

Study on the Application of "Time Bank" to College Students' Volunteer Service System in the Context of Rural Revitalization

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Abstract: With the idea of inclusiveness gradually penetrating into the philosophy of governance of colleges and universities, college students' volunteer activities are gradually enriched, and college students have become the most energetic group in youth volunteer activities. Student organizations and associations at the college or school level have become the main field and position for college students to carry out volunteer service activities in various colleges and universities. They arouse students' interest and achieve the purpose of recruiting college students' volunteers by means of credit awards, personal enhancement, and outings, etc., and then carry out volunteer service activities on the basis of which they provide various services for others or the society to promote the development and progress of China's society. According to the survey, college student volunteers have reached 83.1% of the total number of volunteers, college students have been the main force in the body. However, from the current situation, the conditions of volunteer service are still lacking, the contemporary university volunteer group students do not have a comprehensive understanding of volunteer service, awareness is weak, and volunteer activities are mostly top-down type of promotion, passive volunteer service also deviates from the original intention of the spirit of volunteerism. Therefore, with the development of the new era of volunteerism, how to cultivate and improve the awareness of college students volunteering has become an urgent task.

Keywords: Time banking, Student volunteers, Rural revitalization, Blockchain and big data.

1. Literature Review

According to Wang Yue and Mao Jiaxin (2022), "time banking" is a kind of voluntary service, in which volunteers exchange their own private time and services at the present time, and receive free services in the future when they need them, which is an exchange of present resources with future resources. Based on the rooting theory, Li Haijun et al. (2020) explored the idea of constructing a self-annihilation model based on the intervention of time banking. Time banking, as a new model of mutual labor aging, will provide a solution to the limited supply of governmental aging resources and insufficient personal aging capital savings that exist in current aging. Wang Huan et al.'s (2021) empirical study of volunteers in the field of social security using survey experiments and Logit modeling showed that time banking significantly increased volunteers' willingness to participate in a sustainable way. And time banking mainly affects the level of sustainable participation of volunteers through three mechanisms: legitimacy, long-term incentives and multilateral supply and demand matching. Xiao Kai et al. (2019) proposed a solution based on blockchain technology to address the problems of information insecurity, lack of transparency and flexibility that exist when the issuance and settlement functions of time bank's time coins are completely centralized to a central node. The method uses blockchain technology to gradually decentralize the issuance function separated from the central node to form a public welfare time chain.

Throughout the existing literature, there are not many studies on the design of "time bank + volunteer service" based on college student volunteer groups. The problem of poor

motivation of volunteer groups due to insufficient volunteer conditions and imperfect incentive mechanism in the process of college student volunteer service has been widely concerned by the whole society. The youth volunteer associations of various universities have introduced various incentives and changes in the form of volunteering to improve the status quo. Anhui University of Finance and Economics has a large volunteer group of college students and many young volunteers, and the youth volunteer associations at all levels of Anhui University of Finance and Economics are also paying attention to the above problems. Therefore, it is of great significance to learn from the advanced experience of foreign countries and further explore the new public welfare model of "time bank + volunteer service" and promote it in China.

2. Introductory

Nowadays, while the great goal of common prosperity is gradually being realized, the imbalance between urban and rural development remains a major problem that needs to be resolved urgently. Talents, capital and consumption in the countryside are gathered in the city alone, and the constant flow of talents in the countryside, such as college students, rarely return to the countryside to promote development, resulting in fewer and fewer talents being used for construction in the countryside, and the gap between urban and rural areas is further widened. The report of the 19th CPC National Congress pointed out that the three rural issues are always the party and the development of the country's cause can not be ignored, and it is necessary to put the implementation of the rural revitalization strategy on the agenda. The rural revitalization strategy is the key to solving

the rural development problem, and it is crucial to gather a group of knowledgeable and insightful young talents. Young people have entrepreneurial enthusiasm, innovation drive, courage to explore, easy to accept new things, is the main force of rural development. Young people are the harbingers of the future, and without the gathering of an appropriate number of young people, there will be no revitalization of rural talent.

3. Status of Volunteerism Among University Students

First of all, from the viewpoint of voluntary organization, colleges and universities generally set up college students' youth volunteer service associations to realize the preparation and development of volunteer service work, and set up school-level and college-level organizations for hierarchical management, and colleges set up college-level youth volunteer service associations, which are uniformly subordinate to the school-level management. The whole university forms a unified university student volunteer service management system. Secondly, from the perspective of the type of volunteer activities, there are various volunteer activities and programs, which not only increase the interest of college students in volunteer service to a certain extent, but also enrich the extracurricular practical activities of college student volunteers in various forms. College student volunteers go into the community to help the staff to carry out the census to improve the efficiency of the census, the Youth Volunteer Service Association regularly organizes book donations for children in mountainous areas to transfer knowledge to the future hope of the motherland, and a series of volunteering activities such as these are being carried out in full swing.

