Using Creative Based Learning to Improve the Innovative Skill for Nursing Students

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Abstract

The objectives of this study were 1) to use creative based learning to improve the innovative skills for Nursing students and 2) to compare students' innovative skills before and after the implementation using creative based learning. The simple group of this study consisted of 50 nursing students at Wei fang Nursing Vocational College and were sampled through random cluster. The research instruments included 1) lesson plan based on creative based learning and 2) innovative skills test. The assessment questions aim to assess four sub-variables within the dependent variable including: 1) nursing and society innovation, 2) professional standards, 3) individuals and teams, and 4) project management. AThe data were analyzed by mean, standard deviation and t-test for dependent sample. The results revealed the following. 1. Lesson to improve the innovative skill of nursing students includes Four steps: 1) planning stage, 2) implementation stage, 3) inspection stage, and 4) action stage; 2) comparing their innovative skills before and after implementation, the average score in pre-test evaluation was 58 of full score 80, and in post-test evaluation was 71 of full score 80. It was found that after learning was higher than before learning by statistically at the 0.01 level. That was consistent with the research hypothesis.

Keywords: Creative based learning, Innovative skill, Nursing Students

Introduction

This paper studies the influence of classroom teaching mode under the category of innovative learning methods on the achievement of "innovative skills" of first-year nursing students in higher vocational colleges. Research motivation mainly includes the following two aspects.

One is the need of teaching practice. The primary task of teachers' classroom teaching mode is to set teaching objectives. Teachers need to set corresponding teaching goals in advance no matter how they impart knowledge to students in class, such as text, language, images, video, etc. (Gan, Principles of teaching Design, 1999, p51).

The second is inspired by innovative learning theory. In the classroom model, teachers observe and design the classroom model from a comprehensive perspective, which is also conducive to improving students' innovation ability, constantly integrating skills into it, and forming a classroom model with innovation ability as the goal (Li Hailin, Some reflections on Teaching Objectives, 2003, p. 28).

In short, creative learning is enhanced through innovative education; It requires teachers to strengthen the cultivation of their own innovative ability, so as to enhance the innovative ability of nursing students more effectively.

Objectives

1. To use creative based learning to improve the innovative skill for Nursing students.
2. To compare students' innovative skills before and after the implementation is using creative based learning.

Concept theory framework

The conceptual framework of the study, using creative based learning to improve the invention skill course for Nursing students, was as follows:

Independent Variable		Dependent Variable
Creative Based Learning	▼	Innovative skill of Nursing students

Materials and Methods

The purpose of the lesson plans was to improve the innovative skills of nursing students. The lesson plan was divided into the following four learning units:

1. unit 1: Nursing and Society Innovation (3 hours)
2. unit 2: Professional Standard (3 hours)
3. unit 3: Individuals and Teams (3 hours)
4. unit 4: Project Management (3 hours)

There are four units in the innovation and entrepreneurship education lesson.

The development process of creating Lesson plan according to the innovative skills using creative based learning and assessment form for validity of lesson plan were

followed as.

1. Studying the principles of creating Lesson plan according to the innovative skills and assessment form for validity of lesson plan from books, textbooks, articles, and related research.

2. Creating a Lesson plan according to the innovative skills and assessment form for validity of lesson plan, 4 plans as this above.

3. Drafting the assessment form for validity of lesson plan at the end of each section, there was a space for experts to write suggestions that could be helpful in improving students' innovative skills.

4. Taking the instruments to 3 experts to verify the validity. The test consistency the index of congruency was between 0.60-1.00, the level of consideration was as follows:

Rating was +1 There was an opinion that “Corresponds to definition/measurement objectives.”

Rating was 0 There was an opinion that “Not sure it corresponds to definition /measurement objectives.”

Rating was -1 There was an opinion that “Inconsistent with definition/measurement objectives.”

5. Modifying assessment form for validity of lesson plan according to suggestion.

6. Taking the research instruments to collect data with the research samples.

In this research, the innovative skills were achievement of knowledge that divided into three sub-competencies, including: 1) Nursing and Society Innovation, 2) Professional Standards, 3) Individuals and Teams, and 4) Project Management.

The test questions were designed for these three sub-competencies to evaluate students' innovative skills. The paper consists of 20 multiple-choice questions in each part, totaling 80 questions for a total of 80 points.

The development process of creating the innovative skills test and assessment form for validity of the test of innovative skills were followed as.

1. Studying the principles of the test of innovative skills and assessment form for validity of the test of innovative skills from books, textbooks, articles, and related research.

