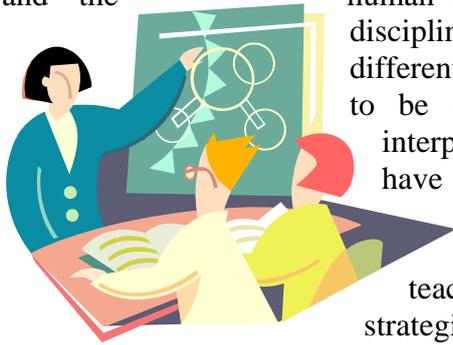


Providing the scaffolding or controlling? Which is better for teaching Nursing?

Margot Phaneuf, RN, PhD

Introduction

Nursing is a diversified discipline, containing many different aspects, some technical and organizational, others scientific and yet others, more internal, more concerned with feelings and the human element. The variety of components makes Nursing a discipline that is hard to teach, since each of these aspects calls for different competences. If, on top of that, nurses in the future have to be autonomous, capable of solving complex therapeutic, interpersonal and ethical problems, it becomes clear that we have to prepare students to face this reality. Consequently, it is imperative that we adopt an appropriate pedagogical model and take inspiration from this in our day-to-day teaching and, as a result of this, offer our students pedagogical strategies that fully prepare them for their role in health-care institutions and in the community. (Image: http://www.fotosearch.fr/photos-images/enseignement-femme_3.html)



An effective pedagogical approach

When we raise the question of teaching, it is always interesting to first place the issue within its appropriate pedagogical approach. As we have seen, the very nature of nursing directs our choice towards an active model, promoting students' development and the acquisition of competences that are essential to being a nurse. So the pedagogical approach that is chosen within this discipline must initially encourage the learner's own growth, and thereby encouraging, basically, the construction of her sense of her own self, the development of her autonomy, alongside her progress within the group, as a springboard for interpersonal growth. Thus, to be well-equipped to face difficult health-care situations, the student needs more than definitions and theoretical principles, and more than the mechanical learning of a certain number of techniques. She has to learn to reflect on health-care situations and to take into account all its dimensions, in order to grasp the essential links in elaborating an appropriate therapeutic plan. To do this, she has to learn to integrate fundamental problem-solving skills, numerous technical skills, develop a facility for conducting interviews, for educating patients and for learning the organizational sequences that have been adapted to the various types of health care. But she also has to acquire good listening skills, to express empathy and openness towards the other person's suffering that will give meaning to her interventions.

The pedagogical model best adapted to this reality is social constructivism. This is moreover the model that, for a number of years, has been advanced as the basis of educational reform in Quebec.

The pedagogical model best adapted to this reality is social constructivism. This is moreover the model that has been advocated for several years as the foundation of the educational reform in Quebec. The reality of this is well known, but we are less aware of how it affects us on a daily basis in our teaching, and, particularly, when we are considering practical training in clinical settings.

Some theoretical notions

BEHAVIOURISM: the school of thought in psychology that studies behaviour and learning objectively, reducing them to a sequence of stimulations and responses.

To explain this model, we first need to discuss *constructivism*, since it was this approach that first made a serious mark on education. Developed in the middle of the 20th century by Jean Piaget, a psychologist who was both a biologist and an epistemologist, *constructivism* was, for him, a

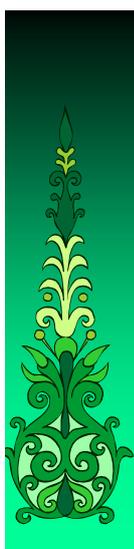
EPISTEMOLOGY: the branch of philosophy that critically studies the sciences to establish the origin and value of scientific concepts and to assess their scope.

reaction against the *behaviourist* methods of his times. These methods proposed that behaviours and learning depend primarily on stimulus-response associations and on the oral transmission of knowledge by teachers.

This behaviourist school of thought calls for the constant mobilization of the teacher's dynamism. She is at the centre of the process, it is essentially a teaching approach, while the student remains somewhat passive, waiting for what the "teacher" will provide for her.

The self-construction of knowledge

On the other hand, the *constructivist approach* advocated by Piaget and later by other



Constructivism: a description

- ❖ It is an educational approach based on cognitive psychology.
- ❖ It gained momentum as a reaction to behaviourism, which restricted learning to stimulus-response associations.
- ❖ It is the search for a well-made head rather than a well-filled head (Montaigne).

psychologists, proposed an important change relative to behaviourism, since, on the contrary, it placed the student at the heart of the educational process, by giving her an active role. Her understanding of phenomena being proposed in her curriculum develops on the basis of knowledge she has already acquired, in brief, on representations she already possesses. This understanding then becomes structured by her process of reflection – each student's own intellectual application, becoming

grafted on to her preceding knowledge. This is why, in this perspective, one speaks of restructuring, of the "inner work" of developing knowledge.

This is an approach where activities are proposed to students that are meaningful for them and which change how they relate to acquiring knowledge. The student is no longer just receptive; she reflects, searches, uses her capacity for taking initiatives and for being creative and moves to a problem-solving mode. She constructs herself at the same time as she builds up her knowledge (Margot Phaneuf. *Piaget chef de file du constructivisme*

PARADIGM: the dominant theoretical conception at a given point in time.

