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The Development of Instructional Model Based on Social Innovator to Promote Creative Innovation in New Economic BCG Model (Bio, Circular, and Green Economy Model) to Community of University Students

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Abstract: This research had objectives for 1) developing the instructional models based on the social innovator to promote creative innovation in new economic BCG to community of university students, and 2) studying the efficiency of instructional models based on the social innovator to promote creative innovation in new economic BCG to community. Sample group being used in this research was 240 students from Dhonburi Rajabhat University, Semester 1, Academic Year 2024 which were from the simple random sampling using the lottery method. Tools being used in this research were developed instructional models and manual, assessment form of creative innovation, knowledge test, evaluation form of social innovator competence and group discussion topics being examined the quality through data analysis, percentage, mean, standard deviation, T-test, and content analysis. The results were found that 1) the instructional models composed of principles, objectives, steps of teaching and learning, assessment and evaluation, and supporting factors. The efficiency value was the highest level. The qualitative value of the manual for using the learning management was the highest level, 2) the effectiveness of instructional models was as follows: 2.1) creative innovation in the new economic BCG for community which the students presented had the highest scores, 2.2) students having knowledge on the new economy BCG model after learning was higher than before learning significantly statistical level of .05, 2.3) students having competence of the social innovator was the highest level.

Keywords: Instructional model, Social innovator concepts, Creating innovation, New economy BCG model

Introduction

According to the standard of national education determining Desired Outcomes of Education, DOE Thailand meant Thai characteristics 4.0 responding to the vision for national development towards stability, prosperity, and sustainability. Thai people 4.0 must preserve Thai identity and compete the global stage. In another words, it was good people having the virtue, holding the shared social value base on self-development for having 3 characteristics which were 1) Learnor purson, 2) Co-creator, 3) Active Citizen (The Office of the Secretariat of the National Education Council, 2019: 3) the Desired Outcomes of Education, DOE Thailand was correspondent to 20-year strategy of Dhonburi Rajabhat University for local development (2017 - 2036). The university determined the vision for Dhonburi Rajabhat University to be graduate production institution having identity, quality, competence, and to be the core institution integrating knowledge into innovation for local development (Itsaro, 2018). From 20-year strategy of Dhonburi Rajabhat University for local development (2017 - 2036) to the determination of Strategic Action Plan of Dhonburi Rajabhat University for 5 years (2023 - 2027) determining the strategic emphasis. The new dimension of developing local community based on socio-geographic characteristics and demand-Driven was launched. Because of the expertise and the unique identity of Rajabhat Universities, Rajabhat Universities was the center of learning in order to create the

community' capital value and to raise the level of the basic economy including to create the community innovators in order to build the self-management competence of local community. The process of instruction should focus on educating the good citizenships for the local community to students for being the social innovators who brought the knowledge to the creative innovative in order to develop the community by using the social innovators which was the process of developing the skills of social innovators to students through the multidisciplinary active learning being used to develop the local community as social lab based through coaching from teachers of various faculties and local wisdom practitioners so that students from different faculties cooperated the activities solving the area based problems. Moreover, the process focused on building students to become graduates as thinkers, communicators, coordinators, and innovators (Phukhamchanod, 2022). According to the idea of social engineer, they would see the important ideas for developing the students which were integrated cross-disciplinary learning and proactive knowledge management, coaching, and design thinking for developing innovations solving the area-based problems.

Therefore, in order to developing students in the group of Rajabhat Universities to achieve the determined identity, the teachers should develop the teaching method promote the interesting social innovators at the present time which was the development of community-based innovation parks, target task location relating to the economic development of BCG in the area, especially in terms of tourism, agriculture, diet sustainability, the creation value being led to global market (Plants, Animals, Local Agriculture). The new economic BCG model was to develop the country with the new economy being called "Economic BCG Model". It was to develop three economies which were bioeconomy, circular economy, and green economy at the same time in order to drive Thailand forward in a tangible way. In addition, the economic BCG model was correspondent to sustainable development goals (SDGs) and to the principle of sufficiency economy philosophy (SEP) (Ministry of higher education, science, research, and innovation, 2022: online).

