

# Experiential Teaching Method Enhance Surgical Nursing Learning Achievements and Learning Attitude of Five-Year Higher Vocational Nursing Students

Pengfei Liu<sup>1</sup> & Kanyarat Sonsupap<sup>1</sup>

<sup>1</sup> Department of Curriculum and Instruction, Faculty of Education, Mahasarakham University, Thailand

Correspondence: Kanyarat Sonsupap, Department of Curriculum and Instruction, Faculty of Education, Mahasarakham University, Mahasarakham, Thailand.

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## Abstract

China's higher vocational nursing education continues to develop. Teaching methods based on classroom lectures are difficult to achieve high-quality teaching results. Nowadays, clinical nursing has an increasing demand for all aspects of higher vocational nursing students. "Surgical Nursing" is a required course for nursing students and the key content of the nurse professional qualification examination. Experiential teaching was introduced as an innovative teaching method. The research aims to achieve several goals: 1) To compare the surgical nursing learning achievement of students between using experiential teaching and traditional teaching methods. 2) To investigate student attitudes toward learning surgical nursing course after using experiential teaching activities. Participants were five-year vocational nursing students studying nursing at a university in Sichuan, China. A control group of 46 students and an experimental group of 46 students were selected through cluster random sampling. This study used the learning achievements and learning attitudes of surgical nursing as research tools. The results of the study showed that participants' learning achievements and learning attitudes in surgical nursing were significantly improved in experiential teaching methods. These findings highlight the effectiveness and practicality of experiential teaching in higher vocational nursing education. It is recommended that further research be carried out to Experiential teaching methods are used in the teaching of other majors to promote the sustainable development of teaching.

**Keywords:** surgical nursing, traditional teaching, experiential teaching, learning achievement, learning attitude

## 1. Introduction

In the five-year higher vocational nursing education in China's higher medical vocational education, students need to go through the first three years of secondary vocational education before they can learn the college professional courses. Five-year higher vocational nursing students in "surgical nursing" this course of study aged between 18 to 20 years old, female ratio is high, most of the students personality and lively, active thinking, but attention, self-control, initiative is a bit poor, easy to be irrelevant information interference, basic specialized knowledge is weak, and medicine. They are not interested in traditional theoretical courses, and like to use mobile phones, computers and other networks to obtain information, but they are easy to be disturbed by irrelevant information, and their discrimination is insufficient. Therefore, in the process of traditional teaching, fewer students can take the initiative to study and implement it, and more students are distracted in class, and they mainly walk and play with their mobile phones.

Traditional teaching methods rely heavily on teacher lectures, which often fail to attract students' attention and make the learning experience attractive (Intarong & Tempuim, 2012). At the same time, they feel that medical courses have too much content and are boring, and the courses have too much content and cannot be understood. The traditional teaching methods combined with teachers are not attractive enough, and there are fewer opportunities to experience real clinical situations yourself. Unable to experience the real clinical surgical nursing process. For example, students may learn about different common types of abdominal diseases in textbooks, but rarely encounter patients with actual related diseases. Therefore, they may have difficulty grasping the clinical manifestations of general surgical disease concepts and applying nursing measures to actual clinical care processes.

The lack of experiential learning and practical application hinders five-year vocational nursing students from

developing a holistic understanding of the surgical nursing discipline and meaningful clinical practice. In addition, students may view surgical nursing as a boring and monotonous theoretical subject, which hinders their motivation to actively participate in the learning process and has a low attitude towards learning. Additionally, limited exposure and practical experience in clinical care scenarios may hinder their ability to apply theoretical knowledge to clinical care. These barriers highlight the need for innovative strategies to meet the specific educational requirements of five-year vocational nursing and improve their attitudes toward teaching surgical nursing.

Therefore, in the daily teaching process, it is necessary to carry out practical and sufficient teaching around the clinical and related professional courses, and highlight the teaching key points (Liu, 2012), centering on the students interest in learning atmosphere, based on constructivism and the effective utilization of bruner found, cognitive theory, flexible application of a variety of teaching methods, arouse the enthusiasm of students' active learning, improve students' autonomous learning ability (Zhang, 2014). In this context, it is urgent to find a method that can directly and fully mobilize students' active learning to replace students' passive learning methods.

