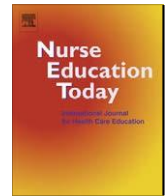




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## Teaching during clinical practice: Strategies and techniques used by preceptors in nursing education

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### summary

The preceptor is a nurse who teaches and supports the student and is seen as pivotal to student learning within the clinical setting. Earlier studies have shown that preceptors' pedagogical competence is significant for facilitating learning during clinical practice. However, studies describing pedagogical competence, especially in terms of teaching strategies, seem to be scarce. The aim of this study was to describe which strategies and techniques preceptors use to teach undergraduate nursing students during clinical practice. The study had an ethnographic approach; methods used were participant observations and focus group interviews with nurses who were experienced in precepting undergraduate nursing students. Findings illustrated how preceptors used different strategies and techniques in a continuous process of adjusting, performing and evaluating precepting. Increased knowledge on how the preceptors actually teach student nurses during clinical practice will help facilitate educational programmes for preceptors, which will enhance their pedagogical skills and competences.

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### Introduction

During clinical practice, which is a substantial part of nursing education, nurses are expected to function as preceptors for undergraduate nursing students. Consequently, they should be able to create learning opportunities that meet the requirements of academic education. To do this, nurses need to possess pedagogical competence to function properly as preceptors. The literature in the area of precepting often describes pedagogical competence and skills as important factors for efficient precepting to take place (McCarty and Higgins, 2003; Häggman-Laitila et al., 2007). But empirical studies describing pedagogical competence in terms of teaching techniques appear to be scarce. In the literature, different techniques are discussed such as the think aloud strategy (Banning, 2008) encouraging students to verbalise their thoughts while solving a clinical problem. Burns et al. (2006) reasoned over different strategies for efficient clinical teaching in line with an interview study by Öhring and Hallberg (2001), where strategies such as demonstrating and identifying learning needs were presented. However, how preceptors teach and which strategies and techniques they actually use in a clinical context are not clearly described. Following article presents findings from an ethnographic study undertaken to describe these issues.

### Background

#### Definition of the preceptor

Nursing is a profession where practical and theoretical knowledge needs to be highly integrated, and clinical practice is significant for the professional development of undergraduate nursing students. This is usually the responsibility of the preceptor, a nurse who facilitates an individualised education and provides a learning environment where theoretical knowledge is linked to practical skills. The preceptor also acts as a role model, and is seen as pivotal to student learning within the clinical setting (Burns et al., 2006; Bourbonnais and Kerr, 2007). In addition, according to findings from an interview study by Myrick and Yonge (2001) preceptor behaviours are important for the enhancement of critical thinking and problem solving skills that are trademarks of an academic education.

#### Approaches to teaching

Teaching can be described as an interrelated process between teacher and learner (Ramsden, 2005), where a variety of teaching strategies progressing from teacher to learner centred (Vaughn and Baker, 2001) may be used. This variation can be achieved by three approaches described by Banning (2005); didactical and teacher centred focusing on lectures; facilitative, directed towards problem solving techniques to help students reflect on and articulate what they know and finally, a socratic approach focusing on

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questions. Ideally, these approaches should be used in combination. Furthermore, Burns et al. (2006) describe two different approaches to preceptor teaching, the first being the sink or swim approach where the student is expected to work independently, with the preceptor though ultimately responsible, acting in the background. The second approach is called manipulated structured approach, where the preceptor presents students with suitable patients and cases based on their previous experiences.

### Aim

The aim of this study is to describe which strategies and techniques preceptors use to teach undergraduate nursing students during clinical practice.

### Method

The research design for this study was ethnography as it enables studies of cultural behaviours (Hammersley and Atkinson, 2007), where culture is defined as behavioural patterns of various groups of people describing their points of view. Data for this study were foremost gathered from participant observations, in addition, focus group interviews were performed to confirm findings and to gain deeper understanding (Hammersley and Atkinson, 2007).