4. Problems with Volunteerism Among University Students

4.1. Single organizer of volunteer activities and lack of innovation in activities

The development of a volunteer activity often has a lot to do with the organizer of the activity, and China is a relatively latecomer to the development of volunteerism. Therefore, there is still a gap between China and developed countries in terms of volunteer service mechanism and publicity effect. Such a background will inevitably affect college students' understanding of youth service and produce certain ideological misunderstandings. In addition, the organizers of volunteer activities in colleges and universities are usually college students, and the limitations of college students' life experience and experience often affect the organization and planning of college students' volunteer activities. At the same time, college students tend to confine their vision to the school, thus failing to connect well with the society.

4.2. Lack of effective guarantee mechanisms for voluntary activities

Most of the funds for university students' voluntary activities come from school grants, which are limited in amount. In addition, the relevant departments are not well coordinated, and many teams are constrained by various factors, so that the normal activity funds and necessary facilities cannot be guaranteed. As time goes by, the willingness of college student volunteer teams to serve will

be weakened, and the enthusiasm of their activities is also diminishing, which is not conducive to the further development of China's volunteer service industry.

4.3. Lack of transparency and fairness in volunteer hours

Nowadays, although volunteer activities are more popular, there is no good third-party platform that can effectively and accurately record the hours of volunteer service. In university campuses, students mostly complete a series of volunteer activities under the leadership of organizers, and their service hours cannot be recorded well, or there is the problem of falsification of hours, which cannot well protect the rights and interests of volunteers.

5. A New Volunteer Service Model of "Blockchain + Time Banking"

We have creatively proposed a new public welfare model of "Time Bank + Volunteer Service", and use the "Time Bank" App as a bridge to connect college volunteers with the needs of rural revitalization. The "Time Bank" App is designed based on the time banking architecture system of blockchain, big data and other financial technology. Blockchain and big data technology ensures the fairness, openness and transparency of the App platform; building a time coin system within the App platform also achieves the purpose of activating the user ecosystem within the App; at the same time, the service records of college student volunteers on the App help schools and enterprises to construct a portrait of talents and contribute to the construction of talents; at present, we are in the critical period of the implementation of the strategy for the revitalization of the countryside, so the App provides a solution to the shortage of talents arising from the construction of rural revitalization. In the current critical period of rural revitalization strategy, the App provides a good solution to the talent gap in rural revitalization construction.

At the same time, we also introduce the abstract concept of "time bank" to quantify the abstract time and set up redeemable time coins, with which college students who have participated in volunteer services can receive some credit awards and valuable learning materials, and dedicate more of their leisure time to volunteer activities in rural construction to get more time coins, which forms a virtuous cycle incentive mechanism. They will also dedicate more of their leisure time to volunteering in village construction to get more time coins, which will form a kind of virtuous cycle incentive mechanism. In the early stage, we will set up our own App and small program volunteering platform, organize corresponding staff to maintain and manage it on a regular basis, and circulate it among the provinces and cities. In the middle and late stages, with the support of certain funds, we will set up time coin exchange stations to ensure that college volunteers get the corresponding rewards in time, so as to motivate them to volunteer in the next stage.

6. Project Technical Requirements

The public welfare App--"Cunshibao" App platform system is committed to transferring volunteer activities from offline to online, and building a volunteer service information platform for both supply and demand. Through blockchain and big data analysis technology, it not only guarantees the openness and transparency of the platform system, but also realizes the accurate matching between volunteers and rural

revitalization talents' help needs. Docking. The functional structure of "Saving Time Treasure" App is divided into two parts: the front-end of "Saving Time Treasure" App and the back-end of "Saving Time Treasure" App, and the users in the front-end of the App are divided into college volunteers, village builders, stationed public welfare organizations and village revitalization talents. Users in the front-end of the app are divided into university volunteers, village builders, resident public welfare organizations and university management departments, and the administrators use the back-end of the "Saving Time Treasure" app to manage[2].

6.1. Application of blockchain technology

Advantages of decentralization

Due to the use of distributed accounting and storage, there is no centralized hardware or management organization, the rights and obligations of any node are equal, and the data blocks in the system are jointly maintained by nodes with maintenance functions in the whole system. In this way, our App is more suitable for the use of every ordinary volunteer, making it easier and more diversified to produce or contribute content, thus enhancing the enthusiasm of volunteers to participate in the contribution and lowering the threshold of volunteering.

Achieving openness and transparency in the recording of volunteer hours

The App system is open, except for the private information of App users and backend administrators which is encrypted, the blockchain data is open to everyone, and anyone can query the blockchain data and develop related applications through the open interface, so the information of the whole App system is highly transparent.

6.2. Application of big data analysis

Through the front-end records of volunteers' participation in activities and acquisition of time coins, "Saving Time Treasure" App will integrate and process the massive volunteer service information of college volunteers, and at the same time, the built-in algorithm of "Saving Time Treasure" App will analyze volunteers' service preferences and characteristics according to the acquired information, so as to establish an accurate connection between volunteers and the demand for rural revitalization assistance. At the same time, the built-in algorithm of "Save Time" App will also analyze the volunteers' service preferences and characteristics based on the information obtained, so as to establish an accurate docking between the volunteers and the needs of rural revitalization assistance, and provide reference and services for various decisions of the activity planners[5].

