Integration of Theory and Practice: Experiential Learning Theory and Nursing Education

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Any of today's nursing students have varied learning styles, presenting a challenge to faculty as they seek out ways to teach students to think critically. The achievement of critical thinking skills has been identified as a necessary outcome of undergraduate nursing education (National League for Nursing Accrediting Commission, 2004). Various other factors, including limited clinical facilities, the nurse faculty shortage, high patient acuity, decreased acute care admissions, shorter lengths of stay, and the shortage of nurses in clinical facilities add to the challenge. Alternative methods to provide critical thinking experiences must be developed and incorporated into undergraduate nursing education.

Traditional approaches to nursing education, including didactic lectures, memorization, and return laboratory demonstrations, may indicate technical mastery, but do not facilitate the outcome of critical thinking. Rather, nursing students learn best through experiential learning. Kolb's experiential learning theory and model are discussed here as the foundation for a practice integration method designed to provide critical thinking experiences in a baccalaureate nursing curriculum. Scenarios with moderate-fidelity manikins constituted one part of the integration method.

The Transformation of Experience Kolb (1984) viewed learning as the process whereby knowledge is created through transformation of experience. Although not specifically identified as a nursing theory, Kolb's theory was selected as a framework for implementation of the proposed intervention based on a review of criteria presented by Kenney (2006). Kenney identified that "theory based nursing practice is the creative application of models, theories, and principles from nursing, medical, behavioral, and humanistic sciences" (p. 300).

Developed by David A. Kolb, PhD, a professor of organizational behavior, Kolb's theory was determined to be the best choice for practice integration of critical thinking experiences through the application of questions developed by Fawcett (2000). Fawcett developed criteria for analysis and evaluation of nursing theories that included questions regarding significance, internal consistency, parsimony, testability, and empirical and pragmatic adequacy.

Kolb's theory addresses the provision of learning experiences and offers different interventions to meet the needs of all types of learners. According to Kolb, learning is a continuous process, and knowledge is created by transforming experience into existing cognitive frameworks, thus changing the way a person thinks and behaves.

The theory identifies and defines key concepts for the learner. According to Kolb, experiences are grasped through apprehension or comprehension. Apprehension is viewed as participation in the actual experience, whereas comprehension occurs outside the actual experience through abstract conceptualization.

For learning to occur, experiences must be transformed. Transformation happens through either extension or intention. Extension is a process achieved by active external experimentation; intention is achieved through internal reflection of the experience. To facilitate the process of grasping experience and transforming it into new ways of thinking and new behaviors, the theory presents four different learning styles or modes: accommodating, diverging, converging, and assimilating.

ABSTRACT The increasingly complex role of a nurse requires a much higher level of critical thinking and clinical judgment skills than in the past. Opportunities to provide critical thinking experiences in clinical settings are challenged by various factors, including limited clinical facilities and a shortage of nurse faculty. Alternative methods to provide critical thinking experiences in undergraduate nursing education are required. Kolb's theory of experiential learning theory is discussed as the foundation for the development of an alternative strategy that uses moderate-fidelity manikins. The strategy involved scenario-based performance of selected nursing skills in order to evaluate critical thinking and theory-clinical correlation.
Introducing a Transformative Approach to Learning

An opportunity became available to change the curriculum in a junior medical-surgical nursing course by melding simulated critical thinking opportunities and laboratory skill performance. Some faculty failed to acknowledge the need to change teaching strategies to meet current requirements for educating nurses and resisted this development. Therefore, efforts to educate faculty were required, including a meeting with all clinical faculty prior to the introduction of the course to discuss clinical objectives. Faculty were encouraged to voice questions, concerns, or suggestions.

One approach used to educate faculty was to present nursing literature on scenario-based critical skills testing (Haskvitz & Koop, 2004; Lasater, 2007; Medley & Horne, 2005; Nehring, Ellis, & Lashley, 2001; Sewchuk, 2005). Scenario-based critical skills integration was discussed as a strategy to facilitate critical thinking as an objective and provide a method to accommodate individual learning styles.

Kolb's theory and model were introduced as a way to meet the learning styles of students and illustrate the learning cycle. The goal and objectives for the integration project were outlined as follows:

1. Students will assess critical health incidents with patients through observation, measurement of physiologic parameters, and verbal communication.
2. Students will plan appropriate steps in care based on current and changing information.
3. Students will intervene to correct or stabilize the situation.
4. Students will evaluate the situation to take additional steps or alter the plan of care.

