

## Conducting clinical post-conference in clinical teaching: a qualitative study

Li-Ling Hsu RN, EdD

*Associate Professor, Director of Graduate Institute in Health Allied Education, National Taipei College of Nursing, Taipei, Taiwan*

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*Correspondence:*

Li-Ling Hsu

Associate Professor

Director of Graduate Institute in Health Allied Education

National Taipei College of Nursing  
No. 365

Min Te Road 11257

Taipei

Taiwan

Telephone: +886 2 28227101

E-mail: llhsu@mail1.ntcn.edu.tw

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### **Conducting clinical post-conference in clinical teaching: a qualitative study**

**Aim and objective.** The aim of this study was to explore nurse educators' perceptions regarding clinical postconferences. Additional aims included the exploration of interaction characteristics between students and faculty in clinical postconferences.

**Background.** Nursing students are challenged to think and learn in ways that will prepare them for practice in a complex health care environment. Clinical postconferences give students the opportunity to share knowledge gained through transformative learning and provide a forum for discussion and critical thinking. Faculty members must guide students as the latter participate in discussions, develop problem-solving skills and express feedings and attitudes in clinical conferences.

**Methods.** The study used qualitative research methods, including participant observation and an open-ended questionnaire. Participant observers watched interaction activities between teachers and students in clinical postconferences. A total of 20 clinical postconferences, two conferences per teacher, were observed. The Non-Numerical Unstructured Data Indexing Searching and Theory-building qualitative software program was used in data analysis.

**Conclusions.** Research findings indicated that, of the six taxonomy questions, lower-level questions (knowledge and comprehensive questions) were mostly asked by faculty members' postclinical conferences. The most frequently used guideline was task orientation, which is related to practice goals and was found in discussions of assignments, reading reports, discussions of clinical experiences, role plays, psychomotor skill practice, quizzes and student evaluations.

**Relevance to clinical practice.** It is an essential responsibility of nurse educators to employ postconferences to assist students in applying their knowledge in practical situations, in developing professional values and in enhancing their problem solving abilities.

**Key words:** clinical postconference, group discussion, questioning skills, transformative learning, nurses, nursing

## Introduction

Nursing students are challenged to think and learn in ways that will prepare them for practice in a complex health care environment. Clinical conferences give students the opportunity to share difficulties and feelings about patient care, develop critical thinking skills, describe nursing experiences and learn how to collaborate with others in a group (Gaberson & Oermann 1999). One aim of nursing education is to enable students to develop good clinical judgment and decision-making skills. Clinical practice increases nursing students' knowledge and their capacity to synthesize theoretical knowledge and nursing care (Addis & Karadag 2003). Postconferences are an integral part of the clinical experience and can be applied as valuable and creative teaching strategies. The teacher is responsible for planning the discussion so as to meet the clinical objectives, analyse clinical situations, identify problems, ventilate feelings and develop support systems (Rowles & Brigham 1998).

Clinical experience is an important part of any nursing education program. Clinical teaching as well as classroom teaching effectiveness can affect students' outcomes (Sieh & Bell 1994). Clinical teaching occurs in a dynamic setting and is a complicated and complex process (Dyches 1998). Therefore, learning how to lead postconference discussions is very important for nurse educators. Recent research has focused on evaluating teaching effectiveness in the clinical area. Some of these studies have addressed strategies for improving teaching (Brown 1981, Knox & Mogan 1985, Mogan & Warbinek 1994, Reeve 1994, Benor & Leviyof 1997, McKenna & Wellard 2004, Hilton & Pollard 2005, van der Hem-Stokroos *et al.* 2005), but very few studies have focused on clinical postconferences. Therefore, the aim of this study was to explore nurse educators' perceptions regarding clinical postconferences. Additional aims included the exploration of interaction characteristics between students and faculty in clinical postconferences.

