Analysis of the Cultivation of University Students' Community Service Innovation Ability Based on the "SECI" Model—Take the He Dong Community as an Example

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Abstract: *Several universities have carried out community service activities for university students. In the practice of community service activities, students can better combine their professional knowledge and help to improve the quality of community service activities. In practice, university students use theoretical knowledge to practice community service, which is beneficial to cultivate university students' knowledge re-learning mindset; helps to relieve the pressure of community service and enrich the content of community service, etc., which is a win-win process.*

Keywords: *university students' community service, SECI model, innovative and creative capacity development*

1. Current situation of university students' community service

The skills and values of university students in modern society are mainly transmitted through classroom lectures, taking the form of study textbooks and documents conveying values-related content; they are mainly disseminated through school education, slogans and other forms, which are relatively homogeneous and are mostly passively accepted by students.[1] Social mobilisation is capable of unifying ideas, invigorating spirits, coordinating actions, integrating resources and promoting development, and its contemporary value is increasingly prominent. Promoting social practice has greater significance. [2]

Social practice is one of the important ways for university students to get in touch with and understand society. With the guiding ideology of "three-wide education", i.e. education of all members, the whole process, and all aspects, we cultivate the comprehensive ability of university students. By participating in community service activities, students can achieve a new understanding of their original knowledge and the development of new knowledge and creativity in a shorter period and at a lower social cost. It has a greater significance to the future employment development and personal career planning of university students.

The content of community work covers a wide range, and social service work at the grassroots is the main way for university students to get in touch with society and understand the grassroots. Among the community services, there are organization building services, civil affairs services, cultural, sports, and education services, medical and health services, environmental health services, community labor security services, community women's union work, traffic persuasion, and care for left-behind children, respectively. Corresponding to the professional knowledge learned by university students, applying the theory to practice will be more helpful to university students' knowledge consolidation, knowledge innovation, knowledge spiral upgrade, and university students' psychological quality cultivation.

The community service of university students in the United States, India, and other countries is combined with professional course design and social practice assessment to promote students' understanding of society through practice, combined with the assessment method to achieve discipline and spur students' practice goals. The importance of community service for Chinese university students in the context of China's national conditions is as follows.

1.1 National talent reserve

National civil servants, institutions, enterprises, and other groups have an urgent need for university students who understand the grassroots. University students who have had social practice have better psychological quality, higher ideological and moral levels, better ability to deal with emergencies, a faster ability to enter new fields and learn new knowledge, higher ability to understand and apply knowledge, better planning for the future development of new things and new fields, and stronger innovative thinking. Grassroots work is more helpful in training excellent organization cadres and grassroots cadres.

Universities cultivate the comprehensive quality of university students through community practice activities, which not only helps individual students to improve their comprehensive ability but also reserves professional talents for the country.

1.2 Comprehensive quality cultivation for university students

The community service activities of university students transform the learning style of pure knowledge input into an interactive learning scenario of "learning + application", which helps students to integrate what they have learned and improve their ability to approach society and deal with problems. Community grassroots work has a wide variety of work content and diverse contact groups. Although students only assist in community work, it enables them to enhance their IQ and EQ within an acceptable range for individuals, and to a certain extent, to enhance their stress and shock resistance, as well as their communication skills, and to promote the psychological quality and skill development of university students.

1.3 Quality Improvement of community services

Under the traditional community service management mode, the integration of university students into community service activities will help them integrate new ideas, new concepts, fashionable propaganda methods, and efficient communication methods into community service, which will inject new vitality into the development of community service.

2. A community service cultivation model for university students based on the SECI model

2.1 Knowledge transformation model

Ikujiro Nonaka once explained the beginning and end of a knowledge creation cycle as follows: tacit knowledge, which originates from highly personalized sources, is eventually sublimated into tacit knowledge of all members of an organization through Socialization, Externalization, Combination, and Internalization, called SECI [3]. Ikujiro Nonaka's SECI theory explains that an economic system that is not based on the deep and comprehensive meaning of "knowledge" and the idea of "learning" is not as effective in allocating resources as it could be [4]. Knowledge is acquired and accumulated in the process of continuous practice, and knowledge is not only a static phase of accumulated total skills and culture but also a more dynamic process of knowledge accumulation. The spiraling knowledge growth of individuals and groups provides the impetus for the next knowledge renewal and development stage. The meaning of tacit knowledge and explicit knowledge is as follows.