Being said above, the researcher intended to develop the instructional model developing students into social innovators with the competence to create innovations in the economic BCG model being led to develop community of students of the higher education level in Rajabhat Universities according to the strategy of Rajabhat Universities and the goal of developing the quality of graduates. The objectives of the research were 1) to develop the learning management under the social-innovators idea in order to promote the competence of creating innovation with the new economic BCG model to the community of higher education students. 2) to study the outcome of the effectiveness of the instructional model under the idea of social innovators to promote the competence of innovation creation with the new economic BCG model to the community which were 2.1) to study the creative innovation with the new economic BCG model to the community 2.2) to study the knowledge about the new economic BCG model to the community, and 2.3) to study the competence of social innovators.

Research methodology

According to the research on developing the instructional models based on the social innovator to promote creative innovation in the new economy BCG model for community of university students, the researcher determined the methodology as following.

Step 1: The analysis and the study basic data (R1=Analysis). To study the primary data sources from knowledgeable individuals and experts, and to study the secondary data from academic documents and related researches being brought to synthesize, design, and develop the instructional model (D1 = Design and Development). The operation details as following. The detail of this step follow.

Objectives: For analyzing the basic data in the instructional models based on the social innovator to promote creative innovation in the new economy BCG model for community of university students.

Target group: Target group used in this step from the purposive sampling method were 1) The experts in terms of curriculum and learning management for one person, in terms of social engineer for one person, in terms of economy BCG for one person, one teacher, one community representative, total 5 people. 2) Documents, academic articles, and related researches.

Tools and assessment of the quality of research tools: 1) The semi-structured interview about needs and expectation of developing the instructional model had the content validity coefficient of 1.00. 2) The analysis form of research documents in this research, the researcher created and developed the analysis form of documents had the content validity coefficient of 1.00.

Method: There were steps for the research operation as following. 1) To cooperate with the target group and to survey in the field for collecting data about needs of the primary data which were the curriculum and learning management expert, social engineer expert, BCG economy expert, instructor, and community representative through the interviews, observations, image and sound recording, and note-taking. 2) To study the secondary data of academic documents and related researches by analyzing documents through the analysis form of developed documents.

3. To bring the primary data from interviews, observations, and note taking by the researcher, as well as data from document analysis, to analyze through content analysis in order to be the foundational information for developing the instructional model.

Data analysis: The statistics for data analysis was content analysis.

Step 2: To design and develop the instructional model (D1 = Design and development) the development of the instructional models according to the social innovator idea in order to promote the competence of creating the innovation using the new economy BCG model for community of university students had the step for the research operation as following.

Objectives: To develop and finding the effectiveness and the quality of the instructional models according to the social innovator idea in order to promote the competence of creating the innovation using the new economy BCG model for community of university students.

Target group: Target group used in this step from the purposive sampling method were: two curriculum and learning management experts, two social engineer experts, and one expert in assessment and evaluation, totaling 5 people.

Tools and assessment of the quality of research tools: The suitability assessment form of the instructional models according to the social innovator idea based on

the social innovator to promote creative innovation in the new economy BCG model for community of university students had the content validity coefficient of 1.00.

Method: To develop and finding the effectiveness and the quality of tools in this research which were the instructional model being developed according to social innovators. Tools collecting data in this research were the assessment form of innovation creation in the new economic BCG model to the community, the knowledge test on the new economic BCG model to the community, and the assessment of competence as the social innovators. The researcher operated the development as following.

1. The instructional model under the idea of developed social innovator. To synthesize data from the analysis step, and to study the basic data being led to the development of the instructional model and the manual of the instructional model and to develop the instructional model and the manual of the instructional model composing with principles, objectives, learning steps, assessment and evaluation, supporting factors, and the learning management manual which consisted of content, tests, manuals, and learning management plans by using the developed model and examining the developed the instructional model and the manual of the instructional model in order to find the effectiveness so that the experts could determine the overall suitability criteria for the model and manual, rated 3.50 or higher.

2. The assessment form for the creative innovation using the new economic BCG model to the community. In order to develop and to find the assessment form of the creative innovation in the new economic BCG model to the community, the researcher synthesized data from the analysis step and studied from the basic data to create the draft assessment form of innovation creation by using the new economic BCG model to the community and the rubric score criteria, the full score was 5 points by studying the competence of innovation creation using the new economy BCG model to the community. After that, the draft assessment form and the criteria giving scores of qualitative examinations of the developed assessment were presented to the experts. The verification result was 1.00.