Experiential teaching is a teaching method dominated by students' experience. Students gain experience by fully participating in activities, and then share their experience thoughts under the guidance of teachers, so as to understand the teaching content in practical activities. The focus of experiential teaching is the process of teachers creating learning situations, allowing students to experience, touch and feel, guiding students to enter the feeling state, stimulating students' inner emotions, and enabling students to be fully developed (Lu, 2021). In this learning process, students can well understand and master knowledge. Students' learning attitude (cognitive level, emotional experience and behavioral tendency) can be effectively improved. Therefore, experiential teaching has become one of the best choices. It is expected that under this teaching method, compared with the traditional teaching method, students' academic performance can be improved and their learning attitude can be improved.

## **2. Literature Review**

### *2.1 Surgical Nursing*

Surgical nursing is an important component of nursing. It is a clinical nursing course that elaborates and studies the holistic care of surgical patients. It is a compulsory core course for nursing students, including the professional knowledge and skills required for nursing positions. It is also a key content of the nurse qualification exam. Surgical nursing focuses on surgical patients with trauma, infection, tumors, deformities, obstruction, stones, and functional impairments, and its scope is guided by modern medical models and nursing concepts. Through the overall learning of this course, we can collaborate with other medical workers in wards and operating rooms to provide holistic care for various surgical patients based on their physical and mental health needs, social and family cultural needs, and with human health as the center, applying nursing programs to provide patients with holistic care.

### *2.2 Traditional Teaching*

The traditional teaching mode refers to the teaching mode in which the teacher explains on the blackboard on the platform, supplemented by blackboard writing, and the students listen and practice on the seats. Teachers simultaneously teach students with similar knowledge and understanding, and repeated learning and repeated practice are considered to be the best methods (Lu, 2007). Its main activity is that the teacher explains the content of the textbook to the whole class in order according to the teaching progress. The students can become proficient in the textbook and the knowledge content taught by the teacher through listening attentively in class, practicing and reviewing after class. If necessary, the teacher can supplement many textbooks or add many practice opportunities through examinations. In the course of "Surgical Nursing", teacher-centered and classroom teaching is the systematic teaching in which teachers explain design specifications and cases, and students master basic knowledge and skills through observation and imitation. . However, it often prioritises knowledge over attitude development and lacks interactive learning. The role of the teacher is central, and the active participation of the students is limited.

### *2.3 Experiential Teaching*

Experiential teaching is a way for students to actively engage in exploring issues they find meaningful. It emphasizes the importance of personal experience (Kurt Hahn). Experiential teaching: It is the process in which students complete emotional learning. The experiential process is described as a series of critical relationships: learner to self, learner to teacher, learner to learning environment. It is believed that experiential teaching is not only Learn by doing and integrate life into learning. It in clearly pointed out that experiential teaching is a purposeful process aimed at improving students' ability to understand, utilize and influence experience (Itin, 2001). The connotation of experiential teaching is constantly changing during development, and the three main variations

are interactive experience, embodied experience and practical experience (Roberts, 2008). Experiential teaching emphasizes the role of emotional experience in teaching. When students experience more positive emotional experience in learning, it will improve their learning motivation and activate their learning behavior. Therefore, through context setting, experiential teaching can make students intuitively feel the correlation between teaching content, learning necessity and their own relationship, deepen students' recognition of the value of learning content, activate students' positive emotions in learning, promote their learning interest, willingness and volitional behavior, and mobilize students' emotional participation in cognitive processing through multiple teaching means and methods. Strengthen students' motivation of active exploration and active expansion of cognition. With emotional mobilization as the medium, experiential teaching promotes the adjustment and improvement of students' cognition and behavior through diversified means, and finally improves their skills.

#### *2.4 Learning Achievement*

"Education Dictionary" defines "learning outcomes" as follows: "After a certain amount of teaching and training, A person's ability changes within a certain range after hard work" (Educational Dictionary Compilation Committee, 1991). Taiwanese scholar Yang Guode believes that whether adults, teenagers or children, certain changes will occur through learning. There are many ways to present learning results, including quizzes, lectures, internship assignments, speeches, performance in daily life and work, etc. (Yang, 2000). It can be seen that learning outcomes refer to changes produced through learning, which include multiple cognitive levels, emotions, and skills, and their forms of expression are also diverse. The academic performance mentioned in this article specifically refers to students' knowledge test scores after a period of study.

