Development of a Community Social Work Course Based on Problem-Based Learning Combined with a Service Learning Approach to Enhance Service Knowledge, Service Awareness, and Project Plan for the Community of Second-Year Students

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Abstract

Background and Aim: Based on domestic and foreign policies and literature related to higher education planning, Ministry of Education policies, educational concepts, Problem-Learning methods, Service Learning methods, teaching strategies, teaching evaluation, etc. The researcher interviewed community workers and students with the existing Foundation of Community Social Work Course. The research and development aimed to: 1) study the background information relevant to develop Community Social Work Course Based on Problem-Based Learning combined with Service Learning approach to enhance Service knowledge, Service Awareness and Project plan for community of second-year students, 2) develop Community Social Work Course based on Problem-Based Learning Combined with Service Learning approach to enhance Service Knowledge, Service Awareness and Project plan for community of second-year student, and 3) determine the effect of implementing the Community Social Work Course based on Problem-Based Learning Combined with Service Learning approach to enhance Service Knowledge, Service Awareness and Project plan for community of second-year students.

Materials and Methods: The sample was 25 second-year students majoring in social work at Jilin Normal University, People's Republic of China, derived by cluster random sampling. The experimental design adopted in this study was a one-group pre-test post-test design. The research instruments that followed from each phase of the study were as follows: Phase I: Interview questions for community social workers and students. Phase II: Community Social Work Course Based on Problem-Based Learning and Service Learning, with a very high level of appropriateness. Phase III: 1) Eight lesson plans based on Problem-Based Learning and Service Learning with a very high level of appropriateness. 2) A Learning Service knowledge test with a reliability of 0.86. 3) An Observation Form for assessing students' service awareness with a reliability of 0.83. 4) An Evaluation form assessing students' project plans for the community with a reliability of 0.78. The data were analyzed by using mean, standard deviation, and a one-sample t-test.

Results: The results of the study were as follows: 1) The researcher reviewed literature and interviewed the 5 community social workers and 25 students for problems of the community social work course. The problems such as the disconnection between theory and practice, the lag in updating course content, and the single teaching method. These challenges emphasize the urgent need for a comprehensive reform of the course content, teaching methods, and assessment system in order to enhance Service knowledge, Service Awareness, and Project Plan for the community of Second-year students. 2) The Community Social Work Course, based on Problem-Based Learning and Service Learning, consisted of the principle, objective, content, instructional strategy, materials, and evaluation. 3) After implementing Community Social Work Course based on Problem-Based Learning and Service Learning, the students' Service Knowledge Achievement was higher than before at the statistically significant level of 0.01 (t=6.779, p <. 01). The students' Service Awareness in the post-test was higher than the criterion set at 70% which was statistically significant at the .01 level (M = 50.72, SD = 4.49, t = 9.607, p = .001). 4) The students' plan for the community mean score was higher than the determined criterion set at 70% (M = 22.72, SD = 2.01, t = 14.696, p = .001).

Conclusion: The developed course components consisted of six aspects, which include the 5 steps of teaching. The steps of teaching were step 1: Community analysis and problem design, step 2: Form a group and need-based

project, step 3: Research and Guidance and support, step 4: Solve problems and citizen participation training, and step 5: Reflection and evaluation. The developed course could effectively improve the service knowledge, service awareness, and community project plan of second-year students.

Keywords: Community Social Work Course Based on Problem-Based Learning and Service Learning; Service Knowledge; Service Awareness; Project Plan for Community

Introduction

The Ministry of Civil Affairs issued documents such as the opinions on strengthening the modernization of the Grass-roots Governance System and Governance Capacity, emphasizing strengthening the construction of the team of community workers, improving the professional quality, improving the professional system, implementing the treatment, and strengthening the capacity building (Ministry of Civil Affairs of China, 2019). These policies provide institutional guarantees for community workers, stimulate their enthusiasm and creativity, and promote the sustainable development of community services (Chen, 2016). Therefore, strengthening community governance and social governance is an important task at present, and strengthening the construction of professional social workers is the key.

In education reform and talent training, needs are constantly changing. In higher education, the quality of teaching methods directly affects the learning effect and the ability of students. The traditional teaching methods often pay attention to the inculcation of knowledge but neglect the cultivation of students' practical ability, which has a certain gap with the current social demand for talents. The Chinese government has issued a series of policy documents emphasizing the importance of problem learning and service learning in higher education (Yang, 2016). Several opinions of the Ministry of Education on comprehensively improving the quality of higher education put forward that it is necessary to innovate the training mode of talents, strengthen the training of innovative ability, pay attention to the combination of learning and thinking, unify knowledge and action, teach students according to their aptitude, strengthen practical teaching, and strive to improve students' practical and innovative ability (Ministry of Education, 2012). By changing teaching methods and adopting more advanced and effective teaching methods in college classrooms, it can better meet the needs of society for talents, improve the comprehensive quality and ability of students, and prepare them for their future careers. Therefore, teachers in colleges and universities should constantly explore and apply new teaching methods in order to cultivate talents with a more innovative spirit and practical ability (Ministry of Education and State Council, 2010).