3. Knowledge test about the new economy BCG model to the community. In order to develop ad to find the quality of the knowledge test about the creative innovation using the new economic BCG model to the community before and after using the set of creative activities by using studying the idea principles, and creating the knowledge test about the creative innovation using the new economic BCG model to the community, the developed draft of knowledge test about the creative innovation using the new economic BCG model to the community consisting of 20 true-false questions was examined for the quality which its result was 1.00.

4. The competence assessment of being the social innovators. In order to creating and developing, the research studied data from documents, books, and related literatures and created the assessment form of competence as the social innovators covering and aligned with the key points which were knowledge of tools, techniques, methods, and processes in developing innovations for local community; the ability of critical and systematic thinking with logical reasoning, viewing problems as challenges; creative and amicable communication and collaboration with group of people; successfully creating innovation for community; and being the thinkers, communicators, collaborators, and innovators for the community, the result was 1.00.

5. The topic of group discussion on the competence for being the social innovator for university students. In order to develop and finding the quality of the topic of group discussion on the competence for being the social innovator for university students by synthesizing data from the analysis step and studying the basic data and developing the draft of the topic of group discussion on the competence for being the social innovator for university students composing with 1.) knowledge of tools, techniques, methods, processes, and steps in developing innovations for local community, 2.) the ability to think analytically and systematically with logical reasoning, seeing problems as challenges, 3.) the ability to communicate and collaborate creatively with groups in an amicable and constructive manner, 4.) the ability to create innovations for community achieving the successful outcomes, 5.) being the qualities of a thinker, communicator, collaborator, and innovator for community, and examining the topic of group discussion about the content validity index and IOC (index of item-objective congruence), the value result was 1.00.

The data analysis: Statistics being used in the data analysis were percentage, mean, and standard deviation.

Step 3: To examine for finding the effectiveness of the instructional model (R2 = Implementation)

To examine for finding the effectiveness of the instructional model by bringing the effectiveness of the instructional model to the experts for testing with the sample group operated as following.

Objectives

For the effectiveness of the instructional models according to the social innovator idea in order to promote the competence of creating the innovation using the new economy BCG model for community as following

1. The innovation creation using the new economy BCG model for community was suitable at the high level.
2. The knowledge about the new economy BCG model after learning was higher than before learning.
3. The competence of social innovators of students after learning was higher before learning.

Population and sample group

Population: The population used in this research was university students of Thonburi Rajabhat University registering for the social engineer course in the first semester of the academic year 2024 includes a total of 14 fields of study, 10 classrooms, and 530 students.

Sample group: Sample group used in this research was university students of Thonburi Rajabhat University registering for the social engineer course in the first semester of the academic year 2024. The size of sample group was determined by the pre-made sampling table of Krejcie & Morgan. The size was 240 students and 5 classrooms which were from the simple random sampling method using a lottery draw by using classrooms as random units.

Tools used in this experiment: Tools used in this experiment of the research on the instructional models according to the social innovator idea in order to promote the competence of creating the innovation using the new economy BCG model for community

of university students were tools in this research composting with the instructional models according to the developed social innovator idea and tools for collecting data which were the assessment form of creative innovation using the new economy BCG model for community, Knowledge test about the new economy BCG model for community and the assessment form of the competence of social innovators had the content validity coefficient of 1.00.

Method: The research on the instructional models according to the social innovator idea in order to promote the competence of creating the innovation using the new economy BCG model for community of university students was operated as following.

Experimental design: In this research, the researcher used research plan type 1 (one group pretest-posttest Design) (Campbell & Stanley. 1963)

The experimental steps

There were the operation steps as following.

1. The researcher cooperated with the community leader in order to make an appointment for the meeting clarifying the objective, the method, and the usefulness from applying the developed instructional models according to the social innovator idea in order to promote innovation creation using the new economy BCG model for community of university students.

2. The researcher applied the instructional models according to the social innovator idea in order to promote innovation creation using the new economy BCG model for community of university students with sample group.

3. The assessment form of the innovation creation using the new economic BCG model for community after using the knowledge test about the new economic BCG model for community and the competence as social innovators of university students before and after using the developed instructional models based on the social innovator idea in order to promote innovation creation using the new economy BCG model for community of university students.

