# Comparing Effectiveness Between Rubric and Traditional Methods to Assess Clinical Practice among Vietnamese Nursing Students: A Quasi-Experimental Study

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**Abstract:** Assessing student competency in clinical practice poses a significant challenge for nursing educators. Rubrics are assessment tools to mitigate subjective biases and lay out set standards and criteria to assess performance, assignment or behavior. The rising enrollment of nursing students at the University of Medicine and Pharmacy, Hue University indicates a shift in healthcare education, but the health system's slow adaptation presents challenges. Current assessment methods lack a unified standard, leading to inconsistencies in measuring nursing competencies. A standardized assessment framework is urgently needed to improve education quality and prepare students for national certification exams, yet evaluations of effectiveness in Vietnam remain unexamined. This quasi-experimental study aimed to compare the effectiveness of rubrics and traditional methods in assessing student competency in clinical practice on self-confidence, satisfaction with clinical teaching, and academic results among nursing students studying a module on women's health, mothers, families, and nursing care. Purposive sampling was employed to select 186 nursing students at the University of Medicine and Pharmacy, Hue University, with 89 students in the rubric group and 97 students in the traditional group. Data collection tools included the Demographic Characteristics, Self-perceived Confidence, Undergraduate Nursing Student Academic Satisfaction Scale, and Rubric and Traditional Assessment. The results of the study demonstrated that students in the rubric group exhibited significantly higher mean scores across several important dimensions, including overall confidence, satisfaction with clinical teaching, and learning performance when compared to their counterparts in the traditional group. However, the rubric group did not report a statistically significant increase in perceptions regarding instructors being "approachable and comfortable about asking questions," nor in demonstrating a "high level of knowledge and clinical expertise." We concluded that the implementation of a rubric-based assessment approach positively influences students' perceptions of their abilities and contributes to a more effective learning environment than the traditional method. Therefore, we consider that the rubric method should be used to evaluate the quality of nursing practice training with further testing widely in other groups of students, nursing courses, and other settings.

**Keywords:** Academic performance, Nursing education, Rubric, Satisfaction, Self-confidence, Student assessment

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TDND: conceptualization, development of rubric assessment method, research design

LDTN: conceptualization, development of rubric and traditional assessment methods research design

TNTP: development of rubric and traditional assessment methods, research design

NTT: research method and design, data analysis, writing manuscript

TNTT: tool translation, editing tool and validation, writing manuscript

BVTD: development of rubric and traditional assessment methods

TVT: data collection, editing manuscript


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## Introduction

Nursing education aims to assist students in acquiring nursing competencies before they enter the professional clinical environment. Assessment is a process that ensures the appropriateness of instructional design for students. To guarantee the delivery of quality nursing care to society, educators must consistently ensure the objective assessment of nursing students who are genuinely prepared to practice.[1] Assessing student abilities presents a significant challenge for educators. One of the popular assessment methods is traditional assessment, which often uses a checklist without detailed descriptions and criteria, leading to disagreement among scorers. Rubrics, on the other hand, aid nursing students in gaining a deeper understanding of the evaluation process and criteria. They also help reduce assessment-related anxiety and foster self-directed learning. Moreover, rubrics assist educators in conducting objective evaluations and interpreting assessment criteria consistently.[2,3] Students in nursing tend to prefer straightforward, detailed assessments and benefit from adequate preparation before assessment.[4] Hence, rubrics are regarded as valuable assessment tools for instructors and feedback mechanisms for students, contributing to limiting subjective issues in assessment and emerging as a trend in nursing education.[5]

In nursing, rubrics have been widely utilized across the globe. They are employed to assess clinical skills, score tasks, evaluate clinical competency, and assess presentations. Rubrics are considered effective tools for teaching, learning, and clinical assessment,[5,6] and they are utilized to evaluate clinical reasoning skills in nursing processes and simulation learning.[6,7] The application of rubrics demonstrate positive effects on learning outcomes, self-regulation strategies, capacity building, and student satisfaction.[8,10] Nursing students often indicate that rubrics aid in enhancing self-confidence and critical thinking skills.[7,10] However, several studies suggest that rubrics do not significantly enhance confidence or have only a minimal impact on individuals' self-regulation abilities and strategies.[7,9] Moreover, research on obstetric nursing students revealed that, in the initial rubric, this did not contribute to improvements in their self-efficacy and satisfaction.[8] Previous studies indicate inconsistent effectiveness of rubrics depending on their design, implementation, and various moderating factors.[9] The increasing enrollment of undergraduate nursing students represents a significant shift in the healthcare education landscape, particularly at the Hue University of Medicine and Pharmacy. However, this shift has not been fully embraced within the health system, presenting challenges for educators and students. Current assessment methods, such as long and short case evaluations, often rely on criteria shaped by individual lecturers' expectations rather than a unified standard. This lack of consensus can lead to inconsistencies in measuring nursing competencies, which is critical as the healthcare environment evolves. With the Ministry of Health's[10] new regulations and competency standards aimed at aligning nursing practices with regional benchmarks, there is an urgent need for a more standardized approach to assessment. These changes are essential for enhancing the quality of nursing education and preparing students to meet the rigorous requirements of a national exam for practice certification, as outlined in the Law on Medical Examination and Treatment.[10] Developing a comprehensive and standardized assessment framework is crucial to address these challenges. This framework should include clear competencies based on both theoretical knowledge and practical skills, ensuring that all nursing students are adequately prepared for professional practice. However, the evaluation of rubrics to compare effectiveness on self-confidence, satisfaction with clinical teaching, and learning performance in nursing students has not been conducted in Vietnam. Therefore, this study intended to assess the effectiveness of utilizing rubrics among nursing students. Our research findings will contribute to providing more evidence regarding the efficacy of rubric implementation in clinical nursing teaching.

