics.

**Effective Communication.** It is important to go deep into the poor and communicate with them effectively. This is part of the education and teaching of innovation and entrepreneurship, and also the first step of great importance. Our courses are not necessarily adapted to all people from different regions and different groups. But good communication can help curriculum designers get accurate figures and information, and provide a basis for the formulation of poverty alleviation programs.

**Software Analysis.** Designing software is a significant job, which is aiming at conducting analysis and statistics of demand survey, categorizing and summarizing various needs, facilitating the curriculum design, and reducing waste of resources. In today's mobile phone popularity, we can design various online questionnaires, coupled with face-to-face communication, to analyze the results of the survey.

**Design of Curriculum System and Content.** According to the results of the survey and statistics, the professionals make an analysis and formulate innovative entrepreneurship courses that are in line with local characteristics. While solving the problems faced by the poor, they constantly improve the construction of the curriculum system [17].

Definition of Training Objects for Poverty Alleviation and Entrepreneurship

**Start with the Education of the Younger Generation.** All people, including the poor, have a hope of a promising future, and parents expect their children to grow up to get a bright tomorrow. It is gratifying that in recent years, the number of rural students in key colleges and universities in poor areas has been increasing steadily, with an increase of 1.5 times in the last four years, as shown in Fig. 5.

In order to make poverty alleviation demand statistics play a great role in innovation and entrepreneurship education, it is essential to make use of the younger generation, who can quickly learn and explain the mode of innovation and entrepreneurship [18].

Therefore, it could be explained that the data of poverty alleviation statistics should first take young people as the main object, carry out the statistics of youngsters’ demand, and analyze the data, recommend young people from poor families to divert their thinking and actively participate in innovation and entrepreneurship learning. It is effective and integral to establish a poverty alleviation project funds such as grants and entrepreneurship funds, in order to achieve the purpose of using innovative entrepreneurship education to push the young generation out of poverty fundamentally.
Improve Targeted Teaching and Training for Middle-aged and Old-aged Poor Groups. The older generation is the majority of the poor, and they usually feel that they are totally powerless to start over. It is unrealistic for them to teach innovation and entrepreneurship for a long time because they have missed the learning time and their acceptance is rather weak. In view of these groups of people, the requirements of demand statistics have to be more stringent, and more detailed analysis of poverty alleviation needs should be carried out according to reasonable demand analysis method.

The training of entrepreneurship teaching for the middle-aged and old people in poverty is obviously different from that for the young people in terms of systematicness, comprehensiveness and teaching depth, and the special design must have to be made carefully [19].

Selection of Poverty Alleviation Programs Based on Demand Statistics

On the basis of the previous poverty alleviation demand statistics, the poverty alleviation needs are classified to facilitate the poor people to make their own choices. Generally, there are several types of innovative entrepreneurship that they can choose through short-term learning and training.

Farmhouse Entertainment. Typically, farmhouse entertainment is a new form of tourism and leisure, which is a kind of leisure tourism mode that rural residents provide to urban residents living in steel forest to return to nature so as to obtain a real relaxation and pleasure of body and mind. Generally, the owners of Farmhouse use local agricultural products to process, to satisfy the customers with a low cost, so the consumption is not high. And the farmhouse is usually surrounded by beautiful natural or idyllic scenery, fresh air, relaxed environment, which can ease the mental pressure of modern people. In recent years, it has been loved by more and more urban people.

Online Store. As a form of e-commerce, it is a main commercial form that allows people to purchase while browsing, and pay through various online payment means to complete the transaction, and the goods purchased are delivered to customers by express companies. Online stores are traded through large-scale online trading platforms. With the advantages of convenience, fast trading, without overstock, easy to handle, in various forms, be safe, and with wide application, it has become an important shopping mode widely chosen by the public.

Aquaculture and Visiting Farms. Aquaculture and sightseeing farm, also known as sightseeing agriculture, refers to the extensive use of suburban space, agricultural natural resources, rural folk customs and rural culture and other conditions, through rational planning, design and construction, to establish an agricultural region with agricultural production, ecology and living in one. Tourism agriculture is accompanied by the industrialization of global agriculture. Modern agriculture not only has productive function, but also has the function of improving the quality of ecological environment and providing people with sightseeing, leisure and vacation.

Other Innovative Entrepreneurship Projects. There are many other innovative entrepreneurship projects, such as: local handicraft products (tie-dyeing, paper-cut, ceramics, etc.).
local specialties, deep processing of agricultural products and so on, which are all optional projects.

From the above analysis, it is clearly necessary to classify and choose the specific types of innovation and entrepreneurship education for the poverty alleviation objects. It can make the statistics of poverty alleviation needs more detailed and facilitate the design of innovation and entrepreneurship teaching for poverty alleviation projects. At the same time, innovation and entrepreneurship teaching can also be continuously developed and strengthened with the help of complete data, so as to achieve a more comprehensive and rational special curriculum design.

Conclusion

Nowadays, precise poverty alleviation is an significant idea to win the battle against poverty. Innovation and entrepreneurship teaching is also developing vigorously. Under such an era background, data statistics of poverty alleviation requirements is very important. Data statistics is also a feature of today's big data era, involving a variety of advanced knowledge and mathematical methods.

Education is always changing with the times, and the teaching mode is also changing. Innovation and entrepreneurship teaching is a kind of practical teaching combined with the background of the times, and precise poverty alleviation is the demand of the development of the background of the times. The statistics of poverty alleviation needs can provide a sound support for the design of innovation and entrepreneurship courses to achieve the goal of mass innovation and entrepreneurship, and also provide data support for precise poverty alleviation, education poverty alleviation, as well as the science and technology poverty alleviation.

References