2. Creating innovative skills test and assessment form for validity of the test of learning achievement.

3. Taking the instruments to 3 experts to verify the content validity and index of items objective congruence (IOC) of the assessment form innovative skills test consistency the index of congruency was between 0.67-1.00.

4. Modifying assessment form for validity of lesson plan according to suggestion.

5. Taking research instrument to innovative skills test and the result of reliability was 0.93.

6. Taking the research instruments to collect data with the research samples.

Table 1: Evaluation quality standards

Score Range	Quality Level
100-120	Strong
86-100	Relatively strong
71-85	General
56-70	Relatively weak
0-55	Weak

The data collection is as follows:

1. Data collection and verification for test tools:

1.Coordinate with 3 professional scholars experts dispense official document from Bansomdejchaopraya University professional experts and give information about data collection process and research tools: instructional model and checklist form about quality of instructional model for consideration (Index of Objective Consistency: IOC).

2. Collect data from 3 professional experts and analysis data for consideration (Index of Objective Consistency: IOC)

Data collection and validation for research work:

1. Relevant literature research: Collect literature related

2. Determination of the research time: the formal research will be carried out in May 2023, and the research data will be collected after the experimental research is completed.

3. Before and after teaching test: This research is experimental research. One Group Pretest – Posttest Design was used with the following experimental design:

Results

The study using creative based learning to improve the invention skill course for Nursing students**.** The researchers conducted research in the following order:

Part 1**:** Results of using creative based learning to improve the innovative skills for Nursing students

The effectiveness of the lesson plan aimed at using creative-based learning to improve innovative skills among nursing students can be assessed through several critical

indicators. Offer valuable insights into the course's impact on enhancing their creativity and innovation, as well as identifying opportunities for further development.

The effectiveness of creative learning is demonstrated through targeted assessments that measure improvement in creative skills before and after class. The level and participation rate of the course reveals its appeal and relevance to nursing students. Observing post-application test scores of innovative skills in a clinical setting or project helps teachers assess their impact on students' professional practice. Provides insights into the development of students' creativity, problem-solving abilities, and readiness to implement innovative solutions in healthcare environments.

The study targeted 50 nursing students from Weifang Nursing Vocational College, aiming to improve their innovative skills through the lesson based on creative-based learning. The detailed outcomes of the pre-test and post-test assessments, which measured the improvement in students' innovative abilities as a result of the course, were presented in Table 2.

Table 2: Learning score between pre-test and post-test

Learning Content	n	Full Scores	Pre-test		Post-test		D
			$\underline{X}$	SD.	$\underline{X}$	SD.	
1. Nursing and Society Innovation	50	20	12	0.642	18	0.346	6
2. Professional Standard	50	20	14	0.436	17	0.412	3
3. Individuals and Teams	50	20	10	0.874	19	0.342	9
4. Project Management	50	20	13	0.576	18	0.432	5
Total		80	49		72		23

According to Table 3, through the implementation of 5E teaching method with the students, their Mathematics Learning Ability post-class significantly improved compared to their ability before the class. This supports the research hypothesis and demonstrates a statistically significant improvement at the level .01.

Part 2: Result of comparing students' innovative skill before and after the implementation using creative based learning

The researcher collected and analyzed data from pre-test and post-test of a lesson focused on using creative-based learning to enhance the innovative skills of nursing students. The data analysis included statistical measures such as mean, standard deviation, and a dependent t-test for correlated samples to assess the effectiveness of the course in improving innovation. The findings were presented in Table 3.

Table 3: Comparison of career planning competency by pre-test and post-test with training course

Learning content		n	Full Point	$\underline{X}$	SD.	t	p
Total score	Pre-test	50	80	58	1.962	9.98**	.00
	Post-test	50	80	71	1.118		

**Statistically significant at level .01 (p <.01)

From the Table 4.2, it could be observed that the career planning competency post-scores were higher than pre-scores, which was statistically significant at the 0.01 level. The average score of students before learning training course was 58 points, and after learning training course, it increased to an average of 71 points, with an average difference of 13 points. The results indicate that after learning training course is better.

Conclusions and Discussion

Conclusion

According to the research topic, the study on improving the innovative skills of nursing students is summarized as follows:

1. Lesson using creative based learning to improve the innovative skills of nursing students which includes Four steps: 1) planning stage, 2) implementation stage, 3) Inspection stage, and 4) Action stage. By using creative based learning, it is found that students have improved the innovative skills of nursing students, including application of knowledge in novel situations, problem-solving and critical thinking, creativity and originality, and adaptability and flexibility to meet the research objectives.

2. Comparing of their innovative skills and abilities before and after implementation, the average outcome in pre-test evaluation was 58 of full score 80, and in post-test evaluation was 71 of full score 80. It was found that after learning was higher than before learning by statistically at the 0.01 level. That was consistent with the research hypothesis.