Data Analysis: Statistics being used in the data analysis were percentage, mean, standard deviation, T-test, content analysis.

Step 4: The assessment and improvement for activity set (D2 = Evaluation and Improvement)

The discovery from the instructional models based on the social innovator idea in order to promote creative innovation using the new economic BCG model for community of university students with sample group, and Focus group were promoted for more completing.

Objectives: In order to promote the developed instructional model.

Target group: Target group used in this step from the purposive sampling method were: the instructor, the university students, and the community leader, all 8-12 people which were specifically chosen.

Tools for collecting data: The topic of focus group on the competence of being social innovators of university students had the content validity coefficient of 1.00.

Method: 1) To conduct focus group discussions to extract lessons learned on the use of innovations by community leaders, including sample groups and researchers. 2) To

analyze and summarize key data for improving the learning management model. 3) To improve the innovation to ensure completeness.

Statistics: The content analysis

Research results

Part 1 The results of a study on basic data and the development of a instructional model according to the idea of social innovators to promote the innovation creation competencies through the new economic BCG model for community of university students.

1. The results of the basic data study found that the learning management model should composed of principles, objectives, teaching steps, assessment and evaluation methods, supporting factors, and a manual which were from the process of developing social engineer skills for students through multidisciplinary active learning with hands-on practice which were used in the development for the local community as social lab based through coaching by teachers from various faculties and local wisdom experts so that university students from different faculties cooperated activities fixing the area based problem by themselves. The tools for the social engineer used the design thinking and community based on learning. The process of learning management based on community (Wilaiporn Ritthikup, 2018), activities for developing the community and society were designed by the design thinking. The design thinking of David Kelley, 2547 mentioned in (Jangwitaya, 2018), he said that the process of design thinking was for developing the new ideas and new innovations for solving the specific problem under the best way and the most suitable which there were 5 steps: (1) Empathize, to understand the sample group, (2) Define, to identify the problems they wanted to solve, (3) Ideate, brainstorm ideas to solve problems, (4) Prototype, to create a full-scale model in the case of products or write the plan in the case of service, and (5) Test, for develop and improve the innovations so that students were developed to be the co-creators under the economy BCG model which developed the economy in 3 sides which were Bioeconomy, Circular Economy, and Green Economy at the same time. From the document study and the related researches were used for developing the instructional model as shown in the synthesis table.

2. The results of the development and efficiency evaluation of the instructional model according to the social innovator idea to promote the competence of creative innovation through the new economic (BCG) model for community of university students

2.1) The results of the development and efficiency evaluation of the instructional model according to the social innovator idea for promoting the competence of innovation creation through the new economic model (BCG) for community of university students. The researcher studied the results of the analysis and basic data (R1=Analysis) and synthesized the primary data from the observation and the interviews with related people, and the secondary data from the document study and the related researches leading the development of the development and efficiency evaluation of the instructional model according to the social innovator idea for promoting the competence of innovation creation through the new economic model (BCG) for community of university students. There were the elements as following.

Name of the activity the development and efficiency evaluation of the instructional model according to the social innovator idea for promoting the competence

of innovation creation through the new economic (BCG) model for community of university students (Double PA Instruction Model).

Principles the learning management through real practice by using community's problems and needs based on creating the innovations corresponding to the economy BCG model through the design thinking together with the idea of social engineer in order to develop the social innovators so that they had the knowledge, the skills for developing the innovation, and created the sense of love for the local community.

Objectives for developing the social innovators having the competence for innovations creation under the new economic BCG model for the community.

Teaching step the instructional model under the idea of social innovators for developing the social innovators having the competence for innovations creation using the new economy BCG model for the community of university students (Double PA Instruction Model) had 4 steps which were step 1. Prepare Essential Knowledge and skills: P_1, step 2. Participatory Actual Research: P_2, step 3. Active Create Innovation and Actual Practice: A_1, step 4. Assessment of Innovation and Knowledge: A_2.

Assessment and Evaluation the way of the assessment and the evaluation from participants who were teachers, community, and learners in order to reflect the efficiency of innovations under the new economy BCG model for the community reflecting the knowledge, skills for developing the innovations, the sense of love for local community of learners who were taught with the developed model.