## Transformative learning theory

According to Mezirow, transformative learning theory is based on the premise that learners have perspectives derived from learning experiences, thoughts, values and insights (Sokol & Cranton 1998). Mezirow stresses the need to empower learners to think 'as autonomous thinkers' in preparation for the twenty-first century (Grabove 1997). A 'trigger event' usually induces transformative learning and is fostered by critical reflection (Sokol & Cranton 1998). Critical reflection is seen as essential to transformative

learning, and is the conscious and explicit reassessment of the consequences and origins of our meaning structures, including perceiving, knowing, believing, feeling and acting (Taylor 2001). If teachers are to make changes in their learning and teaching, they must provide learning context by inquiry, dialogue and reflect in the student learning process (Saaverda 1996). Dewey (1938) argues that ideas are confirmed by the consequences that they have on everyday experience. He also discusses concept formation in relation to the process of reflective thinking. In the process of fostering transformative learning, nurse educators assist nursing students in exploring the meaning in their experiences. By exploring their experiences, students are able to gain a deeper understanding of them and can critically reflect on previously held assumptions (Yorks & Sharoff 2001). A common goal of clinical postconferences is to awaken students to the feelings of their patients.

## Questioning skills

Green *et al.* (2003) noted that integrating clinical content with clinical teaching in a faculty development is important to improve clinical and teaching skills. Irby (2005) addressed additional problems related to clinical teaching, including limited emphasis on problem-solving, inadequate feedback to students, lack of clear expectations of student performance, and inappropriate role models and clinical settings. Gelula and Yudkowsky (2003) stated that health professional faculty need faculty development programs to improve their clinical teaching skills. Questioning is the instructional strategy most widely used to facilitate learning (Hootstein 2002). Questioning strategies are essential to fostering critical thinking skills, creativity and higher level thinking skills (Shaunessy 2000). Questions can be sequenced so as draw out contributions from students, or they can be constructed so as to promote thinking at higher cognitive levels and develop new understanding in students (Spencer 2005).

Deep questions drive learners to go beneath the surface of things, forcing them to deal with complexity (Elder & Paul 1998). Wink's (1993) study found that faculty members use high-level questions in postconferences to assist students in applying their knowledge to new and unique clinical situations. By adopting an educational approach that stressed the use of high-level questions in postconferences, faculty members in the treatment group ( $n = 10$ ) increased the number of high-level questions more than the control group ( $n = 4$ ) did. However, because of its small sample size, that study should be replicated with larger samples and in different settings. Another study by Sellappah *et al.* (1998) studied 1085 questions and found that clinical teachers with teaching

qualifications asked more low-level questions than high-level questions. Schuwirth *et al.* (2001) explored whether short case-based questions elicit different thinking processes from those elicited by factual knowledge-based questions. They found that short case-based questions led to thinking processes which represented problem-solving ability better than thinking processes elicited by factual knowledge questions did. Based on the findings of their study, it was suggested that clinical teachers need to be taught how to ask questions, particularly high-level questions or case-based questions.

### Group discussions (interactive dialogue)

Wink (1995) describes the clinical conference as a group event that addresses course and clinical objectives and student feedings and attitudes related to patient care. Conferences designed for small group discussion are often scheduled after clinical responsibilities are fulfilled. The instructor's role changes from that of a didactic teacher to that of a coach, counselor and facilitator of discussion. The clinical conference should be a student-centred model that encourages dialogue (Rossignol 2000). In Rossignol's (2000) study, teacher roles in clinical conferences included lecturing (62%), soliciting (52%), responding (74%) and reacting (62%). Letizia and Jennrich (1998) investigated a clinical postconference learning environment survey (CPCLES) that included six components: involvement, cohesion, teacher support, task orientation, order and organization and innovation. Their study found no differences between students and faculty in their perceptions of the importance of these postconference learning environment components. The six dimensions used to assess clinical conferences can be employed as guidelines for conducting clinical conferences.

In summary, clinical conferences give students the opportunity to share knowledge gained through transformative learning and provide a forum for discussion and critical thinking. Faculty must guide students as the latter participate in discussions, develop problem-solving skills and express feedings and attitudes in clinical conferences. The characteristics of effective clinical conferences include student involvement, the use of faculty coaching techniques and interaction between students and faculty through transformative learning for the purpose of achieving learning outcomes (see Fig. 1).

