Evaluation in Clinical Practice Using an Innovative Model for Clinical Teachers
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ABSTRACT
This article describes the development and use of a practical model for clinical teachers in nursing education. One of the major problems experienced by clinical teachers is how to use information-rich interactions involving students in clinical practice. The Reflective Interaction Analysis in Nursing Education (RIANE) Model addresses this problem by facilitating clinical teachers' translation of everyday interactions involving nursing students into objective student progress notes recorded for future use in formative and summative evaluations. The use of this model in practice by a group of nurses training to become clinical teachers is discussed.

Clinical teachers need to provide their students with hands-on experience and practice techniques while ensuring that patients receive high-quality, safe nursing care. To achieve this, clinical teaching requires professional competence, interpersonal relationship skills, appropriate personality characteristics, and teaching ability (Tang, Chou, & Chiang, 2005).

It is almost impossible for clinical teachers to teach nursing students everything they will need to know and do as future nurses. The time constraints on clinical placements make this even more difficult as students must achieve significant learning in as little as a month in some cases. Therefore, clinical teachers must decide which information is essential in a specific learning situation and how to teach it (Speziale & Jacobson, 2005) while identifying relevant requisite knowledge, skills, values, and feelings.

A significant core competency of clinical teaching is evaluation. This is a rather complex skill because it necessitates collecting and analyzing knowledge regarding students' varying abilities, and transforming this knowledge into an evaluation that is objective and yet meaningful to students in accordance with both learning goals and standards of practice. To perform successful evaluations, teachers must be able to translate and interpret the multitude of situations experienced by students throughout the clinical placement. A clear model to guide and help convert any specific situation into a learning or evaluative process could benefit both clinical teachers and students.

Literature Review
Role of Clinical Teachers
Much has been written about the role of clinical teachers and the effectiveness of clinical teacher behaviors (Hanson & Stenvig, 2008; Wolf, Beitz, Peters, & Wieland, 2009). The appropriate role for teachers in the clinical setting is to competently guide, support, stimulate, and facilitate learning. This role necessitates the maintenance of a climate of mutual trust and respect to support student learning and growth (Gaberson & Oermann, 2007).

Teaching, nursing, evaluation, interpersonal relationships, and personality were identified by nursing students, educators, and graduates as five categories of attributes needed by clinical nursing educators to fulfill their role successfully. Evaluation was rated as highest and personality was rated as lowest in importance (Knox & Morgan, 1985).

Similarly, Viverais-Dresler and Kutschke (2001) categorized...
and ranked effective clinical teacher behaviors using nursing students’ opinions and ratings. The categories, ranked according to their importance from highest to lowest, were evaluation, professional competence, interpersonal relationships, and teaching ability. Evaluation included the following ranked behaviors:

- Encouraging student self-evaluation.
- Grading fairly.
- Giving positive reinforcement.
- Providing constructive criticism.
- Providing comments that lead to new insights.
- Pointing out areas that need improvement.

In addition, the ability to provide objective evaluations and positive feedback to students has consistently been identified as a positive attribute of clinical teachers (Hanson & Stenvig, 2008). In its Core Competencies of Nurse Educators with Task Statements, the National League for Nursing (2005) indicates the need for faculty competence in “providing timely, constructive and thoughtful feedback to learners,” and “using feedback gained from self, peer, student, and administrative evaluation to improve role effectiveness.”

It seems, therefore, that the role of clinical teachers is seen mainly as facilitator, helping students acquire knowledge and skills to allow application within a given clinical context. Teachers cannot achieve this without giving feedback and evaluating students, as it is this evaluation—when given meaningfully, positively, and objectively—that facilitates student insight in practice.

Clinical Evaluation

Clinical evaluation is a process in which decisions are made about the clinical competency of students in practice. Teachers make and collect observations and anecdotes relating to student performance and other types of data, then compare this information to a set of standards and grade the students accordingly. Teachers then present their evaluations to students.

Formative evaluation provides feedback to students about their progress to enable the development of clinical knowledge, skills, and values (Gaberson & Oermann, 2007), and summative evaluation provides faculty with a formal opinion or grading of students’ performance at the end of the clinical placement. The translation of these clinical competencies into clinical knowledge, skills, and values is performed in accordance with Bloom’s three learning domains (Bloom, Englehart, Furst, Hill, & Krathwohl, 1956):

- Cognitive domain.
- Affective domain.
- Psychomotor domain.

Although the evaluation is intended to be objective, it cannot be completely free of personal opinion and is therefore complex. This complexity is evident in the review on evaluation provided by Walsh and Seldomridge (2005). They specifically point out difficulties encountered by clinical teachers, due to their personal acquaintance with the students, the need for face-to-face evaluation, and reluctance to give low grades to avoid confrontation and cope with student grievances. They also note that evaluation of clinical performance is generally imprecise, as nursing actions consist of hundreds of single acts that are usually examined by teachers in a global manner and are not broken down into discrete components.

This concern of evaluation objectivity is also noted by Dolan (2003), who states the need for standardization of student evaluation techniques. In addition, Elicigi and Sari (2008) found one of the problems that students complained about most frequently during clinical practice was inadequate assessment by their clinical teacher, producing unfair evaluation and grades.