## Review of Literature and Conceptual Framework

Traditional grading is an approach that only focuses on marks and goals. In a traditional grading system, the instructor often assesses based on criteria developed independently, leading to different grading criteria between classrooms. This leads to inequitable grading. A grade may include a student's behavior, so it is inconsistent between teachers and results in unintentional bias. In addition, what learners need to know is controlled by the instructor. Learners often do not know what will come next from one grade level to the next, which creates nontransparency. This leads to a reliance on the instructor for expectations.[11]

A rubric is a scoring guide that includes components and specific expectations for assessing an assignment. Rubrics help instructors assess assignments consistently between students, save time in grading, and provide timely feedback to promote student learning sustainably. Besides, rubrics can clarify the expectations and components of an assignment for both students and teaching assistants. Rubrics also help students understand the assignment's components and expectations and improve work through timely feedback.[12]

Rubrics are often designed in a grid-type structure, with four elements: criteria, performance levels, scores, and assignment descriptors.[13] Rubrics are used to grade written assignments and oral presentations, evaluate teamwork and individual contribution to group tasks, conduct peer review, and self-assessment to improve personal performance.[12]

Society demands a transformation of nursing education to improve the quality of care by producing competent nurses. This requires lecturers to assess students accurately, preparing them well for professional practice.[1] Rubrics are a tool for continuous assessment, monitoring learning progress, and providing student feedback. Rubrics help make assessments consistent and objective among lecturers when evaluating a procedure performed by different students.[5]

Using rubrics as a clinical assessment tool to limit subjectivity in assessment has become a trend in nursing education.[5] Rubrics are used with other active teaching methods to assess nursing students. Rubrics have been proven to be effective in assessing nursing students' skills. Wu et al.[14] applied clinical case discussions and rubrics to assess students. The students gave feedback that the rubrics provided detailed instructions, promoting learning motivation and confidence and improving knowledge and skills, particularly critical thinking skills.[14]

Renjith et al.[5] conducted a study on the rubrics in nursing education in India. They found that these are indispensable tools in nursing education, and they can be used to assess clinical skills, grade assignments, evaluate clinical competence, and analyze presentations. Furthermore, an integrative review revealed that rubrics help increase self-assessment capabilities and enhance students' understanding of evaluation criteria. Building effective rubrics is most successful when there is student involvement.[5]

Cockett and Jackson[15] highlighted that rubrics effectively enhance feedback within higher education by increasing students' self-assessment capabilities and improving their understanding of evaluation criteria. They emphasized that building effective rubrics is most successful when students are actively involved.[15]

Uddin's[16] study found that 72% of participants strongly agreed that self-assessment rubrics help them understand what the teacher expects, with an additional 17% agreeing with the statement. Moreover, 72% of participants believed that rubrics improved their academic performance.[16] The study strongly recommended making rubrics mandatory in all educational institutions nationwide.[16]

Research on obstetric nursing students aimed to compare the effectiveness of rubrics with traditional assessment methods. Results showed that the rubrics positively impacted students' self-efficacy and satisfaction after the rubric.[8] Also, the use of rubrics assessment in the simulation teaching among final-year nursing students resulted in better critical thinking skills and confidence in identifying patient needs.[7]

Rubrics are effective in self-assessment, adjustment, clarity, and straightforward understanding of assessment criteria. The effectiveness of rubrics also depends on students' participation in creating and implementing them.[15] An integrative literature review also showed that rubrics positively affect student learning performance.[9] However, their impact on the ability to self-regulate learning and self-confidence was insignificant.[9] Students also reported that rubrics could increase student stresses related to assessment.[15] Another study on obstetric nursing students also showed that rubrics did not help improve their self-efficacy and satisfaction during the first rubric.[8] Rubrics did not show a significant difference in increasing nursing students' confidence in simulation teaching.[7]

Although rubrics have many positive effects, they also have limitations, such as bias, complexity, and stress if poorly designed and rigid.[15] It is crucial for educators to correct rubric deficiencies to improve learning quality and limit bias. If created logically, clearly, consistently, and with student participation, rubrics will help students learn effectively and reduce stresses associated with assessment.[3,15] This also helps students understand specific criteria they need to achieve, communicates and provides feedback effectively between students and lecturers, reduces ambiguity, and increases student satisfaction.[3] Since there are both benefits and limitations to the rubric method, Thus, this study investigated whether the rubric assessment of clinical practice among nursing students in Vietnam is effective.

The conceptual framework to assess the effectiveness of the rubric tool in this study is based on five theories, including the technology acceptance model (effectiveness), learning theory (feedback), justice theory (fairness), cognitive load theory (structure), and communication theory (consistency).[17] The technology acceptance model includes two constructs, "perceived usefulness" and "perceived ease of use," applied to explain how users adapt to a new technology. For the rubric, "perceived usefulness" could be expressed through the matrix structure and the brief presentation of detailed tasks students must accomplish to achieve the learning requirements. "Perceived ease of use" is related to efficiency in using rubrics. The learning theory model includes five sub-category theories (behaviorism, cognitivism, social-cultural theory, meta-cognitivism, and social constructivism). Behaviorism uses punishment and rewards to change behavior. Rubrics apply behaviorism theory through marking students. Justice theory asks for a consistent and transparent approach to marking among students. Rubrics apply this theory to set up a detailed marking guide. The explicit criteria in the rubric demonstrate to the students why they were given a certain mark. Cognitive load theory implies that the structure of instructional materials is important to reduce the users' cognitive load. The rubric structure and the descriptions for each task ensure performance levels must be accomplished for each level. During the student and lecturer communication process, some semantic problems may be caused by poor handwriting or abbreviations. So, communication theory was applied in the rubric to standardize messages.