### Design

To gain deep and rich descriptions (Hammersley and Atkinson, 2007), the study was concentrated to one cardiology and one surgical ward, at a regional and a university hospital, respectively, in Sweden. Both wards, each takes at least 16 undergraduate nursing students from year 1 and 3 annually, for clinical practice ranging from 5 to 10 weeks. Access to wards and preceptors was made possible by clinical teachers from the affiliated universities acting as gate keepers. Time spent in the field was guided by the selective intermittent time mode to gain depth (Jeffrey and Troman, 2004), lasted for six months and covered both morning and evening shifts, amounting to 120 h. The observations were guided by the central research question; “How do preceptors teach undergraduate nursing students during clinical practice?” Situations where preceptors and students were interacting in a teacher–learner situation were written down in field notes describing; what happened; in what context; what was said and who were involved, informal conversation with preceptors was also included in field notes (Emerson et al., 2001; Hammersley and Atkinson, 2007). At the end of the field work, a general idea describing the research question emerged, and consequently a need for confirmation and deeper understanding emerged (Agar, 1996). Focus groups were then considered as suitable, as this form of group interview places emphasis on interaction between participants with a common frame of reference (McLafferty, 2004). Guided by the findings from the observations, participants were asked “How do you teach undergraduate nursing students during their clinical practice?”. The interviews were audio taped, lasted for average 72 min, and were transcribed verbatim.

### Participants

Thirteen preceptors were included during the field work period. This included all nurses precepting during that period, and thus considered as possible participants. To maximize information, a focused sampling of further 16 preceptors (Lincoln and Guba, 1985) was performed for the focus group interviews. This sample included two preceptors who had previously been observed during the field work Table 1.

Table 1  
Participants during field research and focus group interview.

	Field research (n = 13)	Focus group (n = 16)	Both (n = 2)
Sex	F = 10 M = 3	F = 15 M = 1	F = 2 M = 0
Professional experience (years)	1½ to 10	2 to 14	3 and 12
Pedagogical Training <sup>a</sup>	Yes = 1 No = 12	Yes = 10 No = 6	Yes = 1 No = 1

<sup>a</sup> Postgraduate preceptor programme, eight ECTS.

### Ethical consideration

Informed consent was obtained from both preceptors and student nurses, assuring confidentiality and freedom to withdraw from the study at any time. This was done to ensure trust and avoid intrusion ([www.theasa.org](http://www.theasa.org)). An informative note regarding the study directed to patients and their families was posted on general notice boards around the wards. The study was performed in accordance with the principles of research ethics in Sweden. An approval was granted from The Regional Ethical Review Board (Dnr 590/2006).

### Analysis

Following the ethnographic approach, data collection and analysis are simultaneous processes (Hammersley and Atkinson, 2007). After each observed shift, field notes were written down in a neat copy, as transcribed text, including analytic memos to guide coming observations and as a way to organise data in order to uncover patterns of behaviour. The transcribed texts were read and reread several times to gain a general sense of data, and tentative concepts were defined (Hammersley and Atkinson, 2007). Transcribed texts from the interviews were also read in a similar way, and tentative concepts again emerged from this intense reading. Data from all transcribed texts were then coded and compared so that categories could be developed using the constant comparative method (Glaser and Strauss, 1967; Hammersley and Atkinson, 2007), where each item of data was compared to that of other data categorised in the same way, allowing for new categories and sub categories to emerge. Field notes and transcribed interviews as well as categories and codes that emerged during analysis were checked and discussed until agreement by the three authors to ensure credibility (Lincoln and Guba, 1985).

### Findings

Findings originating from the research question “How do preceptors teach undergraduate nursing students during clinical practice?” are illustrated by three categories and seven subcategories explicating the categories (Table 2). The categories should be understood as precepting strategies, i.e. actions that need to be

Table 2  
Categories and subcategories defining precepting as a continuous process.

Categories	Subcategories
Adjust level of precepting	Getting the picture Preconceived expectations
Perform precepting strategies	Creating a feeling of security Teaching Giving situational feedback
Evaluate precepting	Reflecting on action Assessing

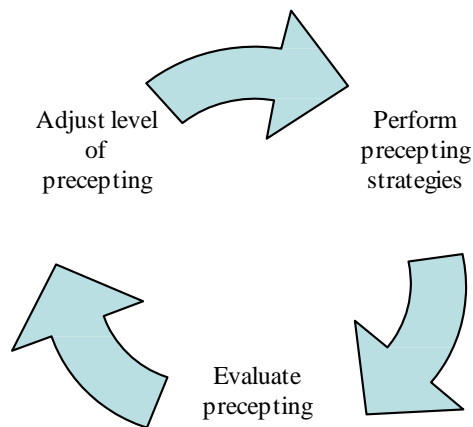


Fig. 1. Precepting as a continuous process.

planned for. Consequently, subcategories represent precepting techniques, in that sense they represent different methods used by preceptors.