Implementation of the integration involved students, as well as junior clinical nursing faculty. The outcome objectives and guidelines for integration were included in the syllabus given to students on the first day of class. Students were informed that their performance would be evaluated as satisfactory or unsatisfactory, an evaluation process consistent with the nursing department’s grading standards for clinical performance.

The Integration Experience

Implementation occurred over the entire 15-week semester with methods selected to incorporate the learning cycle and styles identified by Kolb. During the first and second weeks of the semester, clinical experiences took place on campus in the nursing laboratory. Methods used to review previously taught skills and familiarize students with the process were procedural skill demonstrations with returns, scenario-based presentations, and reflection. The same methods were used during the second week when new skills were presented.

Students were informed that skill performance would be evaluated the final week of the course using scenarios in the nursing laboratory. They were also told that performing skills on the clinical unit did not excuse them from scenario-based skill evaluation.

Throughout the semester, the students had opportunities to utilize interactive skill videos, participate in supervised skill demonstrations with critiques by the lab coordinator, practice independently in the lab, and use the nursing library. Weekly clinical postconferences were designed to facilitate reflection on encountered patient scenarios. The scenarios incorporated lab data, change in status, medications, and the performance of required skills. Students had opportunities to experience all aspects of the learning cycle, including concrete experience, reflective observation, abstract conceptualization, and active experimentation.

For the scenario-based performance evaluation in the nursing laboratory, students were scheduled for a one-hour, individual session with
their assigned clinical faculty. All necessary equipment and supplies such as blood pressure cuffs, pulse oximeters, thermometers, medications, gloves, dressings, and documentation forms were available for use during the scenario-based evaluation.

Each faculty member was responsible for developing scenarios incorporating all the skills that were presented the first two weeks of the semester. Moderate-fidelity manikins with vital sign and programmed voice capabilities were used. Faculty staged the clinical appearance of manikins using dressings, Foley catheters, nasogastric tubes, and IVs to simulate the hospitalized patient. The students were presented with patient scenarios requiring them to assess a critical situation, determine the appropriateness of a particular skill, implement the skill, and evaluate the response. The scenarios also incorporated theory content presented during the semester. Faculty asked questions to encourage dialogue and reflection regarding the students’ performance during the scenario. Upon completion, both students and faculty completed an evaluation of the experience.

Overall evaluation of the experience by students and faculty was positive. Objectives of the integration were met. The most frequently mentioned comment from students’ evaluations was that scenario-based evaluation served as an integrator of learning, bringing together theoretical knowledge obtained in the classroom and psychomotor skills learned in the laboratory and clinical practice, requiring students to think critically. Some students felt that although the evaluation was stressful, it required them to think for themselves and intervene. Others commented that the acuity of patients in the scenarios increased their awareness in clinical practice areas. Many students took the initiative to practice their skills in the nursing laboratory prior to testing.

Faculty evaluations supported students’ responses regarding the integration of learning. Faculty noted other benefits such as the ability to: a) control variables in testing, b) minimize ethical concerns, c) allow experimentation and failure, d) maximize learning time, e) promote self-evaluation, f) elicit feedback, and g) learn effective decision making.

Faculty and student evaluations identified scenario-based evaluation as an integrator of learning bringing together classroom, laboratory, and clinical experience to facilitate critical thinking. These results support Kolb’s (1984) approach to learning as a continuous process in which knowledge is created by transforming experience into existing cognitive frameworks, thus changing the way a person thinks and behaves. Faculty attitudes and approaches toward the facilitation of critical thinking development changed as a result of the integration. Many reported personal rewards as they saw students experience the “light bulb” effect while interacting during scenarios.

Some students stated that scenario evaluation helped boost their confidence. They were surprised at what they knew and were able to apply in a situation requiring critical thinking. Other students had difficulty applying previously memorized material to the scenarios and became aware of their personal deficits. Many students have experienced high levels of interactive technology throughout their social development, and, as a result, find this a comfortable strategy.

All faculty support continued use of this strategy. Thus, going forward, scenario-based laboratory practice and testing will continue to be enhanced by the use of simulation manikins. Faculty members are exploring grant opportunities to purchase additional mid- and high-fidelity manikins.

The increasingly complex role of the nurse requires higher levels of critical thinking and clinical judgment skills than in the past. As nursing education programs confront the need to consider new learning strategies, it is important to adapt present methods to facilitate critical thinking as a professional competency. Human patient simulators offer an important alternative to contextual learning and a means to facilitate the development of nursing students’ critical thinking abilities.

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References