Community work education is the key link to cultivating students' community service ability. The current community work curriculum has obvious shortcomings in many aspects, including the following four aspects: 1) disconnection between theory and practice. Many community work courses pay too much attention to the teaching of theoretical knowledge and neglect the importance of practical operation (Smith, J., 2010). 2) Single teaching method. Traditional teaching methods, such as lectures and class discussions, may not sufficiently stimulate students' interest and motivation in learning (Johnson, L., & Turner, B., 2015). 3) Lack of community participation. Students lack the opportunity to interact with the real community and have difficulty in understanding the actual needs and problems of the community (Taylor, M., & Brown, A., 2009). 4) Shortage of teachers. Some community work courses may face a shortage of teachers, thus affecting the quality of teaching (Wang, C., & Li, X., 2017). In view of the above problems in the field of education, we need to take a series of countermeasures to solve them. Strengthen practical teaching, such as field trips and community service practices, so that students can apply theoretical knowledge to practical operations and help students understand and apply knowledge more deeply (Smith, J., 2010). Adopt more diversified teaching methods, such as group discussion, role playing, interactive games, etc., to stimulate students' interest and enthusiasm in learning. Use modern technologies such as online teaching platforms and virtual reality technology to provide students with a richer and more three-dimensional learning experience (Johnson, L., & Turner, B., 2015). Strengthen community participation. Through cooperation with real communities, practical teaching bases are established to provide more opportunities for students to participate in community work, thereby cultivating students' practical problem-solving skills (Taylor, M., & Brown, A., 2009). Strengthen the training and introduction of teachers to

improve their practical experience and professional level. At the same time, it is also crucial to establish a teacher incentive mechanism to encourage teachers to actively participate in curriculum reform and practical activities (Wang, C., & Li, X., 2017).

Problem-Based Learning and Service Learning have been proven to be effective methods in social work teaching. Problem-Based Learning encourages students to think, explore, and solve problems, stimulates learning interest, cultivates problem-solving ability and innovative thinking, and improves learning effect and comprehensive quality (Yang, 2016; Wang, 2011). It can also cultivate students' ability for independent learning and lifelong learning, laying a foundation for future career development (Zhang, 2015). Under the background of new liberal arts construction, problem teaching method has advantages in improving classroom teaching mode and improving learning effect (Wang, 2020). Service learning promotes the development of students' sense of social responsibility and citizenship, and improves their academic performance and practical ability (Li, 2010). It can also enable students to understand social needs, enhance teamwork, organization, and coordination ability, improve comprehensive quality (Zhang, 2015), stimulate innovative thinking and entrepreneurial spirit, and improve innovation ability (Chen, 2020).

In addition, researchers need to develop a Community Social Work Course based on Problem-Based Learning Combined with Service Learning, aiming to enhance the service knowledge, service awareness, and project plan for the community of second-year students.

Objectives

1. To study the background information relevant to developing a Community Social Work Course based on Problem-Based Learning, combined with a Service Learning approach to enhance service knowledge, service awareness, and a project plan for the community of second-year students.

2. To develop a Community Social Work Course based on Problem-Based Learning, combined with a Service Learning approach to enhance service knowledge, service awareness, and a project plan for the community of second-year students.

3. To determine the effect of implementing the Community Social Work Course based on Problem-Based Learning Combined with the Service Learning approach to enhance service knowledge, service awareness, and project planning for the community of second-year students.

3.1 To compare the students' service knowledge before and after learning through the Community Social Work Course based on Problem-Based Learning Combined with the Service Learning approach.

3.2 To compare students' service awareness after implementing through Community Social Work Course based on Problem-Based Learning Combined with the Service Learning approach, with the criterion set at 70%.

3.3 To compare students' project plans for the community after implementing through the Community Social Work Course based on Problem-Based Learning Combined with Service Learning approach, with the criterion set at 70%.

Literature review

1. Course development process

Curriculum development is seen as a dynamic, reflective process. Educators began to emphasize flexibility and personalization of the curriculum, encouraging teachers to participate in the decision-making process of curriculum development.

Zheng Dulu put forward a five-step course development model of planning, compiling, implementing, checking, and revising. This model mainly focuses on the role and steps of teachers in course development (Zheng, 1950). Fu Lei, one of the pioneers of China's educational reform, put forward a course development model of four elements: "goal, content, method, and evaluation". This model emphasizes the setting of educational goals and the cultivation of students' literacy (Fu, 1978). Chinese scholars have gradually noticed the importance of course thinking. For example, Chen Kongzhao proposed a course

development model with six elements of "goal, content, method, evaluation, resources, and principles", emphasizing the integrity of the course and the utilization of resources (Chen, 1998).

Taylor's course development model has been widely cited. The model includes the setting of educational goals, the selection of learning experiences, the organization of learning experiences, and the evaluation of learning outcomes (Ralph, 1960). Stobart proposes a reverse course development model that emphasizes teacher and student involvement. He believed that course development should be a reverse process, identifying problems from practice and experience, and then rethinking theories and objectives, reformulating practical activities and ways of assessment (Lawrence, 1980).

The course development process usually includes six stages: (1) Formulate principles; (2) Determine objectives; (3) Select contents; (4) Determine instructional strategy; (5) Select materials, media, and resources; and (6) Determine evaluation methods.

2. Problem-Based Learning

The teaching strategy of problem-oriented learning includes the following steps: (1) Ask questions. Teachers ask challenging questions that motivate students to think and learn. (2) Group formation. Students are divided into groups to discuss and solve problems together. (3) Research problems. Students gather relevant information and knowledge through research and investigation. (4) Solve problems. Students apply their knowledge to analyze problems and propose solutions. (5) Reflective evaluation. Students reflect on and evaluate solutions, making suggestions for improvement and further learning (Barrows, 1996).