### Methods

A qualitative study design, which adopted participant observation, taped transcripts and field notes, was applied with the

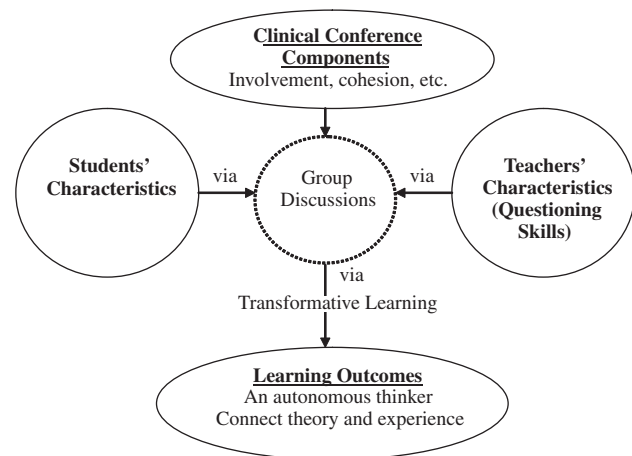


Figure 1 The characteristics of effective clinical conferences.

aid of 10 faculty members and 50 students. Participant observers watched interaction activities between teachers and students in clinical postconferences. The open-ended questionnaire was designed to obtain the teachers' perceptions and opinions of clinical postconferences. The Non-Numerical Unstructured Data Indexing Searching and Theory-building (NUDIST) computer software program for data management was used to identify concepts, categories and themes in the data.

### Subjects and setting

The sample for this study consisted of 10 nurse educators with master degrees selected from among the instructors involved in a two-year nursing program at a nursing college located in Tao-Yuan, Taiwan. The school has a two-year program for students with high school diplomas. Students become Licensed Practice Nurses (LPNS) before attending a nursing college. Students had to participate in about 20 credits of clinical practice experiences during they had studied in high school diploma. Some even had a few years experience in clinical settings after they graduated from high school diploma. In the two-year nursing program, students must be taken 12 credits of nursing practicum. The 12 credits of nursing practicum are divided into three parts: Nursing Practicum I, Nursing Practicum II and Clinical Practicum; each requires 144 hours of practice. In this study students were at the beginning of their 144 hours of Nursing Practicum I. Each nurse educator taught 10 students enrolled in Nursing Practicum I in the medical-surgical ward of a hospital for about four weeks. Ten nurse educators, each holding a master's degree, participated in this study. Permission to conduct the study was obtained from the dean and

the president of this school. Informed consent was obtained from the nurse educators before conducting the study.

### Data collection

Each educator was observed by the researcher and one observer twice during regularly scheduled clinical teaching times. This study collected data using a combination of participant observation, taped transcripts and field notes. Observation is a fundamental and critical method in all qualitative inquiry. It is used to discover complex interaction in natural social setting (Marshall & Rossman 1995). Tape recordings were used to document verbal interactions between teachers and students. Field notes also recorded procedures, facial expressions and body language. A total of 20 clinical conferences, two conferences per teacher, were observed. The study was designed to minimize the Hawthorne or observer effect where teachers or learners change their behaviour because of the researcher's and observer's presence. To minimize this effect, the researcher and observer did not show any responses to the situations that came up during each observation period. The postconference at the end of the student nurse shift is generally viewed as a time for students to share experiences, a time of debriefing of any upsetting occurrences and a time for applying classroom content to the care of patients (Gaberson & Oermann 1999). If clinical teaching involved more time spent on conducting clinical conferences, other methods of clinical teaching would be limited. The postconferences usually lasted for about one hour.

### Data analysis

All the observations were completed, the notes were read and reread and content analysis was performed. The NUDIST qualitative software program was used for data analysis. Non-Numerical Unstructured Data Indexing Searching and Theory-building is a program designed for the storage, coding, analysis and retrieval of text and accommodates an indexing system of nodes (categories of related text units) (Phillips 2000). Non-Numerical Unstructured Data Indexing Searching and Theory-building also provided each item to be coded to a number of nodes, which provided flexibility to construct many categories (Walker *et al.* 2000). As themes and categories emerged, data were refined further using a constant comparative, literature approach both within and between informants (Glaser 1992). Additionally, the statements, which built up the themes, were counted. As the data were analysed, themes and categories were refined so that they reflected the

teaching behaviours observed in the clinical conferences. Content analysis involves a quantitative treatment of issues of quality. Counting, categorizing and coding techniques were used in this study. Kracauer (1993) defines content analysis as a quantitatively oriented methodology used to characterize and compare documents through standardized measurements and metrically defined units.