(1) Tacit knowledge is the accumulated stock of knowledge that already exists in an individual or group. Tacit knowledge includes socialization and internalization.

(2) Explicit knowledge refers to the dynamic process of knowledge accumulation of individuals or groups formed through social activities, social practices, and social interaction activities based on tacit knowledge. Explicit knowledge can be demonstrated as tacit knowledge through practical activities. Explicit knowledge is the social carrier of tacit knowledge and the process of verifying, perfecting, and updating tacit knowledge. Explicit knowledge includes externalization and combination.

In the process of individual or group of university students' community service, it can realize the exchange of knowledge between individuals and the exchange of knowledge, information, and culture between groups (college student groups, community service groups, and community service objects), promote university students' knowledge of social humanities, social development, community safety, and other aspects, and help university students better in their activities such as skill innovation and

knowledge application innovation during their school years. It is one of the sources of ways for creative development.

The basic concept of the SECI model combines the current situation of community resources to build a community service platform and structure, realize the effective docking of professional and professional course knowledge, take social practice as the carrier, understand the specific workflow and job nature to realize the combination of theoretical knowledge and practical activities of university students and accelerate the practical process of knowledge learning and knowledge transformation. Through practice, it improves the ability of university students to deal with specific problems and work in society.

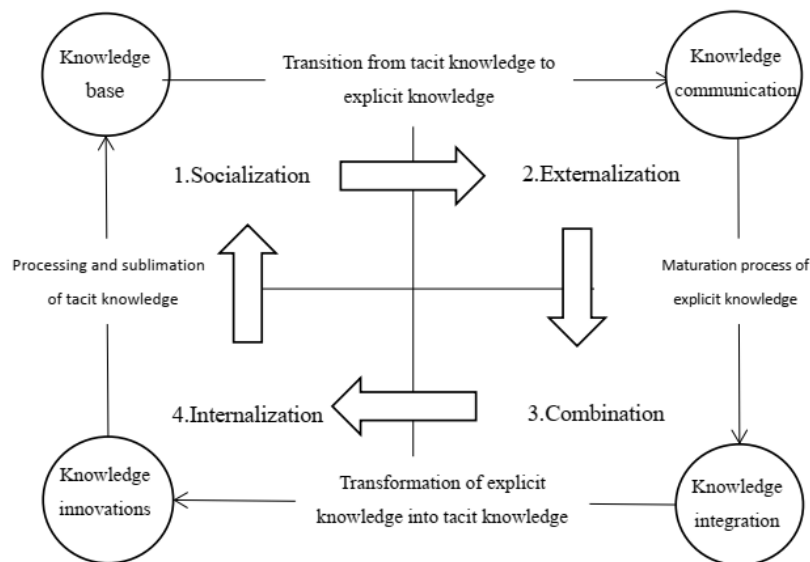The process is shown in the figure 1 below.

Figure 1: The knowledge transformation process of university students' community service under the SECI model

1) Socialization: The process of personal awareness and evaluation of community service by university students and their ability to match the content of community service work, generating tacit knowledge to interface with the outside world. (Tacit knowledge)

2) Externalization: Community service practice activities (Explicit knowledge)

3) Combined: practice content, practice quality, behavior process summary, and refinement (Explicit knowledge)

4) Personal understanding and digestion of the combined information to achieve the organization and processing of the original knowledge. It will promote students to understand the operation of real society and get rid of the bondage of book worship. (Tacit knowledge)

University students' knowledge of community service comes from past internship experiences, education and training during school, and social network learning and awareness. In the process of community service activities of university students, according to SECI theory, the process of mutual promotion and integration of explicit knowledge and tacit knowledge makes individual cognition and community service converge, realizing the increase of knowledge stock and the improvement of knowledge application ability, promotes the desire to continue in-depth learning of new knowledge, and obtains innovation and creative inspiration from practice.