The teaching strategy of cognitive load theory is used to guide the teaching practice of problem-oriented learning. The strategy includes the following aspects: (1) Problem design. Teachers design challenging questions that not only arouse students' interest and curiosity but also motivate them to apply their acquired knowledge and skills to solve problems. (2) Guide learning. Teachers give students appropriate guidance and support in the process of problem solving, helping students understand the problem, gather information, and come up with solutions. (3) Load management. Teachers should adjust the difficulty and complexity of teaching activities according to students' cognitive load, so as to avoid too much or too little load. (4) Knowledge transfer. Teachers guide students to apply what they have learned and problem-solving strategies to practical situations to achieve knowledge transfer and improvement of application ability (Savery & Duffy,1995).

The teaching strategies of learning environment design support the implementation of problem-oriented learning. The strategy includes the following elements: (1) Building common knowledge. Teachers guide students to build shared knowledge and understanding in small groups, promoting the exchange of ideas and collaborative problem solving. (2) Provide supporting materials: Teachers provide students with relevant learning materials and resources to help them gain the necessary knowledge and information. (3) Provide guidance and feedback. Teachers give necessary guidance and feedback in the process of problem solving, guiding students to think and improving students' ability to solve problems. (4) Promoting metacognition. Teachers guide students to reflect on and evaluate their learning process, and develop students' metacognitive abilities and learning strategies (Hmelo, 2004).

The results of the research on the teaching strategy of integrated Problem-Based Learning are as follows:

Step 1. Problem design refers to the phase where the problem or challenge to be solved is first identified. The questions posed should be sufficiently difficult and relevant to stimulate students' interest and motivation.

Step 2. Form a group, referring to the organization of students into small units, comprising multiple members with diverse skills and talents, enabling them to complement and collaborate in the problem-solving process.

Step 3. Research question refers to the task of addressing the questions, which may pertain to details of the problem, methods for resolution, or knowledge and concepts in related fields. The process of asking questions stimulates students' curiosity and desire to explore, guiding them towards potential problem-solving approaches.

Step 4. Research the problem refers to the necessity for students to gather background information and pertinent data about the problem. Through literature research, reviews, expert interviews, surveys, and other methods, students gain an in-depth understanding of the problem's nature and context, identifying key factors and potential challenges, and laying the groundwork for effective solution formulation.

Step 5. Problem-solving refers to the stage where students apply their acquired knowledge, skills, and creativity to find solutions to the problem. They approach the best solution through thinking, experimenting, discussing, and iterating.

Step 6. Reflective assessment refers to the process where students reflect on their assessment during the problem-solving process. They review their problem-solving strategies and methods, and assess the effectiveness and feasibility of the solutions they have proposed.

Through these six steps, students can learn problem-solving skills and thinking skills through practice and collaboration. This problem-based learning teaching model can not only improve students' learning motivation and engagement, but also cultivate students' creative thinking, critical thinking, and problem-solving skills.

3. Service Learning

Eyler and Giles scholars propose the following teaching strategies for service learning: (1) Community partner selection: Involve students in the selection process of community partners so that it is closely related to practical problems and needs. (2) Guidance and support: Provide students with the guidance and support they need to help them understand and solve problems. (3) Reflection and evaluation: Students are encouraged to reflect on their service experience and assess its impact on individuals and communities. (4) Teacher role change: Teachers change from the role of imparting knowledge to the role of partners in promoting students' learning and growth (Eyler & Giles, 1999).

Bringle, Hatcher, and other scholars put forward the following teaching strategies for service learning: (1) Thematic curriculum integration: combining service learning with subject curriculum content to enable students to apply the knowledge and skills they have learned in service practice. (2) Cooperative learning: Students are encouraged to work in groups to solve community problems together and promote the spirit of interaction and cooperation. (3) Reflection and dialogue: Through reflection and dialogue, students are helped to understand the importance, challenges, and value of the service experience. (4) Civic participation training: Through participation in community service, students' civic awareness and participation ability are cultivated (Bringle & Hatcher, 1999).

Saltmarsh and Hartley scholars put forward the following teaching strategies for service learning: (1) Community analysis: Teachers guide students to conduct community analysis, understand community problems and needs, and provide guidance for service learning. (2) Need-based projects: Teachers encourage students to choose and carry out service projects according to actual needs to ensure the authenticity and effectiveness of service learning. (3) Partnerships: Establish close relationships with community partners to promote interaction and cooperation between students and the community. (3) Co-learning: Teachers learn with students and grow and develop in service learning with community partners (Saltmarsh & Hartley, 2011).

The service learning teaching strategy emphasizes the elements of curriculum integration, cooperative learning, reflection, and community participation. Teachers can flexibly apply these strategies according to different teaching objectives and student groups, combined with specific projects and community needs, to promote student learning and social responsibility development.

The researchers' research results on integrated service learning teaching strategies are as follows:

Step 1. Community analysis refers to the investigation and evaluation of the community served to understand the current situation, needs, and resources of the community. The goal is to identify services and programs that the community needs.

Step 2. Needs-based projects are those that are carried out based on the results of community analysis and the actual needs of the community. This type of project places the needs of the community at the heart of the project design to ensure that the project meets the actual needs and expectations of the community.

Step 3. Guidance and support refer to key aspects of ensuring that the necessary assistance is provided throughout the project implementation process. This includes providing project participants with the necessary training, resources, and technical support so that they can effectively complete project tasks.

Step 4. Citizen participation training refers to activities that focus on improving the awareness and capacity of citizens to participate. Through the organization of training activities to educate community residents on how to effectively participate in community affairs, improve their decision-making and problem-solving abilities.

Step 5. Reflection and evaluation refer to the critical stage after the completion of the project. It is necessary to thoroughly reflect and evaluate the entire project process. This includes assessing the extent to which project objectives have been achieved, assessing the effectiveness of the activities undertaken, and examining the personal growth and learning of the participants.