Supporting factors composed of 1) Directing was that the community and school administrators supporting in terms of time and opportunities so that teachers and students operated the developed instructional model. 2) Participatory was that the learning management should promote students to participate in planning, and making rational decisions. 3) Community-based creative thinking was that students are given the opportunity to freely create innovations by using the needs and challenges of the community as a foundation for designing innovations, aiming to develop them in alignment with the new economic approach (BCG) for the community. 4) Coaching and Facilitator was that the learning activities should focus on student-centered approaches. Therefore, the teacher's key role was to provide advice, and assistance when students needed it of the whole activities.

The instructional model as mention above shows in the figure 1 below.

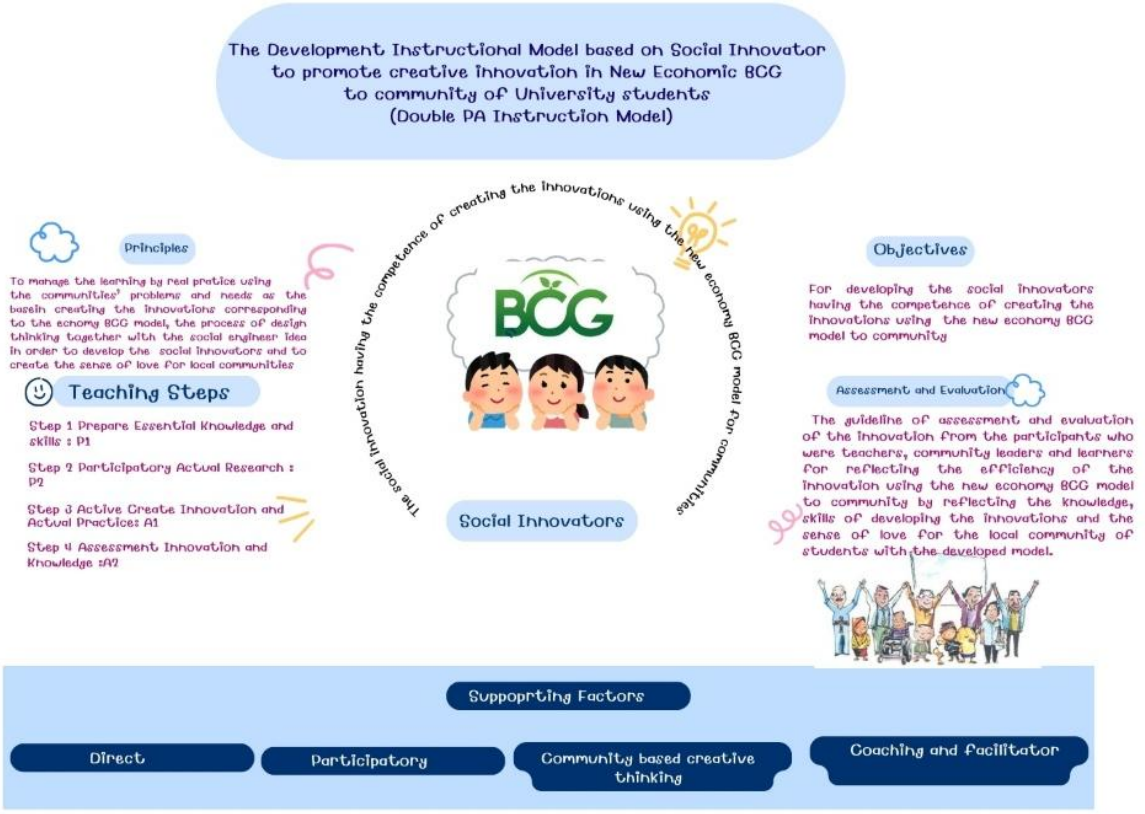

Figure 1: The instructional model according to social innovation ideas for promoting the competence of creative innovations by using the new economic model (BCG)

2.2) The results of the efficiency of the instructional model found that the overall developed instructional model had the highest level of appropriateness (M=4.88, SD=0.12) and the results examining the quality of manual had the highest level of appropriateness (M=4.84, SD=0.08).