Findings illustrate preceptor teaching as a continuous process, the steps in the process being dependent upon each other (Fig. 1). This precepting process can be viewed from two perspectives. On one hand, preceptors utilised the steps in an actual activity, on the other hand they viewed the entire duration of precepting as a continuous process in which each step is needed to be considered.

Data are presented in the findings as excerpts from field notes and direct quotes from interviews, where P stands for preceptor, to assure credibility and transparency.

#### Adjust level of precepting

This category illustrates a starting point for precepting, a responsibility that needs to be planned and adjusted according to the individual needs of the student. In order to achieve this, the preceptors talked about the significance of the first meeting with the student and about how they felt it was important to get a picture of whom they were to precept. Some of the preceptors mentioned an introductory letter being sent to the student, stating the name of the preceptor, date and time for the first day and a brief description of the ward. Following this letter, students were asked to reciprocate by writing a letter introducing themselves, describing the previous experiences and personal objectives. Getting the picture depict how preceptors saw the first conversation as a way to learn more about the student's expectations, experiences and personal goals to be able to plan the weeks ahead accordingly. For this reason, they sometimes used a short questionnaire that covered areas like "What did you do prior to Nursing School" or "What are your learning objectives", or study guides describing general course objectives, provided by the clinical teachers. Preceptors meant that this was necessary to support students formulating their individual objectives.

After the customary first meeting with the student and the clinical teacher, I usually sit down with the student for an informal talk, one need to know something about the student, earlier experiences, their expectations (P 3), Mmh, it's important to have this conversation with the students to get a picture of where to start and what their objectives are. (P 2)

Preconceived expectations illustrate the preceptor's view on what they expect from the student both in terms of theoretical knowledge and practical skills. These expectations were built on preconceived ideas and previous precepting experiences of what students ought to know and be able to do in their 1st, 2nd or 3rd year.

If it's their first clinical practice ever then you need to be very thorough. If it's a 3rd year student I expect a bit more of the (P 1), I agree, you almost take for granted that a 3rd year student is capable of more independent work. (P 5)

#### Perform precepting strategies

This category illustrates how preceptors think and act in the teaching situation. They explained how a trustful relation was seen as a prerequisite for qualitative precepting. Preceptors expressed that creating a feeling of security is fundamental for teaching; one way to do this is to assure the students that they can trust you.

As a preceptor you must mediate a feeling of trust, usually we talk about nurses acting as advocates for patients speaking for them, equally important is to advocate the student, to assure them of your trust. (P 6)

Another way is to encourage a climate that allowed the student to think freely or outside the box, a climate where anything can be asked and no questions are wrong or stupid, in order to understand. This is how two preceptors discussed this issue.

I always tell the student "Ask about everything, there are NO stupid questions and it is ok to be insecure (P 14), Yes, an approving climate is really important, it doesn't matter if the answer is wrong, that can be a starting point for discussions. (P11)

A third way to establish a safe learning environment is "the invisible presence", where the preceptors are close to the students, without hovering over them in every situation.

The student nurse is engaged in small talk with the patient while preparing for a blood sample, meanwhile the preceptor, walks back and forth between the nurse's office and the room, picking up some forgotten items, talking to other patients (Field note).

Teaching was done using several techniques; perceptual techniques where the preceptors taught students by demonstrating and listening or feeling together, e.g. listening for a bowel movement or feeling a vein for drawing blood. Demonstration was also used in combination with students' observation and then being allowed to practice the skill. These techniques were mostly used when teaching psychomotor skills.

The preceptor takes the stethoscope, listens for bowel movements, turns to the student and says "It sounds very good, do you want to listen, you should listen for a kind of gurgling". The student takes over, listens, and in agreement "Yeah, sort of a gurgling sound" (Field note).

Cognitive techniques were described as preceptors either lecturing with or without different resources such as text books, ECG curves and X-ray images.