Discussion

Research on the using creative based learning to improve innovative skill of nursing students was conducted in the first semester of the 2023 academic year. It involved the study of innovative skill for 50 nursing students in Weifang Nursing Vocational College using creative based learning.It is very important to cultivate the innovative thinking, method and ability of nursing students

First-year students are in the golden stage of innovative thinking, and their learning ability, methods, exploration desire and innovation ability are in a flourishing period.

Therefore, to carry out innovative course teaching in the education of first-year students is an important way for colleges and universities to carry out comprehensive education reform and train innovative talents. The study shows the importance of teaching creative learning methods. Nursing students learn the basic knowledge of innovation in school, gradually realize the significance of innovation and innovation, and get some innovative thinking training. They also master some innovative methods in the course learning, and apply relevant knowledge to participate in new projects, which improves their innovation ability and teamwork ability. Creative learning can effectively solve the problems existing in the whole learning and enhance the professional identity; At the same time, the exploration of clinical real problems or cases can stimulate nursing students' interest in innovative learning and practice, and further improve their innovative ability. Studies have shown that 80% of medical innovation skills come from nurses, and nursing students' innovation can help improve nursing quality and work performance, enhance the sense of achievement in the profession, and thus promote the sense of professional identity.

General recommendation

1. Pay attention to the cultivation of nursing students' innovation skills and build a sound innovation skills training system. Innovation skills are considered as the basic core competence of nursing students, and innovative courses through creative learning methods should be incorporated into nursing courses to help students solve existing problems through innovative methods. We should pay attention to the construction of interdisciplinary knowledge system and interdisciplinary integration, and combine innovative theoretical teaching, practical training and innovative education. In addition, the establishment of innovative thinking and the improvement of innovative ability is a gradual process, so it is very important to pay attention to the early training of innovative ability of nursing students and establish a set of systematic training system to improve their innovative skills.

2. Strengthen the construction of innovative teachers in colleges and universities and improve the level of innovative teaching. Students' creativity can be improved through innovation and education, and teachers play a vital role in the development of students' creativity. Therefore, it is very important to strengthen the cultivation of teachers' innovation ability, and colleges and universities should strengthen the guidance and training of teachers' innovation ability. The research points out that only teachers with a certain innovation ability can show a positive attitude towards the cultivation of students' innovation ability and play a positive role in guiding them

3. Strengthen the reform of effective integration of innovative practice teaching of nursing students and innovative education in universities. Clinical practice of nursing students is an important period to improve students' comprehensive ability, and plays a

crucial role in cultivating students' innovative consciousness and improving their innovative ability. Therefore, joint teaching mode can be carried out to improve the innovative ability of nursing students, providing a comprehensive and multi-channel innovative practice platform for nursing students, and effectively improving their innovative ability.

4. Actively create an innovative atmosphere to stimulate nursing students' enthusiasm for innovation. Studies have pointed out that a good creative atmosphere in school is positively correlated with the creativity of nursing students, and having a creative atmosphere is a positive predictor of college students' creativity. Therefore, to further stimulate students' enthusiasm for innovation, exercise innovative thinking and innovative skills in various learning activities, thus enhancing the confidence of nursing students, more likely to engage in innovative activities, more stimulate the initiative and enthusiasm of nursing students to innovate, and improve their innovative skills.

Suggestions for further research

Further research into the using creative based learning to improve the innovative skill of nursing students is crucial for continuous improvement and adaptation to changing healthcare environments. Here are some suggestions for areas of focus:

1. Comparative Studies: Conduct comparative studies to evaluate the effectiveness of creative-based learning versus traditional learning methods in improving innovative skills among nursing students.

2. Longitudinal Research: Undertake longitudinal research to track the career progression of nursing graduates who have undergone creative-based learning, assessing the long-term impact on their innovative capabilities and career success.

3. Interdisciplinary Research: Explore interdisciplinary research opportunities that examine the integration of creative-based learning principles from other fields into nursing education and its impact on student outcomes.

4. Barriers and Enablers: Identify barriers to and enablers for the adoption of creative-based learning in nursing education, providing insights for educators and policymakers to overcome challenges.

5. Impact on Patient Care: Research the direct impact of nurses' innovative skills, nurtured through creative-based learning, on patient care outcomes, healthcare efficiency, and the adoption of innovative healthcare solutions.

By addressing these recommendations and suggestions for further research, nursing education can evolve to better prepare students for the challenges of modern healthcare, equipping them with the innovative skills necessary to lead change and improve patient care outcomes.

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