Cunshibao App classifies the volunteer activities for village construction, and volunteers can choose the activities according to their own interests. It also analyzes the real-time data and historical data of the information released by volunteers with big data, so as to realize the prediction of the future trend of the supply and demand of volunteer services.

7. Main Features and Functions of the DTSP APP

7.1. Volunteer Recruitment

The App will use big data technology to search for rural revitalization activities and build a bridge between volunteers and recruiters. app users can sign up for activities based on their own strengths and the goals they want to achieve by

matching them with each volunteer activity. After joining an activity, volunteers can create their own team, post their team information on the open volunteer recruitment channel, and recruit like-minded teammates to complete the rural revitalization project together. After the project is over, in order to make it easier for team members to continue to cooperate with each other in the next activity, the team leader can apply to the platform to set up his/her own team, and fill in the information of the members to create his/her own exclusive volunteer team.

7.2. Public Service Classes

This function provides an opportunity for volunteers who don't have time to go to the countryside to help build up the countryside. Volunteers can utilize their relevant professional knowledge to record their knowledge on the App through videos, which can be viewed by the public after being reviewed and approved by the back-end technicians, so as to achieve the purpose of helping the villages. For example, volunteers can upload videos of their interesting scientific experiments to open the door to a new world for children in the countryside, or college volunteers majoring in agriculture, forestry and animal husbandry can upload videos about scientific and technological innovation in agriculture to help the development of agriculture in the countryside. We will also open the message function below the video to provide a place for people who watch the video to answer questions.

7.3. Village Photo

This function is intended to provide volunteers with an information exchange platform for rural revitalization. Volunteers can upload their volunteer experiences, insights and new changes in the countryside here. Adhering to the mentality of "I volunteer, I am proud", volunteers can record and clock their volunteer time here, which not only recognizes their volunteer experience, but also inspires more young college students to join in the rural revitalization volunteer activities. At the same time, we have also opened up the like and follow function, App users can like their favorite content when browsing the village photos, and can also follow their favorite volunteers. After that, the platform will also push more articles, photos and volunteer activities according to the characteristics of your favorite activities, so as to better provide volunteers with opportunities to participate in rural volunteer activities.

7.4. Love Donation

With regard to rural development, the brain drain in building villages is an important issue. Outdated infrastructure and lack of new infrastructures are among the reasons for the brain drain. Children in rural areas have little chance to change their destiny by studying due to lack of education, young people lose better job opportunities due to various factors, rural areas are aging and the health service system for the elderly is not good enough, these are the pain points in the development of the countryside, and our SZP App provides a perfect possibility for the development of rural infrastructures. We will launch a love donation activity on the platform, calling for volunteers to contribute to the rural construction, the donation behavior can be to donate some property, can also be labor. All these will be converted into public service hours recorded on the App according to certain criteria.

7.5. Certificate of volunteer service

In order to fairly measure and record each volunteer's service hours, our App will use blockchain technology to ensure the openness, fairness and transparency of the recorded hours. The Certificate of Volunteer Service will show the name, number, ID number and service hours of the volunteer. In order to better promote the construction of rural revitalization, we will link up with universities and contact them to record corresponding credits for volunteers who use the App according to a certain ranking, and give corresponding policy preferences or written commendations. Moreover, this certificate will also bring certain social effects, with the function of constructing talent profiles for enterprises, which will bring certain preferential treatment to graduates when they choose their careers. These incentives will also attract more college students to join the village construction volunteer activities.

8. Socio-economic Significance of The Project

The relevant documents of the central government mentioned that with the goal of adapting to the needs of the implementation of the strategy of rural revitalization, the layout of the scientific and technological innovation system of colleges and universities will be gradually improved through five years, the scientific and technological and talent support system of colleges and universities will be strengthened, so as to significantly enhance the innovation capacity and quality of colleges and universities in serving rural revitalization, train and create a team of talents who understand the countryside and love the grassroots, and make colleges and universities become an important force in the supply of scientific and technological innovations and achievements for the strategy of rural revitalization[3][4].

The project actively responds to the call, and the goal is to make our App a bridge between college student volunteers and the needs of rural revitalization help, use college talent

resources and scientific and technological resources to help poverty alleviation, rural revitalization, and drive innovation and entrepreneurship, and at the same time, make full use of the rural platform to cultivate excellent talents through cooperation between the countryside, enterprises, schools, and other aspects, and to realize self-recycling and independent progress. The implementation of the project will maximize the amplitude of volunteer service to the countryside and the volunteer service system will be more perfect. Volunteers in the process of participating in the construction of their own exercise and get the inner spiritual world of abundance to meet, the countryside will also be more and more talented people's efforts to get rid of the current situation of poverty, towards civilization and harmony of the modern countryside.

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