The preceptor and the student are checking their patient's ECG from the last 24 hours. The preceptor talks about ECG and how to interpret ECG curves correctly while showing the student what it means by pointing to the screen in front of them and in the textbook next to them (Field note).

Another cognitive technique was questioning. Low-level or factual questions were most common, meaning that students just needed to recall knowledge.

While preparing an i.v. drip the preceptor asks "How much potassium can you administrate i.v per hour?" Student "It is 20 [mmol] isn't it?" Then the preceptor asks the student "What is the normal blood level for potassium? The student then answers "I'm not sure, I can't remember" (Field note).

When using reflective questions, the preceptor's intention was to stimulate students' critical thinking ability and to encourage problem solving skills.

“Why is it important that we follow all vital signs after this type of surgery? (Field note)

Another way to ask reflective questions was by giving the student a cue that they needed to be extra attentive. This probing questioning technique was used by preceptors to help students develop clinical competence and reflective skills, one of the preceptors said that cues are usually very simple and gave an example.

Something is important here, what do you think that might be? (P 3)

To further enhance reflective thinking preceptors encouraged students to verbalise their thinking, which opened up for dialogue between preceptor and student.

Time for half time evaluation, the preceptor explains her teaching to the clinical teacher “Well, I call it talk and drive, I want my student to be able to work independently and do everything that's part of the profession. We start every shift, after having listened to the oral report, by planning the day. We talk about how to think during the day, starting with morning rounds, injections, drugs and then we continue talking during the day (Field note).

Giving situational feedback was regarded as vital for students, and is closely related to create a feeling of security. Reinforcing was used as a feedback strategy where preceptors took over a situation, came to a similar conclusion or decision and hence confirmed the student.

The student takes a blood pressure, listens, releases some of the air, and listens again. Puts the stethoscope down, looks a bit insecure and says hesitantly “100/50. . . I think, but there are so many disturbing noises in the room” The preceptor then asks “Do you want me to try?”. The student nods and the preceptor takes the blood pressure, confirming the student by saying, “85/55, you are probably right” (Field note).

Feedback, directly related to a situation, was also given verbally and by gestures. Several preceptors explained how it was often sufficient with a nod or a look once a trustful relation was established.

#### Evaluate precepting

Evaluating is seen as important to help students proceed in their professional development. Reflecting on action was usually done at the end of the shift when things had slowed down a bit. Giving constructive critique meant correcting and giving advice as a way to help student reflect, this is explained by one preceptor.

We usually take a moment each day, talk about what has been good, what has been difficult, “you did a very good job but maybe you should consider next time to. . .” So praise, criticise then praise again . . . the last thing I comment is always on the positive note (P 15).

Assessing done at half time was used as guidance for the remaining part of the clinical practice.

When they've been here for half of the stipulated period it is really important to plan the rest of their practice, evaluate what they have achieved and what they still have to learn. (P 12)

The final assessment usually took the form of conclusion and a recommendation for what areas the student needed to focus on during coming clinical practices.

Final assessment of a 3rd year student, the preceptor says “You have improved a lot this last week, you hand over your patients

in an accurate and structured way, /.../ Your communication skills and how you treat and respect your patients are brilliant and you know clinical competence will grow on you. What I want you to practice even more during next clinical placement is how you evaluate your nursing interventions (Field note).

Assessing was seen as both necessary and a responsibility, not to be taken lightly. Clinical teachers attended, in most cases, the assessment sessions as support for both preceptor and student. At one hospital, senior nurses functioned as mentors for precepting nurses, and could also attend assessments if the preceptors needed support.

#### Discussion

This study has shown that preceptors, through strategic planning and by using different techniques in a continuous process of precepting, strive for an open communication focusing on the learning needs of the student. When the research question “How do you teach undergraduate nursing students during their clinical practice” was put to the focus groups, the discussions in all groups started with acknowledging the importance of knowing something about the individual student, prior experience, skills and knowledge. This finding supports earlier research in recognizing the previous experiences, establishing learning objectives and learning needs as the duty of the preceptor and has to be considered in cooperation with the student (Öhring and Hallberg, 2001; Burns et al., 2006; Häggman-Laitila et al., 2007).