#### *2.5 Learning Attitude*

Professor Tao Deqing believes that learning attitude consists of three parts: cognitive level, emotional experience, and behavioral inclination. Inspired by the A-B-C three-dimensional structure theory, the learning attitude structure was divided into 10 items and a learning state measurement scale was designed. These 10 projects are: understanding the purpose and significance of learning; Understanding of academic performance; Emotional experience in learning; Expression of thirst for knowledge; Proactive learning performance; Planned learning performance; Review behavior during exams; Eliminating difficulties in learning; The behavior of resisting interference in learning; Mastery of learning methods. And measure and study the learning attitude of vocational college students through these 10 projects (Tao, 1998). In summary, the academic community generally agrees that learning attitude is composed of three dimensions: cognitive level, emotional experience, and behavioral inclination, but different scholars hold different perspectives and insights on the specific components of these three dimensions. Professor Tao Deqing from South China Normal University has a relatively complete theory of learning attitudes, which has been widely applied in the study of learning attitudes. This article will be based on Tao Deqing's theory of learning attitude, and study the learning attitude of vocational school students from 10 indicators.

#### *2.6 Related Studies*

Itin (2001) clearly pointed out that experiential teaching is a purposeful process, aiming to improve students' ability to understand, use and influence the experience. The connotation of experiential teaching is constantly changing in the course of development. The three main variants are interactive experience, embodied experience and practical experience. Janet (2003) mentioned in *A-Didactic and experiential-approach -to-Nursing-Education* that Experiential teaching can improve nurses' self-study of anesthetics, and their self-learning attitude is improved (Katie, 2012). In *Piloting a Method for Comparing Two Experiential Teaching Strategies*, it is mentioned that there are obvious improvements in cognition and emotion of learning attitude between the two groups.

Robert Elliott (2013) and others introduced experiential training courses into the residency training. Research results showed that experiential training courses made newly recruited doctors acquire better skills than senior doctors after five years, and had better teaching performance than traditional teaching methods. Suchy (2017) introduced experiential teaching into the study of foreign language teaching and carried out educational practice in Masaryk University Brno, and the research results showed that experiential teaching methods were more effective than traditional methods. Robert Voukelatou (2019) implemented experiential teaching in the dance class of a secondary school in Athens, and the research results showed that experiential learning had a positive impact on students' knowledge acquisition, social skills development and learning attitude

Through combing the research status and literature, it is found that scholars at home and abroad have different degrees of research on the theory of experiential teaching, but there is relatively little practical research on how to implement experiential teaching in Surgical nursing course for higher vocational nursing students. Based on this, this paper under the support of experiential teaching theory, in-depth practice, investigation and analysis of the

implementation of experiential teaching on learning achievement and learning attitudes.

### 3. Method

#### 3.1 Research Design

This research design adopts two groups of experimental designs and uses two different teaching methods, namely experiential teaching and traditional teaching methods. (Under the premise of controlling other teaching conditions, compare the teaching situation of the experimental class and the control class.). To investigate the impact of experiential teaching methods on learning outcomes in surgical nursing and student learning attitudes in a Chinese context. To collect data, various measures were taken including assessment of students' academic performance in surgical nursing. In addition, a questionnaire survey was conducted. The study design allows for exploration and analysis of the potential impact of experiential teaching methods on surgical care-related outcomes, providing valuable insights into the effectiveness and benefits of implementation.

#### 3.2 Samples

Through cluster random sampling, two classes were selected. All students in the third, fourth, fifth and sixth grade of 2019's five-year higher vocational nursing major were selected. Using a random allocation method, five classes were selected to use traditional teaching methods, with 46 students, and class six was selected as the experimental group, with 46 students. A total of 92 students participated in the experiment, including 12 boys and 80 girls. Both classes received eight weeks of instruction, totaling 16 class hours.

#### 3.3 Research Instruments

##### 3.3.1 Teaching Process Design

Lesson plans were evaluated by a panel of five experts consisting of education professors and professional nursing teachers from Mahasarakham University. The evaluation process is designed to assess the quality and effectiveness of the program in achieving its intended goals. Expert evaluations affirmed the quality of the learning management program ( $x = 4.42$ ), indicating that the program was well designed and effective in developing students' geographical skills. and help them understand the care of patients with common diseases in general surgery.