Through these five steps, the development of community service projects is more scientific and systematic. Ensure that the project truly meets the needs of the community, provide more effective guidance and support, and continuously improve the quality and impact of the project plan through reflection and evaluation.

4. Problem-Based Learning combined with Service Learning

The combination of the two learning methods can provide students with a richer learning experience and practical opportunities, and enhance their sense of service. Based on the theory of problem learning and service learning, a new teaching strategy is proposed:

Step 1: Community analysis and problem design refers to the initial and basic stages, including understanding the community, its characteristics, resources, and challenges. First, gather background information about the community to understand its characteristics, resources, and challenges. Then, identify problems or needs in the community and obtain information through surveys, interviews, focus groups, etc. Based on this information, develop goals and strategies to solve community problems and design corresponding project plans.

Step 2: Forming a Group and a requirements-based project refers to a working group of community members and stakeholders to develop a requirements-based project. Based on the results of community analysis and problem design, the focus and objectives of the project are determined, and the corresponding activity plan and schedule are developed.

Step 3: Research and guidance, and support refer to the integrated process of in-depth investigation and research into selected projects. This includes gathering relevant information and data through literature reviews, expert interviews, and field surveys. Project organizers must provide participants with the necessary training, resources, and technical support while working closely with community representatives, professionals, and stakeholders to ensure seamless project execution and alignment with community needs.

Step 4: Problem-solving and civic engagement training refers to taking action to address identified problems and training civic engagement participants. By organizing workshops, seminars, and other events, we teach problem-solving strategies, decision-making processes, and encourage participants to be active in the community. The training emphasizes responsibility and ownership and aims to improve participants' ability to focus on and solve community problems.

Step 5: Reflection and evaluation refer to the key processes that must take place after the project is implemented. Through reflection and discussion with community members and stakeholders, evaluate the results and effectiveness of the project and understand the successes and problems of the project.

These five steps together constitute a complete community project implementation process. Each step has its own importance and specific tasks that can help ensure the success of the project and the solution of community problems.

5. Service awareness

Students' sense of service is composed of four dimensions: students' cognition of service, emotion, values, and behavioral willingness (Dong, Wu & Jia, 2019). Students' sense of service includes three elements, namely, students' willingness to volunteer, service ability, and service responsibility (Zhang,

2019). Students' sense of service consists of five components: cognition of social responsibility, willingness to participate in society, sense of self-efficacy, autonomy, and focus (Zhang, Duan & Xu, 2018). Students' sense of service includes students' sense of social responsibility, care and love for others, contribution and willingness to society, and self-development (Wu, Xue &Li, 2014).

By synthesizing the elements of service awareness of the four scholars, the following five parts are formed.

(1) Students' sense of concentration refers to students maintaining a focused and serious attitude in the service process and not easily getting distracted or giving up. This sense of focus helps to improve service quality and efficiency, while also showing that students are serious about service work.

(2) Care and love for others refers to students showing concern and love for others in the process of service, paying attention to the needs and feelings of others, and trying their best to meet the needs of others. This kind of care and love for others is the emotional basis of service awareness, which can enhance customer satisfaction and loyalty to the service.

(3) Students' willingness to participate and behavioral willingness refers to students' willingness to actively participate in service work and take active actions to meet the needs of others. This willingness to participate and behavior is the driving force to promote students to provide quality services, and can enhance students' service awareness and action.

(4) Students' service cognition and service ability refer to students' cognition and understanding of the meaning, value, principles, and ethics of service. This kind of cognition can help students better understand the nature and requirements of service work and improve the quality and effectiveness of service. Service ability refers to students' professional qualities in service skills, communication skills, teamwork, and so on. This ability can help students better complete the service work, meet the needs of others, and improve the efficiency and quality of service.

(5) Social responsibility and social responsibility cognition refer to students who are aware of their roles and responsibilities in society and are willing to contribute to society. This sense of responsibility and cognition can enhance students' service awareness and action, and encourage students to provide better services for society.

Conceptual Framework

In this research, the independent variable was the implementation of the Community Social Work Course based on Problem-Based Learning and Service Learning Approach, and the dependent variables were the students' service knowledge, service awareness, and project plan for the community.
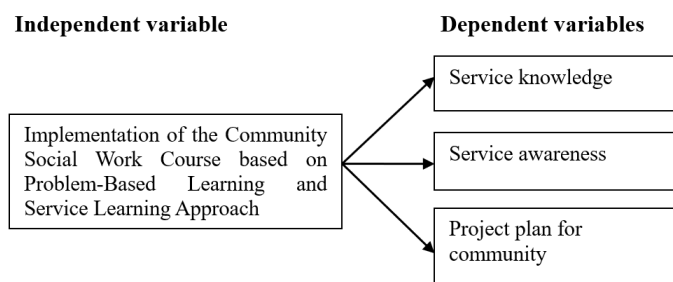
Figure 1 The figure of the Research Conceptual Framework

Methodology

Phase 1: Study the background information, focusing on course components and existing problems of the Community Social Work Course.

Study related literature on the Community Social Work Course and interviewed 5 community workers and 10 students of the social work major at Jilin Normal University. The selected interviewees people

1. Target group

1) The community staff consisted of 5 people, including 2 community leaders, 1 community worker, 1 resident representative, and 1 volunteer leader.

2) The 10 third-year students who have already studied the course were selected by a purposive sampling method.

The interviewees were selected from individuals considered vital for providing relevant information. Key characteristics included being community members, such as community leaders, community heads, and local personnel. Additionally, the students selected had previously enrolled in the course. A purposive sampling method was subsequently employed to conduct the study.