Preparation for Clinical Teaching and Evaluation

Effective teaching requires some form of preparation. MacIntyre, Murray, Teel, and Kashmer (2009) note that there is a need for structured professional development opportunities to help clinicians learn effective pedagogical principles and practices needed to educate the next generation of nurses. Content areas such as teaching-learning strategies, principles of adult education, communication, values and role clarification, conflict resolution, assessment of learning needs, and evaluation are cited as integral topics for a clinical teaching preparation program (Rogan, 2009).

Because evaluation is a core component of teaching, educational programs for clinical teachers should teach valid evaluation techniques so that clinical teachers feel comfortable providing feedback (Clynes & Raftery, 2008; McCarty & Higgins, 2003). Research on the development of evaluation expertise and know-how is virtually nonexistent (Reising & Devich, 2004), and only a few nursing schools report that their policy promotes guidelines for the performance of objective clinical evaluation of students (Gallant, MacDonald, & Smith Higuchi, 2006).

Problem Statement

Evaluation and feedback provision techniques have received much attention in the clinical teaching literature. However, there is less emphasis on the use of specific methods to analyze the information collected from student situations and interactions to transform it into appropriate content for feedback or evaluation.

For evaluations given to students to be meaningful, relevant, and objective, it is important to ensure that the various observations of these experiences are analyzed and interpreted by clinical teachers and then categorized into content areas relevant to evaluation of students’ achievements and competence in knowledge, skills, and attitudes. This is a reflective process in which clinical teachers must be proficient to be effective. It is our proposition that it is possible to make this process more methodical by using a model that would help clinical teachers focus on the process of analysis and interpretation of clinical interactions.

Reflective Interaction Analysis in Nursing Education Model

As cofacilitators in postregistration courses for clinical teachers, we became aware of the difficulties encountered by novice clinical teachers in forming objective and valid evaluations. This led to the development and application of a new model in nursing education—the Reflective Interaction Analysis in Nursing Education (RIANE) Model.

Developed as a tool to be used by clinical teachers, the mod-
el is meant to ensure easy, ongoing evaluation of student achievement by turning the evaluation of interactions in which students are involved into a well-defined concrete act through reflection and process analysis. This promotes transference of clinical knowledge and skills from theory into practice. In other words, the model not only transforms a tacit into an explicit process, but it also helps teachers translate everyday interactions into objective records on students’ progress for future use in formative or summative evaluations.

Similar to clinical decision making and problem solving models, RIANE is a tool that must be practiced and internalized with the accumulation of experience. The model itself is based on theory in reflective practice and also makes use of Bloom’s three learning domains (cognitive, affective, and psychomotor domains) (Figure).

**Explanation of the Model**

The model represents the process that clinical teachers go through incessantly during clinical teaching-learning. It includes the following components:

- Information gathering.
- Description of the situation or interaction.
- Clarification of students’ perspective on the situation or interaction.
- Reflective analysis.
- Actions needed to improve nursing students’ competence.

The following description of the model is accompanied by a specific example of its application.

**Information Gathering.** During clinical practice, clinical teachers witness numerous incidences involving student, patient, and other interactions that may be used for the learning process and also for feedback and evaluation of students’ progress during clinical practice. This is accomplished by both passive and active observation during interactions.

**Description of the Situation or Interaction.** The situation observed is then described objectively and subsequently analyzed. Example:

During a bed-bath, the student noticed that the intravenous (IV) heparin drip was out of place, closed the line, and continued bathing the patient. An hour later, I discovered the discontinued drip, and when noting this to the student, she burst into tears.

**Clarification of Students’ Perspective on the Situation or Interaction.** The teacher’s observations and perceptions of the situation are presented to students for clarification. Example:

The student explained that she had discontinued the IV during the bed-bath because she noticed some swelling around the IV insertion site and the patient also reported some tenderness in the area. When questioned, she could not remember what heparin was nor the principles of heparin therapy. She also said that she had cried because she hates making mistakes and regretted forgetting about the discontinued drip. She thought the fact that the mistake was noted would affect her grade.

**Reflective Analysis.** Analysis is performed by the clinical teacher through reflection on the situation by examining its different contexts, using Bloom’s three learning domains (Bloom et al., 1956). The cognitive context relates to knowledge and thinking skills displayed. Example:

The student has appropriate knowledge and understanding of principles of IV therapy but displayed lack of understanding as to the importance of heparin continuity and showed lack of prioritizing abilities by not notifying me about the discontinuation for more than an hour.

**Affective Analysis.** Analysis is performed by the clinical teacher through reflection on the situation by examining its different contexts, using Bloom’s three learning domains (Bloom et al., 1956). The affective context relates to attitudes and feelings expressed. Example:

The student has difficulty in acknowledging her failings and accepting criticism.

**Psychomotor Analysis.** Analysis is performed by the clinical teacher through reflection on the situation by examining its different contexts, using Bloom’s three learning domains (Bloom et al., 1956). The psychomotor context relates to actions and skills demonstrated throughout the situation. Example:

The student discontinued the drip using correct procedure but did not note the action in the patient’s chart or report to me.