To strengthen the validity of this study, the researcher and additional observer worked together in open discussion through the whole research process. Transcripts were produced and coded by one trained observer and the researcher. The authenticity of the observed data was confirmed through discussion with another observer who was a faculty member with expert in clinical teaching. Interrater reliability was calculated to estimate the degree of agreement between the two raters on four page transcript segments. Interrater reliability was established at 85–93% by comparing raw data, data reduction products and process notes. Lincoln and Guba (1985, p. 300) use dependability in qualitative research, which closely corresponds to the notion of reliability. Clont (1992) and Seale (1999) endorse the concept of dependability with the concept of consistency or reliability in qualitative research.

### Results

This study examined the interaction characteristics between students and faculty members in clinical postconferences. All of the students were unmarried with an average age of 19 years (SD 1.6). The 10 instructors were women; eight were married, with an average age of 32 years (SD 7.5). They had an average of five years (SD 3.5) of experience in nursing practice, with two members having 10–11 years of experience. Five of them graduated from domestic nursing programs, four from US programs and one from a program in Australia.

The first aim was to investigate what an ideal clinical conference looked like in each nurse educator's mind. Seven nurse educators believed that effective learning and discussion surrounding the topic of the day were vital for an ideal clinical conference. Other factors, such as student participation, discussion leadership, different teaching methods, teacher support and cohesion were also mentioned. The other question was: how do you plan clinical conferences for clinical teaching? They recognized ward characteristics, learning goals and student needs as important issues when designing, evaluating and revising clinical conferences. Some of the requirements they noted were: plan clinical conferences according to ward characteristics and learning goals, consider students' needs when planning topics, prepare well, share

experiences, arrange topic priorities and evaluate and revise clinical conferences.

This study found that the nurse educators tended to emphasize discussion of clinical experiences as well as of assignments most often (see Fig. 2).

Example of a discussion of a clinical experience:

Student: Today the teacher and I talked with the patient about sexual activity.

Teacher: What is the patient's diagnosis?

Student: She has cervical cancer and now is in the post-operation stage.

Teacher: What did the teacher say?

Student: The teacher asked about the patient's husband.

Teacher: About his occupation or his feelings?

Student: The teacher asked the patient if she continued to have sexual intercourse with her husband before she was admitted.

Teacher: How did you feel?

Student: I thought about this question for a long time. At first, I did not know how to talk to her. Fortunately, the teacher stayed with me to maintain a friendly atmosphere.

Teacher: Besides a friendly atmosphere, what else was there?

Student: No fever. Frequency of urination had not increased.

Teacher: Do other student nurses have similar experiences? We will talk about this later.

Example of a discussion of an assignment:

Teacher: Based on the data assessment, doesn't the patient have any problems?

Student: No.

Teacher: How do you assess activity?

Student: Assess activity habits, getting out of bed, barrier factors, activity style before and after hospitalization.

Teacher: (to another student) How do you assess the activity of your patient?

Student: I have a question. Should I assess the patient's activity before or after hospitalization?

Teacher: After hospitalization.

Teacher: How about after hospitalization?

Student: He tried to do it by himself.

Teacher: So he is highly motivated to be active.

Example of a student evaluation:

Student: I can collect more physical data, but the data on mental state are superficial and few. I wonder if the patient can do wound care and diet control by himself without any practice during hospitalization.

Teacher: You have to ask him to practice taking care of such a big wound. For example, diet teaching means not only teaching him about food selection but also about observing his actual eating behaviors.