Part 2 The results of the study on the effectiveness of the instructional model based on social innovation ideas for promoting the competence of the creative innovations by using the new economic model (BCG) for the community.

2.1 The results of the evaluation of creative innovations with the new economic model (BCG) for the community by five groups of students from six disciplines. The researchers and community leaders were the evaluators using a rubric score evaluation criteria, are shown in Table 1 (N=3).

Table 1: The results of the evaluation of creative innovations with the new economic model (BCG)

Work no.	Titles of work	Mean		Level
		M	SD	
1	Organic Preserved Fruits	4.33	0.57	Highest
2	Herbal Inhaler for Health	5.00	0.00	Highest
3	Organic Farming in the Household	4.33	0.57	Highest
4	Handy Fertilizer	4.67	0.57	Highest
5	Herbal Dishwashing Liquid with Kaffir Lime and Tea Leaves	4.67	0.57	Highest

From the table 1, shown the results of the evaluation of creative innovations by using the new economic (BCG) model for the community by university students shown that all projects related to creative innovations following the new economic model (BCG) for the community received scores at the highest level (M=4.30, SD=0.57 to M=5.00, SD=0.00) corresponding to community' needs. It could solve the problems and responded community' needs appropriately, practically, and usefully so that community were strong for sustainedly developing as shown in the hypothesis.

2.2 The results of the knowledge test on the new economic model (BCG) for the community before and after learning using the developed instructional model were summarized in Table 2

Table 2: The results of the knowledge test on the new economic model (BCG)

Test	n	Total score	M	SD	t
Before	240	20	7.34	1.64	43.76**
After	240	20	15.68	2.56	

**Statistic significant at .01 level

From the table 2 shown the knowledge test on the new economic (BCG) model for the community before and after learning using the developed instructional model found that the knowledge about the new economic model (BCG)after learning was very high level (M=15.68, SD=2.56) . It was higher that before learning which was medium level (M=7.34, SD=1.64) with significant statistics level at .01 as shown in the hypothesis.

2.3 The results of the evaluation of the competence as the social innovator of university students who were taught using the instructional model based on social innovation ideas for promoting the competence of creative innovations by using the new economic model (BCG) for the community are shown in Table 3.

Table 3: The results of the evaluation of the competence as the social innovator of university students

Competence of creative innovations	M	SD	Competence Level
1. Have knowledge of tools, techniques, methods, processes, and steps in developing innovations for local communities.	4.67	0.47	Highest
2. Have the ability to think analytically and systematically, logically, and see problems as challenges.	4.85	0.35	Highest
3. Have the ability to communicate and coordinate with groups of people creatively and be a good friend.	4.77	0.41	Highest
4. Have the ability to create successful community innovations.	4.27	0.53	Highest
5. Have the ability to be a thinker, communicator, coordinator, and community innovator.	4.67	0.47	Highest
Total	4.64	0.18	Highest

From the table 2.3 shown the competence of creative innovations of university students found that it was generally the highest level (M=4.64, SD=0.18). According to the focus group, it was found that students had knowledge of using tools, techniques, methods, processes, and steps in developing innovations for local community. They had the ability to think analytically in a systematic, logical manner and viewed problems as challenges. They had the ability to communicate and coordinate with groups of people creatively, being a good friend. They also had the ability to create community innovations leading to successful outcomes. They were thinkers, communicators, coordinators, and creators of community innovations. The summary from the group discussion was as follows:

Discussion

1. The results of the analysis and basic data were found that the developed learning management model according to social innovation ideas for promoting the competence of creative innovations by using the new economic model (BCG) for the community of university students corresponded to the university's policy emphasized the development of students according to the principles of social engineering to develop the students' competencies expected to be thinkers, communicators, coordinators, innovators, and co-creators of innovations according to the national education standards used as the basis for developing local community. The developed instructional model was called the social innovator-based learning model for promoting the competence of creative innovations by using the new economic model (BCG) for the community of university students (double PA instruction model) which composed of principles, objectives, teaching steps, assessment and evaluation, and supporting factors. The value of effectiveness was the highest level (M= 4.88, SD=0.12). The instructional model manual had the quality at the highest level (M= 4.84, SD=0.08). This corresponded with Patphol (2024, p. 24) who mentioned about the process of the research and the development in curriculum and learning, and stated that the