2.2 Scenario Management for knowledge transformation

Characteristics of the SECI model: co-sharing, co-resonance, co-ownership, co-creation. Realize the increase of tacit knowledge stock.

The fields of university students' community service: original field (campus knowledge accumulation, individual experience accumulation, and social network learning), dialogue field

(communication of community service positions), system field (practice and coordination among community service positions to achieve the systematic and circular practice of knowledge), and exercise field (simulation and integration of knowledge). The role reversal in different scenarios allows students to develop their knowledge understanding and application to different degrees.

Knowledge assets: empirical knowledge assets, conceptual knowledge assets, comprehensive knowledge assets, and individual actionable knowledge assets internalized by practice. Knowledge is shared through Internet terminals to realize knowledge value assets [5].

Through the characteristics of the knowledge scenario, the experience of the field environment, and the sharing of knowledge assets, we achieve a common goal and a friendly environment for individuals or teams in the practice process.

The participation of university students in community service activities should be a two-way output process, not just the nature of social service for university students. Social practice activities are one of the better ways to apply theory to practice to improve oneself for universities that have been studying theoretical knowledge for a long time.

To achieve effective knowledge improvement, "theory + practice" is the most socially appropriate way. In the process of practice, combining the professional characteristics of university students, personal ideals, subject arrangement, and course goal design, the effective knowledge cycle will be realized. Students can clarify their learning and practice goals before practice and choose suitable positions and carry out targeted community service activities in the process of community service by combining their characteristics.

Community service activities, based on the individual ideas and service consciousness of university students, combined with community characteristics and community job gaps, make up and expand human resources, and are of great significance to the improvement of community service quality.

University students are the future of our country, and their innovation consciousness, social identity, and professional application ability will be the driving force to help the development of society. The development of Internet terminal business promotes students' information exchange and integration in social practice.

3. Community Innovation Knowledge Translation for University Students

3.1 Component of innovative knowledge

The communication of innovative knowledge includes basic focus issues, a case study or practical exploration of the changing environment of the times combined with new economies or emerging technologies, and multiple integration studies with other theories [6].

In the process of community service, university students achieve interdisciplinary and cross-disciplinary knowledge integration through their professional knowledge to promote the accumulation of individual knowledge and improve the quality of community service by addressing the focal issues in the current community service, combining the characteristics of the target community environment and the new technology or new management system they are practicing.

3.2 Management of innovation knowledge sharing and transformation process

3.2.1 Sharing of innovative knowledge

In addition to the SECI model dynamic knowledge accumulation, the management, and constraint of the innovative knowledge transformation process is the focus of achieving quality improvement of university student community services. In the process management, it is necessary to clarify the responsibilities of campus instructors and improve the management quality of lead teachers; at the same time, effective communication and information sharing of pre-programmed information, job information, and ways and means of dealing with problems should be realized within the student practice group. Based on the human-machine relationship based on the Nonaka knowledge spiral model of Jiehan Zhou as a pre-research basis, the information-sharing process in the process of community service for university students is analyzed, as shown in Figure 2.
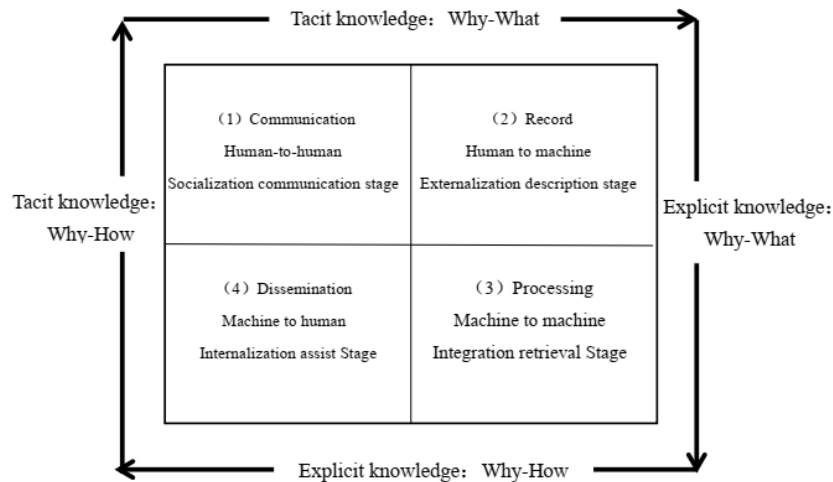
Figure 2: Community service information sharing process under the SECI model.