## Study Aim

This study aimed to evaluate the effectiveness of the rubric assessment method compared to the traditional assessment method in assessing clinical practice on self-confidence, satisfaction with clinical teaching, and learning performance of full-time nursing students studying the module on Women's Health, Mothers, Families, and Nursing Care.

## Methods

**Study Design:** This study was quasi-experimental. We only measured the study variables at one point after students had completed four weeks of the course. This report followed the Transparent Reporting of Evaluations with Nonrandomized Design standards.

**Sample and Setting:** Purposive sampling of the entire population was used to obtain the 4th-year nursing students. The inclusion criteria were: 1) attending

the full four weeks of the module on Women's Health, Mothers, Families, and Nursing Care and 2) agreeing to participate in the study. A total of 186 students participated, including 97 in class A and 89 in class B, with a participation rate of 100%. Almost all students participated fully because this is a compulsory module in the curriculum.

Class-A students studied the module from 11 September 2023 to 6 October 2023 (4 weeks) at a department of obstetrics and gynecology. They were assessed using the traditional assessment method after finishing the module. Students in class B take the same module and location as class A, from 9 October 2023 to 3 November 2023 (4 weeks). After they completed the module, the research team used rubrics to assess clinical practice in terms of self-confidence, satisfaction with clinical teaching, and learning performance.

The obstetrics and gynecology department belongs to a university hospital in Central Vietnam with 105 inpatient beds, and functional units include a prenatal care unit, delivery room, gynecology room, postpartum care room, newborn care room, and ultrasound-prenatal screening unit with a total staff of 27 doctors and 36 midwives. This department has more than 4,500 births yearly, including normal births and cesarean sections. Besides, this is also a training facility for human resources for the Central and Central Highlands regions and a practice location for many medical and nursing students.[18]

**Ethical Considerations:** This study received approval from the Biomedical Research Ethics Committee of University of Medicine and Pharmacy, Hue University (approval number H2023/111, dated 20 May 2023). Before the study commenced, participants were provided with clear information regarding all aspects of the research, including its purpose and methods. All ethical standards were strictly adhered to, including ensuring anonymity, voluntary participation, and the right to withdraw from the study. Ethical considerations related to data collection focused on obtaining informed consent, protecting participants from harm, and adhering to ethical principles in medical research involving human subjects. All participating students signed a consent form to participate in the study. Students' names were not linked to the surveys, and the researchers securely managed research data.

**Research Instruments:** There were two parts: instruments for data collection and the rubric and traditional assessment. The three instruments for data collection were the Self-perceived Confidence, the Undergraduate Nursing Student Academic Satisfaction Scale, and the Rubric and Traditional Assessment Tool were developed in English and were translated into Vietnamese language with permission using the Brislin back-translation model[19] to ensure consistency between the original and Vietnamese versions. All questions in our study were validated by a nursing expert and two medical education experts. Additionally, the content validity index (CVI) was calculated for each item, with individual CVI values ranging from 0.80 to 1.00 and the scale-level CVI averaging 0.90, indicating content validity.

*A Demographic Questionnaire* was developed by the researchers. It includes gender, place of residence, cumulative grade point average (GPA) of the previous school year, present accumulative GPA of the entire course, class positions held, and scholarship awards.

*The Self-perceived Confidence:* was developed by Wong[7] to assess students' self-perceived confidence level through self-rated questions. It contains seven items, e.g., "What is your confidence level in assessing patient needs," using a 7-level Likert Scale ranging from 1 = completely not confident, 2 = not confident, 3 = somewhat not confident, 4 = neutral, 5 = partially confident, 6 = confident, and 7 = completely confident. Possible scores range from 7 to 49, with higher scores indicating higher confidence levels. Cronbach's alpha reliability in the pilot study with 20 students was 0.89, and in this main study, it was 0.90.

*The Undergraduate Nursing Student Academic Satisfaction Scale (UNSASS)* developed by Dennison and El-Masri.[20] The questionnaire assesses nursing students' satisfaction with their clinical teaching and evaluation.

It contains 15 items, e.g., "Clinical instructors are approachable and make students feel comfortable about asking questions," and uses a 5-level Likert scale ranging from 1 = strongly disagree, 2 = disagree, 3 = somewhat agree, 4 = agree, and 5 = strongly agree. The score ranges from 15-75, with a higher score indicating higher satisfaction. For the cut point, students are considered satisfied with clinical teaching if the total score is ≥ 70% and unsatisfied if the total score is < 70%. The Cronbach's alpha reliability in the pilot and main studies were 0.843 and 0.84, respectively.

*The Rubric and Traditional Assessment Tool* was used to evaluate students' academic performance in the Women's Health, Family Care, and Obstetric Nursing 2 modules. The assessment tool consists of three components, each contributing to a total score of 10 points: Skills (20%) – 10 points – include competencies such as baby bathing, breast examination, history taking, umbilical cord care, measuring uterine height and abdominal circumference, and performing Leopold's maneuver. Nursing Process (50%) – 10 points – evaluates based on the student's clinical reasoning and understanding of pathology while completing the patient healthcare record. Clinical Knowledge (30%) – 10 points – assesses through questions posed by instructors, grounded in the patient case report completed by the student. All five skill checklists and healthcare record guidelines were developed with input from obstetric experts and nursing education specialists and were approved by the school's academic council before being implemented in clinical practice.