**Actions Needed to Improve Nursing Students’ Competence.** The information derived from each learning domain serves as the basis for decisions regarding actions or reactions made by the clinical teacher during feedback and evaluation, also assigned to the learning domains. Example:
• Cognitive domain—knowledge regarding IV therapy is adequate but improvement is needed regarding clinical implications of heparin therapy.
• Affective domain—the student needs to acknowledge that mistakes are an opportunity for growth.
• Psychomotor domain—motor skills are as expected, but the student should revise reporting techniques as part of the nursing process.

Application of the Model
The model was introduced during four consecutive continuing education courses for RNs qualifying as clinical teachers during 2007 to 2009 at a nursing school in northern Israel. Each qualification course includes 140 hours of theoretical studies and 60 hours of clinical practice. The curriculum includes subjects such as interpersonal and group communication, principles of adult education, clinical teaching role and skills, clinical education management skills, critical thinking skills, feedback, and evaluation techniques.

The model was introduced in three stages:
Stage I. The model, its rationale, and its recommended use was presented to the participants (N = 65). Participants were then divided into small discussion groups and presented with short descriptions of interactions or situations taken from real clinical experiences, in the form of vignettes. The groups analyzed these experiences according to the model, and the analysis was then reported to the whole class and summarized.

Stage II. As part of their assignments during the mandatory 60 hours of clinical practice, the participants were required to record two situations or interactions involving nursing students and analyze them using the model.

Stage III. The application, effectiveness, and applicability of the model was then discussed and recorded in class discussions. Permission to use and publish the comments and records was obtained at this stage.

The central themes arising from these comments are:
Ease of Use. The participants noted that the model is simple to understand and use. In addition, the model is not time consuming and therefore can be used within the time limitations that characterize clinical settings. Participants comments were “I can’t believe that it took me exactly 5 minutes to form a valid evaluation of the situation” and “...suddenly I understood clearly what had happened during the interaction. I found that the model was so easy to use.”

Familiarity of Use. It was also noted that using Bloom’s learning domains (Bloom et al., 1956) facilitated participants’ ability to form recognizable definitions while analyzing situations, as they were already familiar with the domains. One participant noted, “I know what cognitive, affective, and psychomotor domains are, but I never thought of the possibility of using them in this way. It just made it that much simpler.”

Another participant commented that after analyzing situations three or four times, “I found myself observing situations while automatically assigning the relevant information to the different domains.”

Clear Phrasing. The model helped the participants to focus on and express relevant information for feedback in clear and professional wording. One participant said, “I found that when you analyze the situation like this, you suddenly see more things. Not everything that I noticed about the situation was a mark against the student because she actually demonstrated some remarkable competency.” Another participant noted, “The model showed me how to phrase the sentence and helped me give what I think was a pretty objective evaluation of the student’s abilities.”

Other comments from participants related to increased self-confidence in situation analysis when applying the model; the feeling that students were more accepting of their feedback because it was thought to be “more objective”; and an overall impression that with the model, formulating feedback was actually less intuitive and more methodical.

Discussion
One of the major problems experienced by clinical teachers, yet sparsely discussed in relevant literature, is how to transform information-rich interactions in clinical practice into objective information in a format relevant for meaningful feedback and evaluation. The RIANE model encourages clinical teachers to consider every clinical interaction in which students are involved as a teaching opportunity. It creates order in the seemingly endless amount of information that clinical teachers are faced with daily by methodologically assigning this information to easily accessible formats in relevant domains. Bloom’s three learning domains (Bloom et al., 1956) are commonly understood and applied in the nursing discipline (Bastable, 2007), so the model has features familiar to nurses, making it easier to adapt to and apply.

Using the model may also actually decrease the difficulties encountered by teachers when assessing students’ competence as stated by Walsh and Seldomridge (2005). Because the model induces teachers to inspect and analyze each situation from three different aspects, assessment and subsequent evaluation becomes more objective and suited to students’ personal attributes.

The model also inherently highlights for both teachers and students the fact that performing poorly in one domain does not negate performing well in another. Even though the literature on feedback and evaluation generally underlines the importance of delivering specific, descriptive feedback content to nursing students (Clynes & Raftery, 2008), it is also important to consider the actual content in the context of the learning domains. Although “fairness in grading” (evaluating) is considered of utmost importance by students (Viverais-Dresler & Kutschke, 2001), it is not clear what students consider to be “fair.” Highlighting differing aspects of one situation—some more positive and some more negative—would certainly imply fairness and subsequently, objectivity. Focusing on the strengths and weaknesses portrayed by students within the different domains, and conveying these to students effectively, is of great value in the development of student clinical knowledge, skills, and values (Gaberson & Oermann, 2007).

Conclusion
The RIANE Model is unique in addressing difficulties encountered by clinical teachers in formulating relevant, meaningful, and objective information for feedback and evaluation.
As with any learned skill, using the model for reflection and analysis becomes habitual and then second nature. Despite the promise the model seems to hold, more experience is needed, and larger scale studies are recommended, including studies of both the use of the model by clinical teachers and its effectiveness from students’ point of view.

References