Findings illustrate how preceptors attempt to create a feeling of security where trust forms a foundation for the relation between preceptor and student, a trustful relation is seen as crucial to enhance student learning. Trust is also viewed as fundamental for preceptors, enabling them to decide when and to what extent responsibility should be handed over. This is consistent with findings by Öhring (2000) where preceptors narrated the need to “develop trust in the student” (ibid, p. 43). According to Häggman-Laitila et al. (2007), preceptors may give students more responsibility and independence when a supportive relationship has been established. In the current study, responsibility is handed over in three hierarchical steps. The first step, total control, was especially executed in the beginning of clinical practice. This means that students are allowed to perform the activity, with the preceptor close by, monitoring the student. The second step represents the preceptor as more peripheral, a technique that can be understood as the invisible presence, and is clearly visible during field research when students are allowed to work independently but with the preceptor within reach. The last step is letting the student work independently, reporting back to the preceptor. From a student point of view, these findings are comparable to the results obtained from a study by Löfmark and Wikblad (2001), where nursing students viewed responsibility and opportunities to work independently as facilitating factors for learning. This final step represents a technique mostly used at the end of the clinical practice when a trustful relationship has been established and is more frequently used for students being in their final year.

Teaching techniques are chosen to fit the activity, and are adjusted according to the students' prior knowledge or level of skills. These techniques can therefore vary between more teacher centred when preceptors lecture, and more student centred when preceptors use reflective questioning. Within and among the focus groups, there is a mutual agreement that questioning is a very efficient way of teaching, and this technique is also easily recognizable during the observations. Findings show how preceptors' use of factual questions enables them to determine a certain level of basic knowledge and represents the most used questioning technique. This matches the results given by Phillips and Duke (2000) and

Profetto-McGrath et al. (2004), where factual questions are seen as important for facilitating the teaching process, but it is concluded that preceptors need to learn how to ask more reflective questions. In the current study, preceptors state that they actively try to ask more reflective questions as a way to stimulate reasoning skills. When questions take the form of being more reflective, preceptors use a technique that helps students to develop their critical thinking skills, as this level of questioning requires assessment of a situation. Preceptors in this study also use a variety of reflective questions, identified in the findings as cues or hints. This is another way for preceptors to facilitate critical thinking skills, necessary for nurses working in complex nursing situations. In accordance with Myrick and Yonge (2002), preceptors in the current study describe how cues help students to come to their own conclusions. Yet another way to mediate logical thinking and problem solving is a technique named by the preceptors as ‘‘talk and drive’’. This technique encourages students to verbalise their reasoning and thinking while solving clinical problems, in line with the think aloud strategy described by Banning (2008). These techniques facilitate opportunities for reflection between preceptor and student nurse, necessary to gain a deeper understanding of experienced nursing situations. Preceptors in this study, in concordance with other studies (Öhrling and Hallberg, 2001; Burns et al., 2006), highlighted the importance of taking time for reflection to hear the student’s view on how the day went and how the student felt about it. Reflection is seen as fundamental for a collaborative learning environment (Burns et al., 2006), where learning is made possible through an interrelated process between preceptor and student (Ramsden, 2005).

This study has not differentiated between preceptors with or without formal pedagogical training or strived for a sample representing a predetermined number of years of professional or preceptor experience. This might implicate that there is a possibility for response bias, as there were more preceptors with pedagogical training in the focus groups with an assumed interest in precepting. Though it would be interesting to explore to what extent education or experience affects precepting for better or worse, the findings imply that preceptor experience, clinical experience and preceptor education affect some of the performing strategies. Preceptors with longer experience or preceptor education tend to ask more reflective questions and put more emphasis of setting aside time for reflection together with the student.

## Conclusions

The findings of this study contribute new knowledge about how preceptors teach undergraduate nursing students during clinical practice, knowledge that can be utilised in educational programmes for preceptors. They illustrate how preceptors incorporate a variety of strategies and techniques to enhance students’ learning and professional development. They also make explicit the significance of a trustful relation between preceptor and student nurse. In addition, the findings reveal the preceptors’ effort to use different techniques that promote reflection and critical thinking skills. However, as data gathered from participant obser-

vations and interviews yielded rich and deep descriptions reaching beyond the scope of the research question, several new issues were raised. Therefore, future studies will be addressing two major topics; (1) factors influencing precepting and (2) what content is deemed significant and hence taught by preceptors.

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