Students in the traditional group were assessed by qualified instructors using internal checklists and procedures. However, these checklists were based solely on internally developed criteria without the detailed and clear classification provided by the rubric system. In contrast, the rubric group received a more in-depth educational experience, with structured instruction, guidance, and evaluation through the rubric system. This system offered a comprehensive breakdown of each criterion related to skills, the nursing process, and clinical knowledge, ensuring a more systematic and transparent approach to assessment. The score ranges from 0 to 10, with higher scores indicating higher academic performance. For grading, the scale was divided as follows: Grade A = excellent (8.5 - 10), Grade B = good (7.0 - 8.4), Grade C = average (5.5 - 6.9), Grade D = poor (4.0 - 5.4), and Grade F = fail (below 4.0). It was evaluated and classified based on the national education system of Vietnam.

**Processes to minimize errors** include building a tight, clear toolkit using easy-to-understand words; testing surveys to check reliability and recalibrating the questionnaire; thoroughly training the survey methods so that the participants agree on the investigation method; closely supervising the investigation process; and clearly explaining the research objectives to participants.

**Rubric and traditional methods:** All participants in both groups studied Women's Health, Maternal, Family, and Nursing Care Module 2 for four weeks. These topics were in a clinical course at the hospital. Students learned the same content with the same lectures and professor assistants for both groups. Both groups were assessed on learning outcomes of the course using the same criteria and lectures. However, the method to evaluate each criterion was different.

**Rubric group** was assessed by the Assessment Rubric (RUBRIC), the rubrics were built according to the 7-step rubric development method by Renjith et al.,[5] based on module outcome standards, and curriculum outcome standards of the school. Next, workshops/ training courses on assessment methods and modes for all lectures involved in the evaluation were organized to agree on how to evaluate each rubric. Then, these rubrics were integrated into the teaching process so that students could understand the evaluation criteria and scales corresponding to the attainment levels of knowledge, clinical skills, and skills in writing nursing records. Students can use these rubrics for self-assessment and academic orientation during their learning process. At the end of the course, lecturers conduct competency assessments based on these rubrics to assess essential skills in obstetrics and gynecology care (using eight

rubrics to assess eight essential skills according to module outcome standards, 20%), nursing medical record marking (using rubric nursing process assessment, 50%) and making oral examinations score about clinical knowledge (using rubric evaluation of clinical knowledge, 30%). It took 20 minutes to assess each student using the rubric, and we had five lecturers participating in the assessment, so it took about six hours in total.

**Traditional group** was assessed using traditional methods, including assessment of the performance of essential skills in obstetrics and gynecology care (20%), marking nursing medical records (50%), and marking oral examinations of clinical knowledge in the traditional methods (30%) using checklists without rubrics. It took 15 minutes to assess each student using the traditional method; we had five lecturers participating in the assessment, so it took about five hours in total.

**Data Collection:** Data were collected immediately after students finished four weeks of the module. Specifically, data in the traditional group were collected on 6 October 2023 and in the rubric group on 3 November 2023. The steps of data collection were:

Step 1: The researchers selected all fourth-year nursing students who met the sample criteria. A total of 186 students participated in the study. The purpose and methods of the study were clearly explained to participants. If the participants agreed to participate, they were asked to sign the consent form.

Step 2: 97 students in class A were conveniently allocated as the traditional group and 89 students in class B as the rubric group to reduce the diffusion effect between the two groups. Class A participated in the module first, and class B participated later.

Step 3: All students in two groups participated in the course in the obstetrics and gynecology department within four weeks.

Step 4: The course learning outcomes were evaluated in three parts: nursing skills, nursing process, and clinical knowledge. The traditional assessment method was used for students in class A, and the rubric assessment was used for students in class B.

Step 5: The researchers distributed a designed survey form to students to collect data on characteristics, self-perceived confidence, and satisfaction with clinical teaching.

**Data Analysis:** Collected data were cleaned, coded, and analyzed using SPSS 20.0 software. Descriptive statistics described research variables' frequency, percentage, mean, and standard deviation. The Kolmogorov-Smirnov test was used to test the normal distribution of the data. The data in this study were non-normally distributed, so we used the Chi-square and Mann-Whitney U test to compare the differences in characteristics, self-perceived confidence level, satisfaction with clinical teaching, and learning outcomes between the groups. The difference is considered statistically significant at $p < 0.05$.

## Results

Most participants in both groups were female students, accounting for 90.7% in the traditional group and 88.8% in the rubric group. Most participants were from rural areas, accounting for over 70% of both groups. The average cumulative scores of the last year and the present of both groups are quite similar. The results showed no significant differences in characteristics between the two groups $p < 0.05$ (**Table 1**).