Table 1. The experiential teaching process design for the Experimental Group (Method 1) and the traditional teaching process design for the Control Group (Method 2)

The experiential teaching process design (Experimental Group) (Method 1)	Traditional teaching process design (Control Group) (Method 2)
1: creating clinical situations	1: Develop teaching objectives
2: setting learning objectives	2: Teachers impart knowledge
3: guiding problem exploration	3: Student participation in classroom activities
4: in-depth case interpretation	4: Summary and induction
5: Carrying out cooperative exercises	5: Assigning homework after class
6: evaluating learning achievements	

##### 3.3.2 Surgical Nursing Learning Achievement Test

This exam uses the same test paper, with a total score of 50 points, and the test time is 60 minutes: In order to evaluate the mastery of the learning results of "Surgical Nursing", we distributed the test papers to the control class and the experimental class before the experiment started. 43 students from the "Nursing of Diseases Related to General Surgery" course evaluated the difficulty and discrimination of the test paper based on the data collected in the pre-survey. The calculated P value was 0.75 and the D value was 0.53. The results showed that the difficulty of the test paper was moderate, the differentiation effect is good, and it is suitable for assessing students' mastery of theoretical knowledge. A pre-test was conducted before the experiment started. Based on the analysis of the test results, it was judged that there was no significant difference in the scores of Class 5 and Class 6 of the 19th grade five-year higher vocational school. The basic conditions of the students before the experiment were equivalent, and a controlled teaching experiment could be conducted. An assessment was scheduled one week after completing the 8 weeks of study. In this assessment, we organized two groups of students to take closed-book paper exams at the same time.

##### 3.3.3 Surgical Nursing Learning Attitude Questionnaire

The learning attitude questionnaire used in this study was appropriately modified with reference to the learning attitude questionnaire (Tao, 1998). This questionnaire includes three dimensions: cognitive level, emotional

experience and behavioral tendency, with a total of 10 items. They are: understanding the purpose and significance of learning; understanding of learning performance; emotional experience in learning; expressing desire for knowledge; active learning performance; planning learning performance; reviewing behavior during exams; eliminating learning difficulties; Resist disruptive behaviors during learning; master learning methods. There are 30 questions in total and 5 Linkert scales are designed. And through these 10 projects, we measure and study the learning attitude of higher vocational students. Cronbach's  $\alpha = 0.942$ ,  $KMO = 0.704$  ( $P < 0.05$ ), indicating that the questionnaire was reasonably structured and highly stable, and could be used for formal data collection.

### 3.3.4 Data Analysis

Assess the normal distribution of each set of data and select appropriate data analysis methods. Learning achievement: 1. The results of the experimental group and the control group (pre-test) confirm that there is no difference between the sample groups and the experiment can be carried out. The results (post-test) are tested using independent samples T-test and the students' results are compared. Learning attitude: The independent sample T test was used between the experimental group and the control group, with a significance level of  $P \leq 0.05$  to determine whether the observed differences were statistically significant.

## 4. Results

### 4.1 The Effects of Surgical Nursing Learning Achievement

The researchers used SPSS 23.0 to test the normal distribution of students' knowledge test (pretest, posttest) results. The one-sample Kolmogorov-Smirnov test was used to compare the cumulative frequency distribution of the sample data with the normal distribution. If the difference between the two is small, it indicates that the sample was drawn from a population that follows a normal distribution pattern. In our calculations, we found that in the pre-test: the p-value for traditional teaching was 0.200\* and for experiential teaching was 0.200\*, both values exceeding 0.05, and in the post-test: the p-value for traditional teaching was 0.168, the p value of experiential teaching is 0.200\*, and both values exceed 0.05. It is confirmed that the four sets of data meet the following conditions: Normal distribution (see Table 2)

Table 2. Normal distribution test results of knowledge scores for Method 1 (traditional teaching method) and (experiential teaching method)

Tests of Normality							
	Group	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Pre-test	traditional teaching	0.084	46	.200*	0.983	46	0.71
	experiential teaching	0.078	46	.200*	0.982	46	0.701
Post-test	traditional teaching	0.114	46	0.168	0.972	46	0.318
	experiential teaching	0.086	46	.200*	0.985	46	0.829

Note. \*. This is a lower bound of the true significance; a. Lilliefors Significance Correction.