Questioning was used most frequently, and the questions were low-level ones. Lower level questions are those at the knowledge, comprehension and simple application levels of the taxonomy. Lower level questions invoke relatively low order thinking, often simple recall (Spencer 2005). Higher-level questions are those requiring complex application (e.g. analysis, synthesis and evaluation skills) (Myrick & Cpsych 2002). This study found that more than 90% of the questions

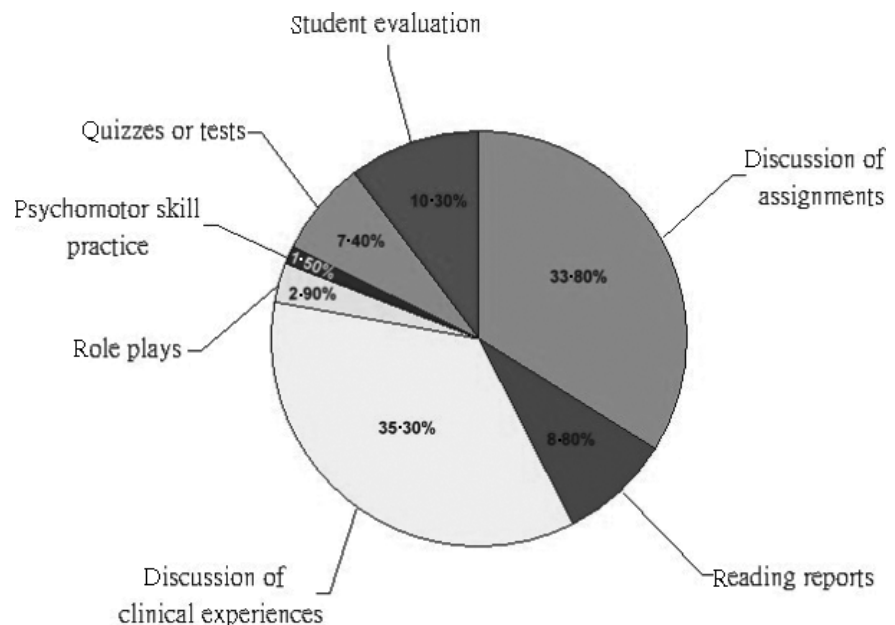


Figure 2 The contents of group discussions (number shown are percentages).

the nurse educators asked were low level ones. Many of the questions that the nurse educators posed were at the first two levels of Bloom's taxonomy. The results regarding question types are listed in Table 1. This taxonomy describes cognitive function in six areas: knowledge, comprehension, application, analysis, synthesis and evaluation.

Letizia (1998) noted six components of clinical conferences. Among the components that we observed in the clinical conferences, task orientation was the one that appeared most often, followed by order and organization, discussion leadership, different teaching methods and teacher support (see Fig. 3).

Task orientation focuses on subject matter and planned activities related to learning goals. Example of a task orientation:

Reading report – cerebrovascular accident (CVA)

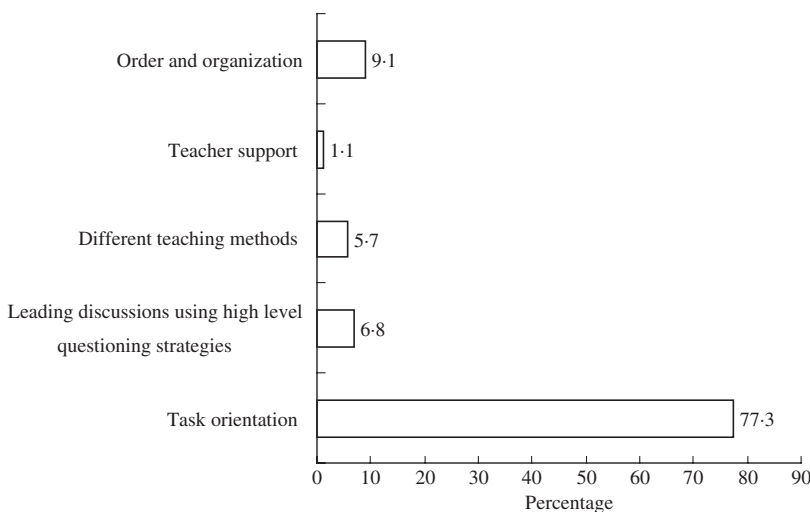
Student: Describes type, signs and symptoms, treatment, and examination of CVA.