2. Research instrument

Interview form for 5 community staff and 10 third-year students. The interview questions mainly included the following five aspects: 1) Teaching objective; 2) Teaching content; 3) Teaching method; 4) Media and resource; and 5) Evaluation.

3. Data analysis

1) The data on existing problems is collected by an interviewing process and the voice record tool.

2) The content analysis is used for analyzing and summarizing collected data..

Phase 2 Development of the Community Social Work Course Based on Problem-Based Learning Combined with Service Learning

The purpose of this phase was to design the draft course document and determine the quality of the draft course document before its implementation.

1. Developing a Community Social Work Course Based on Problem-Based Learning Combined with Service Learning. This step aimed to develop the draft course according to the results from the first phase. The components of the draft course consisted of: 1) Formulate principles of the course; 2) Determine objectives of the course; 3) Select course content; 4) Determine instructional strategy; 5) Select media and resources; 6) Determine evaluation methods.

2. Determining the quality of developing a Community Social Work Course based on Problem-Based Learning Combined with Service Learning. This step aimed to determine the effectiveness of the draft course document before its implementation. The draft course document was evaluated by five experts regarding the appropriateness of each component of the draft course.

3. Constructing research instruments. There were 8 lesson plans, considering the overall structure and format of each lesson: Constructing and examining the quality of a service knowledge test; Constructing and examining the quality of an observation form for service awareness evaluation of second-year students; and constructing and examining the quality of a project plan assessment form.

1. Target group

The five experts who evaluated the draft course consisted of 2 specialists in the course field, 2 specialists in instruction relevant to specific content, and 1 specialist in the measurement and assessment field.

2. Research instrument

The instrument used for evaluating the draft course document and lesson plan was the appropriateness evaluation form.

3. Data analysis

The researcher offered the course evaluation form to a group of experts to examine or evaluate the draft course document. After gathering the data, the collected data were analyzed for the appropriateness of the course document.

Phase 3: The implementation of the Community Social Work Course based on Problem-Based Learning, combined with the Service Learning approach.

1. Population and sample

The population was 46 second-year students (2 classes) majoring in social work at Jilin Normal University, the People's Republic of China.

The sample was 25 second-year students majoring in social work at Jilin Normal University, People's Republic of China, derived by cluster random sampling.

2. Research Instruments

Instruments for data collection consisted of three parts.

1) Learning Service Knowledge Test. The test consists of 30 multiple-choice questions evaluating service knowledge with item difficulty (p) 0.428-0.714 and item discrimination (r) 0.52-0.72. Kuder and Richardson formulas 20 equal .86.

2) Observation sheet for assessing students' service awareness with a reliability of 0.83. Service awareness was evaluated through the Service Awareness Observation form, which included five aspects: (1) sense of concentration, (2) care and love for others, (3) willingness to participate and behavior, (4) service cognition and service ability (5) social responsibility and social responsibility cognition.

3) Evaluation form assessing students' project plan for the community with a reliability of 0.78. The community project plan is evaluated through the community project plan evaluation form, which includes four aspects: (1) Participate in simulated community work situations, (2) Role play, (3) Work as a team, and (4) Address community issues.

3. Data collection

The course was implemented for the samples in the first semester of the 2024 academic year. There were 25 second-year students from 1 class majoring in social work at Jilin Normal University, the People's Republic of China. The procedures of data collection during the implementation process were as follows:

1) The samples were given the pretest for measuring service knowledge with constructed instruments.

2) The samples were taught by using the Community Social Work Course based on Problem-Based Learning, Combined with a service learning approach.

3) After finishing the instruction, the samples received the posttest by using the same instrument as the pretest.

4) At the same time, an observation sheet for assessing students' service awareness is used to measure students' service awareness.

5) The evaluation form is used for assessing students' project plans for the community.

4. Data analysis

In this study, quantitative data were analyzed in line with the research objectives.

1）To compare students' service knowledge before and after the implementation of the Community Social Work course on problem-based learning, combined with a service learning approach, by using a t-test for dependent samples.

2）To compare students' service awareness after implementing the Community Social Work Course based on Problem-Based Learning Combined with a service learning approach, with a criterion set at 70% by using a one-sample t-test.

3) To compare students' project plans for the community after learning through the Community Social Work Course based on Problem-Based Learning Combined with a service learning approach, with a criterion set at 70% by using a one-sample t-test.

Results

Phase 1: The findings of studying basic data for course development

The purpose of this phase was to investigate and review the relevant community social work course. (1) The findings of studying the relevant documents, (2) The findings of interviewing the community social workers and students of the community social work course. The findings of this phase were used in designing a course in phase 2.

1. The findings of studying the relevant documents

The results of studying relevant literature and books reveal the information needed to develop teaching models. From the relevant literature, books, literature, strategies, teaching ability, and other teaching data collected and analyzed, curriculum development, community social work curriculum, curriculum teaching, etc., to get the idea of designing the draft teaching model (including the teaching model development process). Collect, analyze, and summarize relevant literature by subject-coded analysis or content analysis. Summarize the process and successful experience of relevant literature cases. Through an in-depth understanding of relevant teaching strategies, teaching effectiveness, and case studies, a solid theoretical and practical foundation has been laid for the construction of effective teaching strategies in the future.