Because the Kolmogorov-Smirnov Test for normal distributions of knowledge scores indicates that both the significance values (p-values) obtained from Method 1 (traditional teaching ) and Method 2 (experiential teaching) are greater than 0.05, we can conclude that the knowledge scores from Method 1 (traditional teaching ) and Method 2 (experiential teaching)) follow normal distributions at the 0.05 significance level, respectively.

Table 3. Teaching method – (experiential teaching (experimental group)) surgical nursing performance after learning and traditional teaching (control group)) results of comparison using independent sample t-test

		Levene's Test for Equality of Variances		t-test for Equality of Means			Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)			Lower	Upper
		Pre-test	Equal variances assumed	2.365	0.128	0.296				
	Equal variances not assumed			0.296	84.906	0.768	0.21739	0.73348	-1.24099	1.67577
Post-test	Equal variances assumed	1.780	0.186	-3.202	90	0.002	-2.90217	0.90622	-4.70254	-1.10181
	Equal variances not assumed			-3.202	84.106	0.002	-2.90217	0.90622	-4.70426	-1.10009

Note. Pre-test results: The results of traditional teaching method and experiential teaching method were subjected to independent sample T test,  $P \geq 0.05$ , indicating that the contrast effect was not significant, and there was no significant difference between the two groups. Post-test results of traditional teaching method and experiential teaching method Carry out independent sample T test,  $P \leq 0.05$ . It indicates that the contrast effect is significant.

As shown in Table 3, the independent sample T test on the pre-test scores of traditional teaching method and experiential teaching method, the corresponding significance sig value is 0.768,  $P \geq 0.05$ , not significant level, indicating that traditional teaching method and experiential teaching method The difference in scores is not significant and can be tested. The independent sample T test on the post-test scores of experiential teaching method and experiential teaching method has a corresponding significance sig value of 0.002,  $P \leq 0.05$ , reaching a significant level, indicating that experiential teaching and traditional There was a significant difference in the scores on the post-test of teaching methods.

Table 4. Traditional teaching method paired sample statistical table

		Mean	N	Std. Deviation	Std. Error Mean
traditional teaching	Pretest	24.3478	46	3.05663	0.45068
	Post-test	32.0217	46	3.72672	0.54947

Note. Traditional teaching method: The mean score of the post-test data is 32.0217, which is significantly higher than the pre-test data of 24.3478, with a mean difference of 7.67391.

Table 5. Traditional teaching method paired samples t test

		Paired Differences				t	df	Sig. 2-tailed	
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower				Upper
Traditional teaching	Pretest-Post-test	-7.67391	3.72412	0.54909	-8.77984	-6.56799	-13.976	45	0.000

Note. Traditional teaching method: The T distribution value of the paired T test of the pre- and post-test scores is -13.976, the corresponding significance sig value is 0.000, and the P value  $\leq 0.05$ , reaching the significance level, indicating that the pre-test and post-test of the two groups of traditional teaching are directly There are significant differences in data scores.

As shown in Table 5, the T distribution value of the paired T test on the pretest-posttest scores of the traditional teaching method is -13.976, the corresponding significance sig value is 0.000, and the P value  $\leq 0.05$ , reaching the significance level, indicating that the traditional teaching pretest There is a direct significant difference between the two groups of data scores in the post-test. From the paired sample statistical results shown in Table 4, it can be seen that the mean score of the post-test data is 32.0217, which is significantly higher than the pre-test data of 24.3478, with a mean difference of 7.67391.

Table 6. Experiential teaching method paired sample statistical table

		Mean	N	Std. Deviation	Std. Error Mean
Experiential teaching	Pre-test	24.1304	46	3.92490	0.57869
	Post-test	34.9239	46	4.88759	0.72064

*Note.* Experiential teaching method: The statistical results of paired samples show that the mean score of the post-test data is 34.9239, which is significantly higher than the pre-test data of 24.1304, with a mean difference of 10.79348.

Table 7. Traditional teaching method paired samples t tes

		Paired Differences					t	df	Sig. 2-tailed
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Experiential teaching	Pre-test-Post-test	-10.79348	6.31979	0.93180	-12.67022	-8.91673	-11.583	45	0.000

*Note.* Experiential teaching method: The T distribution value of the paired sample T test of the pretest and posttest scores is -11.583, the corresponding significance sig value is 0.000, and the P value  $\leq 0.05$ , reaching the significance level, indicating that the pretest and posttest experiential There is a significant difference between the two sets of data scores for teaching.