**Table 1.** Characteristics of participants

| Characteristics | | Traditional group (n = 97) | Rubric group (n = 89) | $\chi^2$/U | p-value |
|---|---|---|---|---|---|
| Gender | Male | 9 (9.3) | 10 (11.2) | 0.19* | 0.660 |
| | Female | 88 (90.7) | 79 (88.8) | | |
| Residence | Rural | 70 (72.2) | 65 (73.0) | 0.02* | 0.894 |
| | Urban | 27 (27.8) | 24 (27.0) | | |

**Table 1.** Characteristics of participants (Cont.)

| Characteristics | | Traditional group (n = 97) | Rubric group (n = 89) | $\chi^2$/U | p-value |
|---|---|---|---|---|---|
| GPA of the last year | | 2.89 ± 0.37 (2.00–3.66) | 2.91 ± 0.32 (2.20–3.59) | - 0.32** | 0.753 |
| GPA to the present | | 2.75 ± 0.31 (2.00–3.40) | 2.79 ± 0.31 (2.19–3.52) | - 0.77** | 0.440 |
| Position in class | Yes | 12 (12.4) | 14 (15.7) | 0.44* | 0.509 |
| | No | 85 (87.6) | 75 (84.3) | | |
| Have received a scholarship | Yes | 23 (23.7) | 18 (20.2) | 0.33* | 0.567 |
| | No | 74 (76.3) | 71 (79.8) | | |

Note. * = Chi-square test; ** = Mann–Whitney U Test

**Table 2** shows that the self-perceived confidence level of students in seven items all achieved above-average scores in both groups. In particular, the mean confidence level in communication was higher than in other areas. Specifically, the traditional group reached 4.63 ± 1.28, and the rubric group scored 5.21 ± 1.12, p = 0.003. Besides, the overall confidence score of students in the rubric group was 34.00 ± 5.00 higher than the traditional group (29.87 ± 4.60). This difference is statistically significant with p < 0.001. In addition, the mean score of self-perceived confidence in areas such as assessing patient needs, performing accurate assessments, identifying patient problems, prioritizing patient needs, implementing nursing procedures, and evaluating the effects of nursing procedures in the rubric group was significantly higher than the traditional group, with statistically significance level p < 0.05. It can be concluded that using a rubric enhanced students' self-perceived confidence **(Table 2).**

**Table 2.** Comparison of self-perceived confidence level between the rubric and traditional groups

| Self-perceived confidence level | Traditional group (n = 97) | Rubric group (n = 89) | U* | p-value |
|---|---|---|---|---|
| 1. Confidence level in assessing patient needs | 4.34 ± 0.87 | 4.84 ± 0.88 | - 3.57 | < 0.001 |
| 2. Confidence level in performing accurate assessments | 4.04 ± 1.01 | 4.51 ± 0.92 | - 3.24 | 0.001 |
| 3. Confidence level in identifying patient problems | 4.04 ± 1.12 | 4.85 ± 0.87 | - 5.06 | < 0.001 |
| 4. Confidence level in prioritizing patient needs | 4.39 ± 1.02 | 5.00 ± 1.02 | - 4.36 | < 0.001 |
| 5. Confidence level in implementing nursing procedures | 4.36 ± 0.95 | 4.85 ± 0.97 | - 3.46 | 0.001 |
| 6. Confidence level in evaluating the effects of nursing procedures | 4.06 ± 1.06 | 4.73 ± 1.04 | - 4.73 | < 0.001 |
| 7. Confidence level in communication | 4.63 ± 1.28 | 5.21 ± 1.12 | - 2.97 | 0.003 |
| **Overall level of confidence** | | | | |
| Mean ± SD | 29.87 ± 4.60 | 34.00 ± 5.00 | - 5.92 | < 0.001 |
| Min-Max | 20–46 | 19–46 | | |

Note. * = Mann–Whitney U Test

The results in Table 3 show that the mean score of overall satisfaction with clinical teaching in the traditional group (59.38 ± 5.05) was lower than that of the rubric group (62.55 ± 5.79). Therefore, this result indicates that the level of satisfaction in the traditional group was higher than that in the rubric group. When considering the satisfaction subscale, the mean score in the traditional group was lower than in

the rubric group. However, the differences in the content of "Clinical instructors are approachable and make students feel comfortable about asking questions" and "Clinical instructors demonstrate a high level of knowledge and clinical expertise" were not statistically significant at $p > 0.05$. Therefore, using rubrics has improved overall satisfaction with clinical teaching (**Table 3**).

**Table 3.** Comparison of satisfaction level with clinical teaching between the rubric and traditional groups

| Satisfaction level | Traditional group (n = 97) Mean ± SD | Rubric group (n = 89) Mean ± SD | U* | p-value |
|---|---|---|---|---|
| 1. Clinical instructors are approachable and make students feel comfortable about asking questions | 3.95 ± 0.65 | 4.07 ± 0.69 | -1.21 | 0.226 |
| 2. Clinical instructors provide feedback at appropriate times and do not embarrass me in front of others | 4.08 ± 0.61 | 4.26 ± 0.59 | -1.97 | 0.049 |
| 3. Clinical instructors are open to discussions and differences in opinions | 4.14 ± 0.61 | 4.46 ± 0.52 | -3.50 | < 0.001 |
| 4. Clinical instructors give me sufficient guidance before I perform technical skills | 3.94 ± 0.72 | 4.36 ± 0.59 | -4.05 | < 0.001 |
| 5. Clinical instructors view my mistakes as part of my learning | 3.95 ± 0.57 | 4.04 ± 0.69 | -1.04 | 0.298 |
| 6. Clinical instructors give me clear ideas of what is expected from me during a clinical rotation | 3.96 ± 0.69 | 4.28 ± 0.67 | -3.14 | 0.002 |
| 7. Clinical instructors facilitate my ability to critically assess my client's needs | 3.89 ± 0.58 | 4.04 ± 0.64 | -1.75 | 0.080 |
| 8. Clinical instructors assign me to patients that are appropriate for my level of competence | 3.85 ± 0.62 | 3.85 ± 0.67 | -0.03 | 0.975 |
| 9. Clinical instructors give me verbal and written feedback concerning my clinical experience | 3.85 ± 0.58 | 4.17 ± 0.61 | -3.58 | < 0.001 |
| 10. Clinical instructors demonstrate a high level of knowledge and clinical expertise | 4.26 ± 0.68 | 4.36 ± 0.66 | -1.03 | 0.302 |
| 11. Clinical instructors are available when needed | 3.76 ± 0.66 | 3.89 ± 0.66 | -1.29 | 0.198 |
| 12. Clinical instructors provide enough opportunities for independent practice in the lab and clinical sites | 3.91 ± 0.65 | 4.22 ± 0.65 | -3.25 | 0.001 |
| 13. Clinical instructors encourage me to link theory to practice | 4.12 ± 0.56 | 4.36 ± 0.69 | -2.82 | 0.005 |
| 14. Instructions are consistent among different clinical and lab instructors | 3.81 ± 0.68 | 3.97 ± 0.66 | -1.55 | 0.120 |
| 15. Faculty members behave professionally | 3.92 ± 0.72 | 4.21 ± 0.61 | -2.90 | 0.004 |
| **Overall level of satisfaction** Mean ± SD Min-Max | 59.38 ± 5.05 (49-75) | 62.55 ± 5.79 (49-75) | - 3,920 | < 0.001 |