2. The findings of interviewing the community social workers and students of the community social work course

The researcher applied the curriculum development content to teaching, conducted research on different teaching methods, collected the interview data of five community workers and 10 students who have learned this course, and finally formed a new curriculum system of Community Social Work based on the combination of problem learning and service learning. In summary, the interview results of five community workers show that the traditional teaching model has many problems in the field of community social work education, including the disconnection between theory and practice, insufficient teaching objectives, a single teaching strategy, slow updating of teaching materials, and problems in evaluation methods. In response to these problems, community workers put forward suggestions for improvement, emphasizing the combination of theory and practice, diversified teaching methods, and strengthening community ties. These suggestions are of great significance for improving the quality and effectiveness of community work education.

In summary, the interview results of 10 students show that there are many problems in the traditional teaching mode in community work teaching, including the disconnection between theory and practice, the delayed updating of teaching content, the shortage of media and resources, the single teaching method, and the single teaching evaluation method. These problems limit the cultivation of students' practical ability and comprehensive quality, and affect the learning effect and enthusiasm. Therefore, it is necessary to reform and innovate the traditional teaching mode to adapt to the development needs of the community work field and enhance students' practical ability and comprehensive quality.

Phase 2: The development of the course development and the evaluation of the course development and the lesson plans

1. The findings of the course development

The draft course document consists of six components:

1) Course principle

The comprehensive teaching principle of the new curriculum emphasizes students' subjectivity, encourages students to actively explore and learn, stimulates intrinsic motivation, and becomes an active participant in learning. Advocate the Problem-Based Learning, improve the application and problem-solving ability; Insist on combining theory with practice, and deepen learning and understanding through

practice. At the same time, pay attention to personalized teaching, teaching according to aptitude. And advocate service learning, through community service activities, to cultivate a sense of service and responsibility. Together, these principles form the core concept of the new curriculum, which aims to cultivate high-quality talents with innovative spirit, practical ability, and social responsibility.

2) Course objective

The teaching objective of the new curriculum is elaborated from three specific dimensions: knowledge objective, skill objective, and attitude objective.

Knowledge objectives: To master the definition, characteristics, social functions, and applications of community work, and to understand the content, operation, and autonomy of community management.

Skill objectives: To be able to plan, implement, and evaluate community service projects, utilize resources, identify and solve community problems, and improve practical ability.

Attitude objectives: Cultivate a sense of service, dedication, enhance the spirit of teamwork, sense of responsibility, and collective honor, and become a community worker with innovative and practical ability.

3) Course content

The study consists of 8 lesson plan elements. In the teaching process, the method of combining problem learning and service learning is adopted to enhance classroom interaction and effectively cultivate students' active learning habits. Further cultivate students' innovative thinking of finding, analyzing, and solving problems, stimulate students' thinking vitality, and cultivate students' critical thinking through group discussion and role play. At the same time, through simulated service scenarios and volunteer service projects, students are guided to transform their knowledge into practical actions to serve society, thereby improving their academic performance, enhancing their service awareness, and improving their ability to write community project plans.

4) Instructional strategy

New teaching steps based on Problem-Based Learning and Service Learning are as follows:

Step 1: Community analysis and problem design refers to the initial and basic stages, which include gathering background information about the community, identifying problems or needs in the community, and obtaining information through surveys, interviews, focus groups, etc. Develop goals and strategies to solve community problems and design corresponding project plans.

Step 2: Forming a Group and a requirements-based project refers to a working group of community members and stakeholders to develop a requirements-based project. Based on the results of the community needs analysis and problem design, this team will determine the focus and objectives of the project and develop the corresponding activity plan and schedule.

Step 3: Research and guidance, and support refer to the integrated process of in-depth investigation and research into selected projects. Relevant information and data were collected through literature review, expert interviews, and field surveys. Provide participants with the necessary training, resources, and technical support to ensure seamless project execution and alignment with community needs.

Step 4: Solve problems and Citizen participation training refers to taking action to address identified problems and training civic engagement participants. And encourage participants to actively participate in community affairs, improving the ability of participants to pay attention to and solve community problems.

Step 5: Reflection and evaluation refer to the key processes that must take place after the project is implemented. Through reflection and discussion with community members and stakeholders, evaluate the results and effectiveness of the project and understand the successes and problems of the project.

5) Media and resources

Teaching Material: Multimedia materials. Multimedia textbook. Including audio, animation, images, and other forms, enrich the teaching content, improve students' participation and learning effect; Online courses and learning platforms. (Virtual laboratory and simulation environment); PPT courseware.

6) Course evaluation

The information collected through the evaluation can help determine students' performance. These pieces of information also help guide the course and teaching methods to meet the needs of students. The form of evaluation is determined to be consistent with the objectives, content, and teaching and learning process. The assessment in the new course includes: Learning service knowledge test; Observation sheet to enhance students' service awareness; Evaluation of students' project plan for the community

2. The finding of course development and lesson plans by experts

This step aimed to determine the quality of the draft course and lesson plans before their implementation. The draft course was evaluated by experts regarding the appropriateness of the draft course. The findings of the course evaluation, which were collected and analyzed were indicate that the experts rated the overall course development at a very high level, with a mean score of 4.82 and a standard deviation of 0.14. The finding of eight lesson plans that experts rated the overall lesson plans at a very high level, with a mean score of 4.72 and a standard deviation of 0.04. These findings are statistically significant, confirming the suitability of the draft curriculum and lesson plans for implementation.

Phase 3: The findings of the course implementation

The course was implemented with 25 second-year students (1 class) majoring in social work at Jilin Normal University, the People's Republic of China. The study findings are presented as follows.