Teacher: What differences are there between hemorrhagic CVA and infarction CVA in treatment?

Student: With hemorrhagic CVA, there is increased intracranial pressure (IICP), and brain hernia anti-platelet aggregation drugs are given to maintain blood pressure.

**Table 1** Educators' questions, categorized according to Bloom's taxonomy

Question type	Number	Percentage	Examples
Knowledge	117	68.8	What does this patient suffer from? (field notes 01B) When can the patient's A-V shunt be used? (field notes 05A) What is the calcium value of this patient? (field notes 03B) What are the side effects? (field notes 04B) What is your caring plan for him on the first day? (field notes 07B)
Comprehension	43	25.3	Why is Ponston anti-inflammatory, while Scanol is not? (field notes 01A) Why does the patient take Mycostain? (field notes 07A) Why does the patient have severe diarrhea? (field notes 09A)
Application	7	4.1	How do you decrease the side effects of this drug? (field notes 02B) How do you take this Normacol Plus drug? (field notes 02B)
Analysis	3	1.8	To what should you pay attention? (field notes 02B) Besides constipation, are there other reasons for taking magnesium oxide? (field notes 01B) Bedsides G-I distress, are there other causes of his illness? How do we rule out UTI? (field notes 02A) Have you solved the patient's sleeping problem that has existed for several days? (field notes 09A)
Synthesis			Not applicable
Evaluation			Not applicable
Total	170	100	



**Figure 3** Frequencies of components observed in clinical conferences.

Teacher: What is your diagnosis of your patient?

Student: Brain infarction.

Teacher: The signs and symptoms of CVA depend on which part of the brain is affected. You have to consider nursing care and rehabilitation. Rehabilitation includes principles, times, frequency, and plans.

Only three nurse educators used high level questioning strategies to lead discussions in clinical conferences during the observation period. Example of a questioning strategy:

Teacher: How do you assess nutrition status?

Student: Oral ulcers.

Student: Medication and activity.

Teacher: You have to describe data to define causes.

Student: Oral ulcers affect food intake. Another factor is poor eating habits.

Teacher: Is it poor eating habits or...? The main point is that pain affects food intake.

Student: Yes.

Teacher: Does the patient's condition improve every day?

Student: My patient's condition improves every day.

Teacher: You seem too enthusiastic. You have to understand the patient's condition. (Ask another student to summarize her report.)

Student: Hemoglobin (Hb), total lymphocyte count (TLC), Fe<sup>++</sup> and albumin.

Teacher: What is TLC? What is the relationship between TLC and nutrition?

Student: (Silence)

Different teaching methods, such as role plays, experience sharing, assessment discussions, psychomotor skill practice and report reading, were adopted by three nurse educators in their conferences. Example of a conversation after a role-play:

A role-play served as the basis for discussion of the process of recording an assignment. Two student-nurses played the roles of a patient and a student nurse, respectively. Other student-nurses were observers.

Teacher: Do you have any comments?

Student: Do not change the subject. This student nurse has to focus on self-care, not family problems.

Teacher: You are right. These are two different points in the communication process.

Student: What is the key point for this patient?

Teacher: This student can assess self-care first and then try to understand the patient's psychosocial problems from his non-verbal behaviors.

Student: Sometimes it is not easy to recognize psychosocial problems.

Student: Can we guess what the patient is thinking?

Teacher: We have to understand what the patient is thinking.