(1) Human to human communication: human-to-human-oriented knowledge accumulation; through the determination of community service practice goals, it is clear why to do it (determine the goal) and how to do it (customize the path).

(2) Human to machine record: there is a practical behavior, through the human entry into the machine, the human behavior has a specific data recording process; this stage is the entry of the machine, but the human entry into the machine information type, way, content, etc., will have an important impact on the "machine and machine processing". Therefore, before choosing human-machine entry, we should do a good job of data classification, data collection, and later data processing methods and other work plans.

(3) Machine to machine processing: Machine processing information process carries out data analysis and information sharing for "human-machine records". It helps to standardize process management and establish management rules.

(4) Machine to human dissemination: the processing results assist people to achieve knowledge enhancement and improvement. The obtained data results, which are shareable by all participating members, are also needed for the leader to evaluate the obtained results and make suggestions for improvement.

(4)-(1) A new round of teamwork and management: through the results of the previous round of knowledge integration and the accumulation of innovative knowledge (knowledge spiral upgrade process), we propose the next phase of activities targeting (new ideas, new knowledge) to carry out the work.

3.2.2 Transformation of innovative knowledge

"Challenge Cup", "Student Innovation and Entrepreneurship Project", "Contemporary Youth Art Design Competition", "Digital Architecture Innovation Application Competition", "National Student Audit Elite Challenge", "National Student Film and Television Competition" and other competitions' research results, combined with the content of community services, will be innovatively applied to community services, so that the theory can be transported to social practice, helping to implement the concept knowledge and help to improve the quality of community services. Verify what can be improved by the previous research results through the analysis of the process of community service practice activities. Make knowledge update iteration and promote the development of new ideas.

3.3 Disadvantages

The management team instructors of university community services need to standardize and improve the knowledge-creation mechanism of university community services. The knowledge creation process in the case of external knowledge intervention needs to be integrated and improved by the team. The management of this dynamic process is a key part of the knowledge sublimation of university students' social practice. New knowledge relies on the inertia of knowledge creation existing within the organization and lacks fuel for improving knowledge content.

4. Community service innovation capacity development of university students in the HeDong community

4.1 Cultivation Process and Effectiveness

The He Dong Community of Zengjiang Street, Zengcheng District, Guangzhou City, a university has promoted the participation of community residents by carrying out volunteer work, volunteer teaching, volunteer medical service, organization and government propaganda, law enforcement and various cultural and sports activities in this community. From the actual needs of the residents, it provides greater help to improve the happiness of the residents, enrich the cultural life of the community and create a comfortable and harmonious community environment.

In the community service practice activities of university students, through the teacher-led team, combined with the content of community services and job requirements to scientifically and reasonably form a team, to carry out investigations in the form of questionnaire survey method, fieldwork method, and interview method, such as the use of questionnaire star, small program visitor visits, the amount of data read, etc. to obtain data, while the fieldwork method and interview method can understand the community focus on the needs of the problem, and be a certain degree of program solutions. Through online information communication learning and interaction, offline talk, and group discussion to improve and advance the improvement plan. Apply the expertise learned to specific community services. We make the community activities more youthful and energetic, and the content of the publicity is friendly and easy to understand for the residents.

In the practical activities, through the knowledge cultivation and innovation of the SECI model, it promotes students' participation in the innovation competition of university students; it promotes students' understanding of the social grassroots and exercises students' hard-working and daring spirit, which is helpful to their overall quality.