Table 1 The findings of comparing the different mean scores of students' service knowledge before and after learning the Community Social Work Course based on Problem-Based Learning Combined with a service learning approach

Group	n	Pretest scores		Post-test scores		t	p
		M	SD	M	SD		
Experimental group	25	18	6.61	26.28	1.54	6.779**	0.001

** $p < .01$

As presented in Table 1, after implementing the Community Social Work Course based on Problem-Based Learning Combined with Service Learning approach, the students' knowledge was higher than before at a significance level of .01 (M = 26.28, SD = 1.54, t = 6.779, p = 0.001).

Table 2 The findings of comparing students' service awareness after implementing Problem-Based Learning Combined with the Service Learning approach, with the criterion set at 70%

Group	n	Full score	Criteria score	M	SD	t	p
Experimental group	25	60	42.1	50.72	4.49	9.607**	0.001

** $p<0.01$

As presented in Table 2, after implementing the Community Social Work Course based on Problem-Based Learning Combined with Service Learning approach, the students' service awareness was higher

than the determined criterion set at 70% at a significance level of .01 (M = 50.72, SD = 4.49, t = 9.607, p = 0.001).

Table 3 The findings of comparing students' project plans for the community after implementing Problem-Based Learning Combined with the Service Learning approach, with the criterion set at 70%

Group	n	Full score	Criteria score	Mean	SD	t	p
Experimental group	25	24	16.81	22.72	2.01	14.696**	0.000

** *p*<0.01

As presented in Table 3, after implementing the Community Social Work Course based on Problem-Based Learning Combined with Service Learning approach, the students' project plan for the community was higher than the determined criterion set at 70% at a significance level of .01 (M = 22.72, SD = 2.01, t = 14.696, p = 0.001).

Discussion

Results from research objective 1 found that the traditional teaching mode is mainly lecturing, overemphasizes theoretical knowledge, and neglects the cultivation of students' practical ability, problem-solving ability, and innovative thinking, resulting in a disconnect between what students learn and the actual needs of community work. Lack of practical guidance. Traditional teaching content may be difficult to update promptly, leading to a disconnect between teaching content and industry needs. Traditional teaching methods focus on the assessment of students' theoretical knowledge and neglect the assessment of students' practical ability. It is difficult to fully reflect the individual differences and learning outcomes of students with a single assessment standard and a unified examination paper or marking standard. This can lead to a lack of student engagement and interest, especially for applied courses where active student participation is critical to learning outcomes. Community social work, as a compulsory basic course for social work majors, aims to cultivate students' service knowledge, service consciousness, and practical ability to develop community service plans. However, in traditional teaching strategies, teachers impart knowledge in one direction and students accept it passively, lacking interaction and participation. Neglect of case studies: The lack of case studies and practical simulations limits students' ability to combine theoretical knowledge with practical situations.

The community social work course is not only an important component of the education system in the field of social sciences but also possesses profound value in social practice and humanistic care. It plays an irreplaceable role in actual social services and management. It is a compulsory course for students of social work, sociology, and related majors, laying a solid foundation for training professional community workers. However, students majoring in social work often exhibit low engagement, a lack of ability to solve practical problems, and a lack of in-depth understanding of social issues when studying this course. Therefore, it is particularly important to enhance these students' learning initiative and comprehensive abilities, strengthen their understanding of the concept of community social work, and improve their service awareness. Thus, the teaching of a community social work course should be based on the current teaching situation, addressing prominent issues and contradictions in teaching. Comprehensive teaching reforms should be carried out in terms of teaching philosophy, content, and methods to promote the development of the community social work course in applied undergraduate colleges. The quality and level of teaching continue to improve. Reform is innovation; it is necessary to break away from outdated thinking and bring the latest course system to students, truly enabling them to apply what they learn (Wang, 2011).

Results from research objective 2 found that the Community Social Work Course based on Problem-Based Learning and Service Learning consisted of the principles, objectives, content, instructional strategy, materials, and evaluation. The developed course with a very high level of appropriateness. This may be

because researchers follow Hilda Taba's curriculum development steps: diagnosing learners' needs, formulating objectives, selecting content, organizing content, selecting learning experiences, organizing learning activities, and determining evaluation methods. This approach ensures that curriculum planning is responsive to students' actual needs, encourages teacher involvement, and is grounded in educational principles and developmental appropriateness. Taba's model underscores the importance of a logical sequence in curriculum design, promoting coherence between objectives, content, and assessment (Taba, 1962).

Results from research objective 3 found that the course was implemented among second-year students to assess the effectiveness of the course. The research combining Problem-Based Learning and Service Learning can improve students' service knowledge, students' service awareness, and students' service project plan for the community. This may be due to the following reasons: The problem-based learning method is a teaching approach that guides students to actively think, explore, and practice by constructing challenging and practical problems. This method not only focuses on problem-solving but also emphasizes the thinking training and ability cultivation during the problem-solving process, which has a significant effect on improving various abilities of college students (Hmelo, 2004). The Problem-Based Learning method has several characteristics that collectively promote the enhancement of various abilities of college students: (1) Problem-Based Learning can stimulate college students' initiative in learning and exploration. When facing problems, students need to actively seek solutions, a process that cultivates their autonomous learning ability, critical thinking, and innovation ability. (2) This method strengthens college students' problem-solving and decision-making abilities. By simulating or real problem situations, students need to analyze problems, develop plans, implement actions, and evaluate results, thereby exercising their decision-making ability, which is crucial for their future careers. (3) Problem-Based Learning also promotes college students' team collaboration and communication skills. Group-based teaching activities require students to work in teams, divide labor, and exchange ideas, which enhances their team collaboration skills and communication techniques. (4) This method enhances the practicality and applicability of knowledge. Students combine theoretical knowledge with practice while solving problems, developing practical abilities and innovative awareness, and better adapting to future societal needs. (5) Problem-based learning achieves a transformation in the teacher's role and the establishment of the student's learning subject status. The teacher transitions from being a mere knowledge transmitter to a guide and promoter of learning, whereas the student assumes the role of the primary learner. This shift stimulates the student's interest and enthusiasm for learning, enhancing both learning efficiency and participation (Wang, 2022).