research and development was research that could be applied with all professional fields and became many models of innovations. In terms of the curriculum and the learning, the research and development were used as the research process for creating various innovations. Corresponding to the research of Duangphrakes (2017), she studied about the development of the active instructional model by using based problems in order to promoting the competence of students in non-formal education and informal education. The results were found that the results of the development of the active instructional model by using based problems in order to promoting the competence of students in non-formal education and informal education composed with 1) principles, 2) objectives, 3) content and learning management process, 4) assessment and evaluation of the learning management. This composed of 7 learning management steps which were 1. preparation of learners,2. problem situation, 3. problem analysis, 4. work planning, 5. implementation, 6. summary, and 7. evaluation.

2. the result of the effectiveness of the instructional model under the idea of social innovators to promote the competence of innovation creation with the new economic BCG model to the community which were:

2.1 The creative innovations according to the new economic model (BCG) for the community presented by the students received scores at the highest level. It aligned with the research hypothesis corresponding to Isaro (2021) who defined that the social engineer meant the person was able to think analytically in a systematic and logical manner, integrating knowledge across disciplines, mixed sciences, and interdisciplinary approaches; the person had the knowledge to use tools, techniques, methods, processes, and steps in developing people in local community; they were able to communicate and coordinate with groups, network partners, and social stakeholders in a collaborative and amicable manner; they were good at creating the social innovations for solving the problems of community, society, and Thailand.

2.2 Students had the knowledge about the new economic model (BCG) after learning higher than before learning at the .05 level of statistical significance. Corresponding to Benjamin S. Bloom (Bloom. 1976: 18), the believed that for being successful and effective in teaching, the teachers must have the clear goal in order that they could determine and manage the activities including the correct evaluation by classifying the goals of study. Corresponding to the office of the education council secretariat (2019, p. 3), they mentioned about the desired outcomes of education, DOE Thailand, in terms of learner person which meant to be a hardworking person loving to learn, and having lifelong learning skills to keep up with the digital era and the future world.

2.3 Students generally had the competence as the social innovators at the highest level.Corresponding to Isaro (2021, p. 53), she mentioned about “Social Engineer Skills” composing of the critical thinking skills, communication skills, teamwork skills (coordination skills), and innovation creation skills. These were the specific skills of students studying at Rajabhat Universities who were instilled, taught, given knowledge through the thinking process of analytical reasoning, identifying the real problems, thinking systematically, thinking creatively, design thinking, taking systematic action, following structured steps based on principles, not just textbooks, considering the real problems, communicating, coordinating with goals, network partners, social stakeholders with understanding, accessibility, mutual dependence, and sustainable development. They learned to create tools, used techniques and methods corresponding to the way of life in the local community where local people lived, produced social innovations to solve social problems in the proper and virtuous manner, ultimately made oneself self-reliant and the

source of support for society with dignity, worthy of being proud students of Rajabhat University. The suggestion applying the results of the research are 1) should focus on the student centered, open the opportunity for students to think, and real practice in the innovation creation causing the usefulness and corresponding to the needs based on community. 2) For developing the competence of social innovator, they should collaboratively develop among the educational institutions, learners, and the community throughout the teaching and learning process. 3) Should get students prepare for knowledge, skills, and characteristics of being social innovation before going into the field and practice to crate the innovation based on the community. 4) The developed instructional model should be promoted to applied in several university and supported by administrators. The suggestions for the further research are 1) The further research should apply the idea of the philosophy of sufficiency economy as the base on innovation development. 2) The further research should study about the secondary education or the vocational education. 3) The further research should develop the volunteer spirit in developing the community and society.

Conclusion

The results were summarized as follows: 1) the developed instructional model composed of principles, objectives, teaching procedures, assessment and evaluation, and supporting factors had the effectiveness value at the highest level. The user manual for the instructional model had the quality value at the highest level. 2) the effectiveness of the instructional model according to the idea of social innovators for promoting the competence in creating innovations by using the new economic (BCG) model for community as follows: 2.1) to create the innovation according to the new economic model (BCG) for community which students presented had the highest scores, 2.2) students had the knowledge about to the new economic (BCG) model after learning higher that before learning with statistical significance at .05 level, and student in general had the competence as the social innovators at the highest level.

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