As shown in Table 7, the T distribution value of the paired T test on the pretest-posttest scores of the experiential teaching method is -11.583, the corresponding significance sig value is 0.000, and the P value  $\cong 0.05$ , reaching the significance level, indicating that before the experiential teaching There is a significant difference between the data scores of the two groups of test and post-test. From the paired sample statistical results shown in Table 6, it can be seen that the mean score of the post-test data is 34.9239, which is significantly higher than the pre-test data of 24.1304, with a mean difference of 10.79348.

Comprehensive analysis: Table 3 shows that there is a significant difference in the post-test scores between experiential teaching and traditional teaching methods. Adding Tables 4, 5, 6 and 7 shows that the mean score of the post-test data for traditional teaching methods is 32.0217, which is significant. It is higher than the pre-test data of 24.3478, and the mean difference is 7.67391. The mean score of the post-test data of the experiential teaching method is 34.9239, which is significantly higher than the pre-test data of 24.1304, with a mean difference of 10.79348. And experiential teaching methods significantly improve students' surgical nursing performance.

#### 4.2 The Effects of Surgical Nursing Learning Attitude

The results showed that the experiential teaching method of the experimental group and the traditional teaching method of the control group  $P = 0.013$ ,  $P \cong 0.05$ , reaching the significance level, indicating that the experiential teaching method significantly improved students' learning attitude compared with the traditional teaching method.

After the course, all students in the experimental class and the control class participated in a questionnaire on learning attitudes toward the "Surgical Nursing" course. The survey was conducted on site and included 30 questions. Questionnaires were distributed and collected on site, with a recovery rate of 100%. Through the single-sample Kolmogorov-Smirnov test, we found that  $p \geq 0.05$  in some dimensions of the experimental group and the control group, indicating that the two sets of data did not meet the normal distribution conditions (see Table 8).

Table 8. Normal distribution test of each dimension of learning attitude scale

		Kolmogorov-Smirnova			Shapiro-Wilk		
		Statistic	df	Sig.	Statistic	df	Sig.
Cognitive level	Traditional teaching	0.195	46	0	0.937	46	0.015
	Experiential teaching	0.153	46	0.009	0.949	46	0.042
Emotional experience	Traditional teaching	0.128	46	0.058	0.958	46	0.092
	Experiential teaching	0.127	46	0.06	0.963	46	0.147
Behavioral predisposition	Traditional teaching	0.153	46	0.009	0.949	46	0.041
	Experiential teaching	0.095	46	.200*	0.972	46	0.318
Total	Traditional teaching	0.131	46	0.046	0.933	46	0.011
	Experiential teaching	0.095	46	.200*	0.952	46	0.055

\* This is a lower bound of the true significance.  
 a Lilliefors Significance Correction

Note. Cognitive level dimension: traditional teaching method and experiential teaching method p=0.015, p=0.042, emotional experience dimension: traditional teaching method and experiential teaching method p=0.092, p=0.147, behavioral tendency: traditional teaching method and experiential teaching method Teaching method p=0.041, p=0.318, overall dimension: traditional teaching method and experiential teaching method p=0.011, p=0.055. The above table shows that: the two sets of data of the traditional teaching method and the experiential teaching method do not conform to the normal distribution. Two independent samples Mann-Whitney test was used to compare the learning attitudes of the experimental group and the experimental group.

Table 9. Mann-Whitney Test-ranks of various dimensions of learning attitude

	group	N	Mean Rank	Sum of Ranks
Cognitive level	Traditional teaching	46	40.62	1868.5
	Experiential teaching	46	52.38	2409.5
	Total	92		
Emotional experience	Traditional teaching	46	40.77	1875.5
	Experiential teaching	46	52.23	2402.5
	Total	92		
Behavioral predisposition	Traditional teaching	46	40.21	1849.5
	Experiential teaching	46	52.79	2428.5
	Total	92		
Total	Traditional teaching	46	39.59	1821
	Experiential teaching	46	53.41	2457
	Total	92		

Table 10. Test Statistics of various dimensions of learning attitude

	Cognitive level	Emotional experience	Behavioral predisposition	Total
Mann-Whitney U	787.5	794.5	768.5	740
Wilcoxon W	1868.5	1875.5	1849.5	1821
Z	-2.132	-2.07	-2.265	-2.485
Asymp. Sig. (2-tailed)	0.033	0.038	0.024	0.013

Note. a Grouping Variable: group. Two independent samples of the learning attitude questionnaire Mann-Whitney test cognitive level P=0.033, P ≅ 0.05; emotional experience P=0.038, P ≅ 0.05; behavioral tendency P=0.024, P ≅ 0.05; total score dimension P =0.013, P ≅ 0.05.