4.2 Problems and Methods of improvement

4.2.1 Limited community conditions

Community service activities in the form of teams require a certain amount of financial support in organizing community activities and access to financial channels is limited, the strength of community financial support is weak, and there are many restrictions on the introduction of sponsorship funds. Community management is fragmented and diversified and lacks systematic management. The original field of the He Dong community consists of the model of "university + community", in which the volunteer service team composed of students from the university regularly visits the He Dong community every week to provide volunteer services such as volunteer teaching and sympathy, but this model is only limited to the social workers in the community and the volunteer service team from the university, and there is relatively little communication with other communities, other cooperative groups, and platforms.

In the background of the above-mentioned conditions, it is necessary to overcome more difficulties to carry out community service activities for university students, and based on this, instructors should motivate students and propose new ways to solve problems under the existing conditions.

4.2.2 High Mobility of college student team members

Volunteers are highly mobile, and there are difficulties in handing over work when each batch of community service is docked to the next batch of university students' community service activities. Many students need to learn from scratch and have a shallow understanding of the original docking materials, which is not conducive to carrying out in-depth community service work.

Before the community service work is carried out, students should be actively mobilized and encouraged to carry out publicity and training on community service work attitude and work knowledge, so that university students who are willing to actively participate in community service will have positive work attitude and adequate knowledge preparation and reduce students' frustration in social practice.

4.2.3 There is room for improvement in the comprehensive quality of lead teachers

Up to now, the leading teachers have been volunteering in the community for six years, and their existing knowledge of managing teams has met the basic needs of leading teams, but they still need to

expand their knowledge and experience in interdisciplinary and multi-disciplinary guidance. Lead teachers can increase their social practice experience in the form of community service, enterprise attachment, and industry-academia integration, which will be more helpful to better leading university students' community service and social practice work.

5. Suggestions for improving community service for university students

5.1 University courses should be integrated with practice

Schools should closely integrate professional courses with community service, and clarify the course tasks that students need to accomplish in community service activities through the design of course objectives, arrangement of course practical activities, and course assessment methods; solve the problems of practical education mode, practical content that is more disconnected from the major, and imperfect practical assessment system [7].

5.2 Establishing a "service-learning" concept

The grassroots work experience is a valuable social practice experience for university students, which is different from the professional social practice of enterprises and industry-academia combination in that the contact with community residents is closer to life, while the enterprise type is closer to the market demand, and its innovative consciousness is based on the macro needs of the market. Grassroots community service activities not only provide a testing ground for socially inexperienced university students, but also have a positive effect on students' cultivation of patience, improvement of interpersonal skills, civic literacy, and clarification of career development directions [8].

In community service learning and practice activities, "theory - theory application - practice - knowledge summary and integration - perfect theory (to help promote the next stage of practice)", provides a knowledge spiral path. Service is the form, practice is the process, the community is the carrier, and the improvement of skills and knowledge and the growth of emotional and adverse quotient are the harvests.

Therefore, before the community service practice activities of university students are carried out, the leading teachers should establish a good concept of "service-learning" in the university students' service group and gain knowledge from service instead of service for the sake of service. Combined with the SECI model, students are encouraged to use knowledge, summarize knowledge, and develop new ideas in the service.

6. Conclusion

The community service activities of university students are of great help to promote the social practice ability and comprehensive quality cultivation of university students and are of great significance to the improvement of community service quality. Combined with the SECI talent model, carrying out community service activities for university students at the grassroots level helps to enhance university student's ability to learn knowledge and develop creativity, and provides strong guidance for students' future competitions, internships, and career planning. Through curriculum design and faculty-led forms combined with the current situation of the community, a win-win approach is achieved to serve and improve the grassroots. Combined with the SECI talent model, carrying out community service activities for university students at the grassroots level helps to enhance university student's ability to learn knowledge and develop creativity, and provides strong guidance for students' future competitions, internships, and career planning. Through curriculum design and faculty-led forms combined with the current situation of the community, a win-win approach is achieved to serve and improve the grassroots. Community service for university students is one of the important contents of future university teaching reform.

Acknowledgement

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