Note. * = Mann-Whitney U Test

**Table 4** shows that the ranking of learning scores of the traditional group was only 19.6% of students achieved Grade A, and 69.1% achieved Grade B. However, 65.2% of students achieved Grade A, and 32.6% achieved Grade B in the rubric group. This difference is statistically significant with $p < 0.001$. On the other hand, considering the mean of the learning score, the traditional group scored 7.78 ± 0.72 out of 10 points. The rubric group scored 8.58 ± 0.58 out of 10 points, $p < 0.001$. Therefore, the rubric group that used the Rubric Assessment Tool had higher learning scores than the traditional group (**Table 4**).

**Table 4.** Comparison of the learning scores between the rubric and traditional groups

| Learning score | | Traditional group (n = 97) n (%) | Rubric group (n = 89) n (%) | $\chi^2$/U | p-value |
|---|---|---|---|---|---|
| Score classification | Grade A | 19 (19.6) | 58 (65.2) | 40.76* | < 0.001 |
| | Grade B | 67 (69.1) | 29 (32.6) | | |
| | Grade C | 11 (11.3) | 2 (2.2) | | |
| Mean score | | | | | |
| Mean ± SD | | 7.87 ± 0.72 | 8.58 ± 0.58 | -6.72** | < 0.001 |
| Min-Max | | (6.0-9.4) | (6.7-9.6) | | |