The Service Learning method enables students to apply their knowledge in real or simulated service situations, which not only deepens their understanding of knowledge but also cultivates their practical abilities and innovative thinking. Service learning emphasizes the combination of classroom learning and practical application as students participate in community service, a process that helps to enhance students' sense of social responsibility, team collaboration skills, and critical thinking (Xiao, 2023). In service learning, students need to communicate effectively with community members and team members to solve problems together. This process of communication and cooperation significantly enhances students' communication skills and team collaboration spirit. Through participating in service learning projects, college students perform better in team collaboration, are better able to coordinate relationships among team members, and complete tasks together (Wang, 2022). Additionally, service learning encourages students to reflect and summarize to learn from their service experiences. This reflection process can cultivate students' self-awareness and self-improvement abilities, making them clearer about their learning goals and directions. The reflection in service learning is an important way to promote students' personal growth and development (Zhang, 2021). Learning through problem-solving is the core idea of constructivist learning theory in reforming traditional teaching. Introducing service learning into the curriculum can help

students combine knowledge learning with practice, improving students ' knowledge, abilities, and qualities in practice. This approach of combining problem learning and service learning enables students to actively think and seek solutions when facing real or simulated problem situations, while applying their knowledge to community service, enhancing learning experiences and a sense of responsibility (Xu, 2020).

In the service learning process, students need to deeply understand community needs, design, and implement service plans. This process not only exercises students' problem-solving abilities but also enhances their ability to write community service plans. Through continuous reflection and improvement, students can more accurately grasp community needs and design more targeted and feasible service plans (Li, 2020). The combination of problem learning and service learning can not only improve students' comprehensive quality and problem-solving abilities but also cultivate their service awareness and social responsibility. Students exercise their team collaboration skills, communication skills, and innovation abilities in practice. The improvement of these abilities is of significant importance for their future development (Zhang, 2021).

The implementation of Problem-Based Learning and Service Learning may closely integrate theoretical knowledge and practical operations. Through the design tasks of the actual community work course, students can apply abstract theoretical knowledge to specific practices, thereby deepening their understanding and mastery. Curriculum reform can increase students' interest in learning, serving as the foundation for innovative teaching models. Through problem-based learning and service learning, students are no longer passive recipients of knowledge but actively explore and solve problems by completing specific community social work design tasks. This innovative teaching model can stimulate students' interest and motivation in learning and improve learning outcomes. Problem-based learning and service learning emphasize the importance of practical teaching and mention the combination of theoretical and practical teaching. Problem-based learning and service learning, as practice-oriented learning methods, emphasize learning through practical operations, allowing students to practice and improve their knowledge while completing tasks. Problem-based learning and service learning, as practice-oriented learning methods, emphasize learning through practical operations, enabling students to practice and improve various abilities during the task completion process.

Conclusion

This study confirms the effectiveness of the teaching model combining problem-based learning and service learning to improve the service knowledge, service awareness, and community project planning of sophomore students. Through the test of service knowledge, observation of service awareness, and evaluation of the community project plan, it is confirmed that this study can effectively combine theoretical knowledge and practical operation to improve students' service knowledge, service awareness, and community project plan.

Future research could further explore the integration of Problem-Based Learning and Service Learning, particularly in fostering a sense of civic responsibility and community engagement among students. Examining how this approach enhances student learning outcomes and professional competencies while addressing real-world community challenges would provide valuable insights. Additionally, investigating the role of online technology tools and platforms in facilitating interactive, service learning experiences could further strengthen the practical application of teaching. By continuously refining instructional strategies and leveraging technology to support community-based initiatives, it can better prepare students for the evolving field of software engineering, ensuring they develop both technical expertise and a strong commitment to social responsibility. This not only enhances the quality of education but also reinforces higher education's role in cultivating professionals who contribute meaningfully to their communities.

Recommendation

Recommendation for implication

1) Before introducing the course into the classroom, teachers should first study the curriculum and course documents, such as course plans and teaching materials, to make the teaching more effective.

2) Teachers should study the mode of using teaching skills, such as cooperative learning, group discussion, problem solving, and question teaching, to explain to students how to do the instruction of learning activities before starting.

3) Teachers should know how to prepare teaching materials before starting the teaching process through self-learning teaching methods.

4) Teachers should encourage students to express their ideas and use social interaction. Make them have teamwork skills, have teamwork skills, be good at communication, and communication responsible for doing activities with others.

5) Teachers should study the real evaluation and how to evaluate students' learning. In addition, teachers should adopt real and diverse assessment methods. This kind of assessment is effective in better evaluating students' academic performance.

Recommendation for further research

1) Investigating the role of online technology tools and platforms in facilitating interactive, service learning experiences could further strengthen the practical application of teaching.

2) The adaptability of students from different backgrounds is studied to compare the learning effects of various student groups in the course, optimize the course design, and improve its inclusiveness and adaptability.

3) Explore the possibility of integrating teaching strategies with technology, such as using innovative technologies, such as online collaboration platforms and virtual reality simulation, to enhance teaching interaction and immersion, support the realization of curriculum objectives, and help teachers effectively track students' learning progress and results to provide a richer learning experience.

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