Combining Tables 8 and 9 P for each dimension of learning attitude is ≅ 0.05, reaching a significant level, indicating that experiential teaching methods can significantly enhance students' learning attitude.

**5. Discussion**

The findings demonstrate the positive impact of experiential teaching as a guiding principle in study programmes. The study found that an experiential teaching approach improved participants' learning outcomes in surgical nursing while also leading to significant enhancements in learning attitudes. Based on these findings, the following discussion will delve into the benefits of experiential teaching in five-year high-pillar nursing teaching, the advantages of experiential teaching methods in surgical nursing teaching, and the improvement of students' learning attitudes.

The results of this study are consistent with previous research (Janet Rosentreter, 2003; Katie Anne Adamson, 2012; Robert Elliott, 2013; Suchy, 2017; Robert Voukelatou, 2019)

Experiential teaching fosters active, engaging learning experiences and promotes situational experience,



collaborative teamwork and role appreciation. These results are particularly beneficial to nursing students in school, because this teaching method makes learning close to clinical practice, combines theory with practice, and allows them to experience the particularity of the nursing profession. The experiential teaching method provides a meaningful and contextualized learning method that encourages students to explore practical problems in clinical practice, connect them with clinical scenarios, and actively construct scenarios to reflect, learn, and make progress. This student-centered, situational experience-based teaching method is very consistent with the development needs and learning styles of nursing.

Incorporating experiential teaching methods into surgical nursing teaching has shown many advantages. Experiential teaching methods provide students with a platform to connect classroom knowledge to problems and situations in clinical practice. In this study, students work on the care of patients with general surgery-related conditions. By taking on these challenges through active scenarios and role-playing, students develop clinical thinking skills, enhance their professional qualities as nurses, and gain a deeper understanding of knowledge. The contextualized and problem-solving nature of experiential teaching in nursing education helps provide students with a more meaningful and relevant learning experience.

Finally, the higher learning attitude exhibited by five-year vocational nursing students toward the experiential teaching method in this study can be attributed to several factors. First, experiential teaching promotes students to actively participate in situational experiences and empowers students with the ability to learn independently. This sense of autonomy and participation in the learning process can enhance students' motivation and emotional experience. Additionally, experiential teaching methods promote collaboration and teamwork, allowing students to work together in small groups, share ideas, and learn from each other. This kind of teamwork and support help create a positive and enjoyable learning situation. In addition, applying experiential teaching to real clinical situation problems can enhance their cognitive level, emotional experience, and behavioral tendencies.

## **6. Conclusion**

This study uses an experimental design of traditional teaching methods in the control group and experiential teaching in the experimental group to investigate the effectiveness of a learning management plan using experiential teaching methods in five-year higher vocational nursing education.

The results showed a positive impact on the academic performance of the experimental group and the enhancement of learning attitude. These findings support previous research highlighting the benefits of experiential teaching in nursing education and its effectiveness in nursing teaching.

This research has important implications for educators and policymakers. The positive results observed in terms of academic performance of the experimental group indicate that the incorporation of experiential teaching methods into nursing teaching courses can enhance students' professional qualities, clinical thinking, problem-solving skills and participation in the learning process. This study provides valuable insights into the potential of experiential teaching as an effective teaching method in nursing education, particularly in the teaching of surgical nursing. For future research, it is recommended that this method be extended to the teaching of other medical-related majors to further study and verify the effectiveness of experiential teaching in teaching different medical majors. Furthermore, exploring the long-term impact and sustainability of the implementation of experiential teaching methods in higher vocational nursing teaching will provide a deeper understanding of its lasting impact on student learning outcomes and skill development. Further research could also focus on optimizing the design and implementation of experiential teaching strategies for different subject areas and grade levels.

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## **Authors' contributions**

Pengfei Liu was responsible for the study design and revisions, as well as data collection and analysis.

Subsequently, Pengfei Liu drafted the manuscript, which was then revised by Professor Kanyarat Sonsupap. All authors reviewed and approved the final version of the manuscript.

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