Note. * = Chi-square test; ** = Mann-Whitney U Test

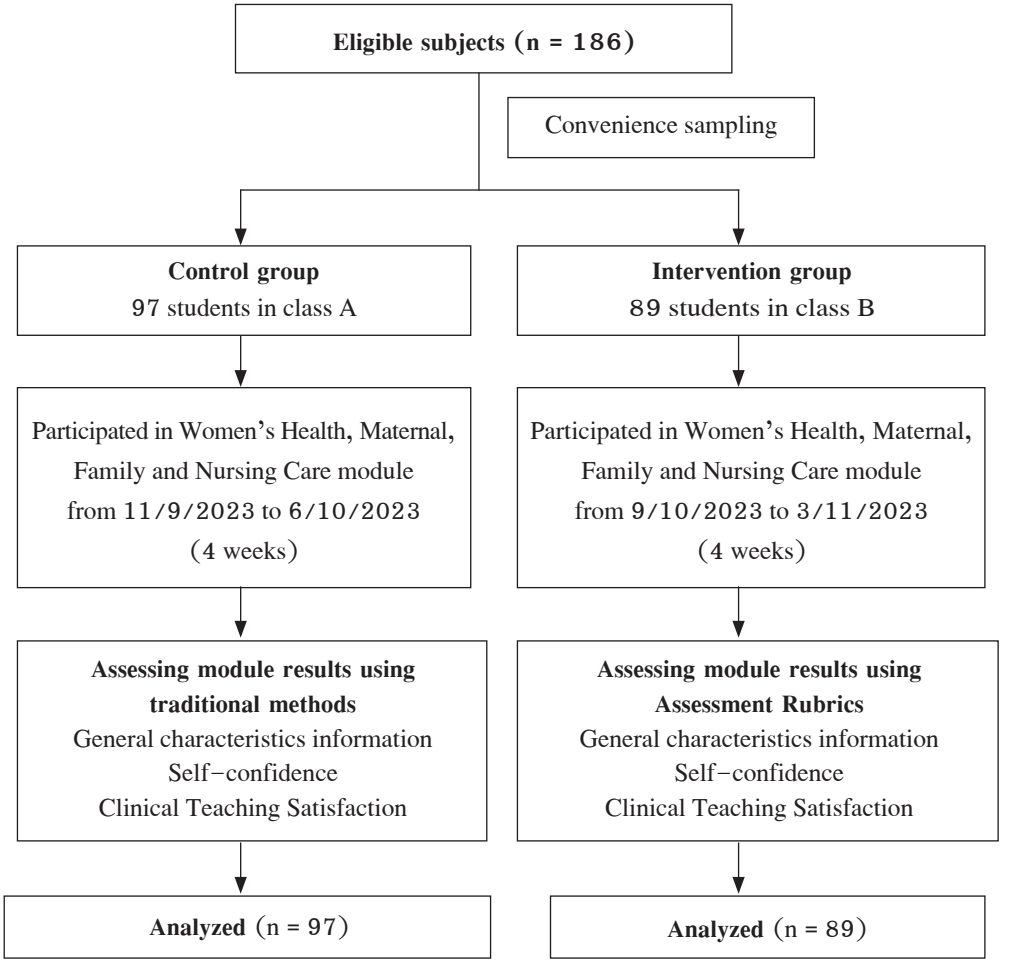


**Figure 1.** Research process diagram

## Discussion

Our study demonstrates that the rubric assessment method is more effective than the traditional method in enhancing nursing students' self-confidence, satisfaction, and learning outcomes. These results are consistent with prior research, which has demonstrated positive effects of rubric assessments on self-efficacy and satisfaction among maternity nursing students, as noted by Ebrahim.[8] Furthermore, the work of Panadero et al. highlights a moderate positive effect of rubrics on academic performance, while also noting smaller effects on self-regulated learning and self-efficacy.[9] Similarly, research by Camargo Salamanca et al. shows that rubric use has a statistically significant moderate to large positive impact on students' self-efficacy.[21]

Self-confidence is crucial in influencing nursing students' clinical competencies, directly affecting their ability to perform and apply learned skills in clinical settings. Research has indicated that higher self-confidence could enhance students' engagement in clinical practice, fostering them to communicate effectively, make critical decisions, and demonstrate essential nursing skills with greater assurance.[22-24] Conversely, low self-confidence can hinder performance, resulting in anxiety and reduced participation, which can impede skill acquisition and competence.[25] Thus, fostering self-confidence among nursing students is essential for enhancing their clinical competencies and ensuring they are well-prepared for the demands of professional practice. Our research results highlighted that evaluating clinical competencies using rubrics was more effective than traditional evaluation methods in enhancing learners' confidence. Rubrics help learners identify the instructor's "expectations," thereby helping to orient the learning process and, at the same time, help learners recognize their strengths and weaknesses and identify important milestones to achieve a desirable score.[26] This is an important key to helping learners become more confident when they clearly understand their abilities, improve self-directed learning, and understand the assessment criteria to achieve better results.[27] This understanding fosters self-directed learning and guides students toward achieving desired performance levels, ultimately enhancing their self-confidence. This result is similar to a meta-analysis, which found that rubrics had a moderate positive impact on learners' confidence.[28,29] Therefore, our research results again confirm that the rubrics utilization in nursing training is a more effective approach than the traditional evaluation method in improving students' self-confidence in Vietnam.

Student satisfaction is critical in evaluating the quality of nursing education, as it reflects the effectiveness of instructional methods, course content, evaluation methods, and overall learning environment. High levels of satisfaction among nursing students are associated with improved engagement, motivation, and academic performance, which are essential for developing competent healthcare professionals.[28,29] Our study indicated that students who utilized rubrics reported higher satisfaction levels than those assessed through traditional methods. Students' satisfaction resulted from their involvement in the rubric-building process, and the evaluation criteria were communicated during the learning process.[30] This allowed students to gauge their progress better throughout the learning process and determine their preparedness for the final exam.[27,31] In addition, during the learning process and exams, providing feedback to students after rubric assessment helps them feel more satisfied with teaching evaluation and assessment activity.[32] As a result, learners feel that they are evaluated more objectively,[33] which contributes to improving learner satisfaction. This aligns with previous research in nursing and other health sciences that highlights the positive effects of rubrics on student satisfaction.[31,34] So, assessing clinical practice using the rubrics method is more effective than the traditional method in terms of enhancing students' satisfaction.

Regarding academic achievement, our study indicates that the outcome of the rubric group was significantly higher than the traditional group. Notably, no students in the rubric group received lower grades, adhering to current training and scoring regulations. The rubric group achieved higher average learning scores across skills, nursing processes, and oral examinations, suggesting that the rubric-based assessment effectively promotes better learning outcomes. Both groups went through the same learning program and content and were evaluated in three areas: skills, nursing process, and oral exam on clinical knowledge. However, the group that was evaluated using rubrics had a higher learning outcome compared to the traditional group. Research shows that the use of rubrics improves learners' achievement while promoting self-regulated learning and the learning process.[9,26] This may be because students clearly understand the assessment scale that is disseminated during the learning process,[33] know the lecturer's expectations, and the level to be achieved for each assessment section, leading to a clear basis for learning orientation to achieve targeted outcomes.[26]

In summary, our findings reinforce the value of incorporating rubric assessments in nursing education. They foster greater self-confidence and satisfaction among students and enhance academic performance compared to traditional evaluation methods. We recommend the widespread implementation of rubrics as a standard assessment tool in nursing education in Vietnam and elsewhere, particularly in clinical practice, to elevate the quality of training and better prepare students for their future roles in healthcare.

## Limitation

We used convenience sampling, with post-rubric comparisons only, and conducted on a single module with the fourth-year students at one university. Thus, generalizability is limited. Furthermore, in the context of measuring learner competency in nursing education, the results may be influenced by psychological factors and the health status of students at the time of assessment. Therefore, future research should expand to include participants from different academic years, apply this method to various modules, and exclude students with psychological or health issues to ensure the quality and effectiveness of this method.

## Conclusion and Implications for Nursing Education

Research indicates that using assessment rubrics in teaching and student evaluation effectively improves learning outcomes, enhances students' self-confidence, and increases course satisfaction. To achieve high effectiveness, it is essential to develop detailed rubrics tailored to the objectives and skills required in nursing. Consistency in applying rubrics is crucial to ensure fairness and clarity in assessment. Regularly evaluating the effectiveness of rubrics through feedback from students and faculty will facilitate continuous improvement. Finally, improving rubrics is necessary to meet the evolving needs of students and the healthcare environment. Through these efforts, rubrics support students in their learning process and contribute to their professional development in the nursing field.