## Discussion

Nurse educators can facilitate critical reflection through transformational learning. To attain meaningful learning in clinical postconferences, nurse educators have to foster critically reflective thinking, clinical problem posing and discourse that is learner-centred, participatory and interactive (Mezirow 1997). Clinical conferences can provide meaningful practice experiences and excellent opportunities for students to close the gap between theory and practice (Rowles & Brigham 1998). However, in this study, some nurse educators did not understand the patient's condition well and only asked theoretical questions, not practical ones, such as: what is point localization? What factors affect appetite? What is the definition of the secondary role? Only a few nurse educators led discussions in which theory was applied to practice. They asked questions like: how do you assess the activity of your patient? Does the patient experience shortness of breath? What affects food intake? Does the patient fall asleep during hemodialysis? It is important that nurse educators bridge the gap between theory and practice in clinical conferences. Schon (1987) argues that a reflective practicum can help form a bridge between theory and practice. Reflection, when used by professionals as a part of practice, can help students learn about their own reality, which will help them to link the theory they have learned to clinical experience. According to the researcher's and observer's observations, in this study, failed to do so in the clinical conferences because of their lack of teaching rounds, an understanding of patient-centred care, clinical teaching experience and familiarity with practice units. Just as Scanlan (2001) described nurse educators revealed their lack of understanding of situations as well their failure to understand a student's behaviour. When they became more familiar with clinical situation, they were able to reflect on their experiences in a more effective way and make direct connections between theory and practice (Scanlan 2001). Ahmed (2002) states that clinical teaching requires certain qualities involving several ways of imparting knowledge and requires a great deal of homework, devotion and emotional energy. Therefore, nurse educators should receive regular training to improve their professional expertise and to help them find better ways of motivating their students during the learning process.

This study findings indicated that of the six taxonomy questions, lower-level questions (knowledge and comprehensive questions) were mostly asked by the faculty members during the clinical postconferences. This finding is similar to that of Craig and Page (1981) and Sellappah *et al.* (1998). In Sellappah *et al.* study, the authors reported that more than

90% of the questions asked by 26 clinical teachers were low level ones. In light of these findings, these authors suggest that faculty members should ask high-level questions to help students think critically and to enhance their problem solving abilities in clinical situations. Phillips and Duke (2001) study suggests that nurse educators need to ask higher-level questions to facilitate the development of critical thinking. Another study (Wang 2005) describes how higher-level questions engage students in mental activities that help them develop thinking and responding abilities.

Our findings showed that 'task orientation' occurred most frequently, followed by order and organization, discussion leadership, different teaching methods and teacher support. For many years, nurse educators have put task orientation first; hence, it is difficult for nurse educators in Taiwan to consider all of Letizia's six dimensions (involvement, cohesion, teacher support, task orientation, order and organization and innovation) in clinical conferences. Clinical conferences have been found to include cognitive, affective and behavioural learning. However, in this study, cognitive learning seemed to dominate the one-hour-long clinical conferences. The most frequently used guideline was task orientation, which is related to practice goals and was found in discussions of assignments, report reading, discussions of clinical experiences, role plays, psychomotor skill practice, quizzes and student evaluations. These results differed from those of Letizia (1996), where teacher support was perceived as the most frequently occurring element, followed by task orientation.

In this study, teacher support was the least frequently occurring element (see Fig. 3). Because of cultural factors, the nurse educators in this study hardly ever expressed affective behaviours, such as praise, smiles, support, amiableness, kindness or friendliness to students. An old Chinese saying states, 'As excellent student is trained by a strict master.' Nurse educators in Taiwan usually emphasize cognitive learning rather than affective learning. To achieve positive outcomes of clinical conferences, nurse educators need to consider all five categories listed in Fig. 3. In this study, however, most of the interaction that occurred during clinical conferences focused on tasks; little concern was given to the other categories. It is an essential responsibility of nurse educators that enhance the functions of postconferences in order to assist students in applying their knowledge in practical situations, in developing professional values, and in improving their problem solving abilities.

## Conclusion

Clinical conferences are designed to include small group discussion and are often scheduled at the end of daily clinical

activities (Gaberson & Oermann 1999, Rossignol 2000). Clinical conferences have been found to include cognitive, affective and behavioural learning (Letizia 1996, 1998). In this study, cognitive learning seemed to dominate the observed one-hour clinical conferences. A conference session provides a comfortable time in which students can exercise their reflective skills, express their feelings and develop support systems (Oermann & Standfest 1997, Stokes 1998, Lau & Chuk 2002). Postconferences also may be used to assess critical thinking abilities and skills in analysing significant incidents in practice in a group format (Brookfield 1995). Further research could develop teaching strategies for implementing clinical postconferences and monitoring the functions of clinical postconferences.

## Contributions

Study design: LLH; data analysis: LLH and manuscript preparation: LLH.

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