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# การเปรียบเทียบประสิทธิผลระหว่างการใช้เกณฑ์การประเมินผลกับวิธีการแบบดั้งเดิมในการประเมินการปฏิบัติทางคลินิกในนักศึกษาพยาบาลชาวเวียดนาม : การศึกษากึ่งทดลอง

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**บทคัดย่อ:** การประเมินความสามารถของนักศึกษาในการปฏิบัติทางคลินิกเป็นความท้าทายที่สำคัญสำหรับอาจารย์พยาบาล เกณฑ์การประเมินผลเป็นเครื่องมือประเมินเพื่อลดอคติส่วนตัว และกำหนดมาตรฐานและเกณฑ์ที่กำหนดไว้เพื่อประเมินการปฏิบัติงาน การมอบหมายงาน หรือพฤติกรรมของบุคคล จากจำนวนนักศึกษาพยาบาลที่ลงทะเบียนเรียนเพิ่มขึ้นที่มหาวิทยาลัยการแพทย์และเภสัชกรรมแห่งเว้ บ่งชี้ถึงการเปลี่ยนแปลงในระบบการศึกษาด้านการดูแลสุขภาพ แต่การปรับตัวของระบบสุขภาพที่ตามไม่ทันทำให้เกิดประเด็นท้าทาย วิธีการประเมินความสามารถของนักศึกษาในปัจจุบันขาดมาตรฐานที่เป็นหนึ่งเดียว ส่งผลให้การวัดสมรรถนะการพยาบาลที่ไม่คงเส้นคงวา ดังนั้น จึงจำเป็นต้องมีกรอบการประเมินมาตรฐานอย่างเร่งด่วนเพื่อปรับปรุงคุณภาพการศึกษาและเตรียมนักศึกษาสำหรับการสอบรับรองแห่งชาติ อย่างไรก็ตาม ในเวียดนามยังไม่พบว่ามีการศึกษาวิจัยเกี่ยวกับการประเมินประสิทธิผล การศึกษากึ่งทดลองนี้มีวัตถุประสงค์เพื่อเปรียบเทียบประสิทธิผลของการใช้เกณฑ์การประเมินผลและวิธีการแบบดั้งเดิมในการประเมินความสามารถในการปฏิบัติทางคลินิกของนักศึกษาต่อความมั่นใจในตนเอง ความพึงพอใจในการสอนทางคลินิก และผลการเรียนในนักศึกษาพยาบาลที่เรียนโมดูลเกี่ยวกับสุขภาพสตรี และการพยาบาลมารดาและครอบครัว การเลือกกลุ่มตัวอย่างใช้การสุ่มแบบเจาะจงเพื่อคัดเลือกนักศึกษาพยาบาล 186 คนจากมหาวิทยาลัยการแพทย์และเภสัชกรรมแห่งเว้ โดยมีนักศึกษา 89 คนอยู่ในกลุ่มการใช้เกณฑ์การประเมินและนักศึกษา 97 คนในกลุ่มการใช้วิธีการดั้งเดิม เครื่องมือในการเก็บรวบรวมข้อมูลประกอบด้วยแบบสอบถามลักษณะทางประชากร ความมั่นใจในตนเอง แบบประเมินความพึงพอใจทางวิชาการของนักศึกษาพยาบาลระดับปริญญาตรี และเกณฑ์การประเมินและการประเมินแบบดั้งเดิม ผลการศึกษาแสดงให้เห็นว่านักศึกษาในกลุ่มเกณฑ์การประเมินมีคะแนนเฉลี่ยสูงกว่ากลุ่มที่ใช้การประเมินแบบดั้งเดิมในหลายมิติ ได้แก่ ความมั่นใจโดยรวม ความพึงพอใจกับการสอนทางคลินิก และ การปฏิบัติงานเพื่อการเรียนรู้ อย่างมีนัยสำคัญ อย่างไรก็ตาม กลุ่มการใช้เกณฑ์การประเมินไม่ได้รายงานการเพิ่มขึ้นของการรับรู้เกี่ยวกับผู้สอนในด้านที่ “เข้าถึงได้ง่ายและรู้สึกสบายใจในการถามคำถาม” หรือ ในการแสดงให้เห็นถึง “ระดับความรู้และความเชี่ยวชาญทางคลินิกที่สูง”อย่างมีนัยสำคัญทางสถิติ สรุปได้ว่าการนำแนวทางการประเมินตามเกณฑ์มาใช้ส่งผลในเชิงบวกต่อการรับรู้ของนักศึกษาเกี่ยวกับความสามารถของตนเอง และมีส่วนช่วยให้บรรยากาศการเรียนรู้มีประสิทธิผลมากกว่าวิธีการดั้งเดิม ดังนั้น จึงควรใช้วิธีการประเมินตามเกณฑ์ในการประเมินคุณภาพของการฝึกปฏิบัติการพยาบาล โดยมีการศึกษาวิจัยในกลุ่มนักศึกษาอื่น ๆ หลักสูตรการพยาบาล และสถานที่อื่นๆ เพิ่มเติมด้วย

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**คำสำคัญ:** ผลสัมฤทธิ์ทางการเรียน การศึกษาด้านการพยาบาล เกณฑ์การประเมิน ความพึงพอใจ ความมั่นใจในตนเอง การประเมินนักศึกษา

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