<http://www.infiressources.ca/MyScriptorWeb/scripto.asp?resultat=733864> .

Constructivism: a definition



- ❖ It is the learning process by which a student herself constructs an internal representation of what she knows, a personal interpretation of what she has experienced.
- ❖ This representation is constantly being modified, its structure and linkages forming the basis to which future learning will be added.

From the few years of experience we have had with this teaching model, we already know that this way of doing things is not necessarily easy to put into practice, since it involves a real *paradigm shift*. In this new way of organizing learning, the instructor is no longer the sole dispenser of knowledge; in fact it is now the student who comes on centre-stage and takes a leading part. While she becomes the beneficiary of the strategies and an organization of material proposed

by the teacher, it is she, the learner, who becomes the architect of her own training.

The group as a fertile ground for learning

This Piagetian approach has made an important contribution to pedagogical development, but a number of psychologists found a weakness in this individualistic way of looking at learning. For an educational theoretician such as Lev Vygotsky, while learning is an internal appropriation made by students themselves, it is, at the same time, fundamentally conditioned by the social context, by the group in which the learning occurs. In fact, the subject “constructs herself”, but also through the mediation of others (*La construction sociale des savoirs* <http://www.protic.net/profs/menardl/articles/vygotsky.cfm>).

This conception differs importantly from Piaget’s individualism, for interaction

The principles of social constructivism



- ❖ This approach emphasizes learning rather than teaching.
- ❖ Knowledge must not remain abstract or theoretical: for the learner, it has to be seen in context, related to concrete and significant situations.
- ❖ Knowledge is structured according to previously acquired information.
- ❖ New notions must be presented in a sequence of increasing difficulty.
- ❖ Notions must always be related to the other concepts. These links encourage understanding and memorization.
- ❖ The student is responsible for her own learning, she is active, looks for information she needs and takes initiatives.
- ❖ She interacts with her peers and develops her own self with and through the group.

between peers now takes on a major significance. Through the introduction of a confrontation between participants' divergent ideas, the student can now become aware of her own thoughts relative to those of others. But, in addition, through the emphasis on peer collaboration to encourage learning, she can develop her own self in and through the group. This provides a direction that is particularly useful in training students how to communicate and in developing the helping relationship, but it is also relevant to all the other components of the Nursing programme. Just as it is hard to learn how to swim without getting in the water, so, for the student, an approach in which human relations are central is likely to become difficult without learning how to relate to one's peers. This approach is learnt by being in contact with others, through the example of others, by becoming immersed in situations requiring communication and by solving problems that are specific to this experience.

The importance of student dynamism

Inspired by the theories of Piaget and Vygotsky, another psychologist came to influence our modern conceptualization of learning: the American, Jerome Bruner, the third member of the constructivist trilogy. His

Scaffolding: support, propping up and providing comfort for someone.



Scaffolding in Nursing

The quality of learning depends on the relevance of both information and scale. This can be achieved

in theoretical learning by:

- asking questions that open up links,
- using relevant examples,
- problem-solving, progressive difficulty in learning-task, appropriate to the student's level;

during practical training by:

- reminding students of basic principles and alerting them to new problems,
- creating links between theory and practice,
- assigning students to appropriate situations, but where there are things to learn,
- allowing students supervised but real autonomy,
- giving frequent non-punitive feedback on the work they do.

learning theory focused essentially on the activities of the subject who is doing the learning. For Bruner, it is the subject who constructs for herself new concepts based on knowledge that she has already integrated; it is she who researches, selects new information to acquire, transforms this new knowledge, organizes it and relates this to her personal cognitive structure. Bruner also emphasized the importance of the student's psychological maturation, of her motivation and of the role of her social interactions.

But for those of us in Nursing, there are certain principles of this approach that need to be particularly emphasized. **Scaffolding** is one of these. It contributes a dimension to education that makes it possible to get the most out of a pedagogical situation. Amongst others, during practical training, a context of providing care can be a potentially important learning experience, but, if

it is not maximally exploited, the student risks not profiting fully from it. For instance, it is not enough that she knows how to take the vital signs or correctly perform auscultation on the patient, she has to know what should be the consequent decisions and care. The teacher intervenes in a similar context. It is she who can make the difference between mechanical learning and a true understanding of what needs to be done with a patient.

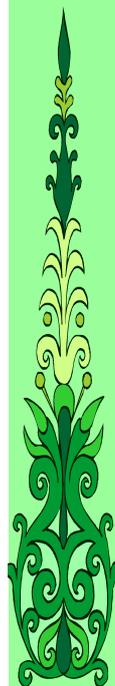
Some people believe – wrongly – that social constructivism reduces the importance of the teacher’s role as an educator and, that, on the other hand, the student, by becoming responsible for her own learning, is largely left to her own devices. But this is not what happens in reality. The principle of “*tutorial interaction*” and “*scaffolding*” as defined by Bruner throw a new light on this. He showed us that while these concepts certainly have important pedagogical implications, they can also encourage the development of autonomy as well as technical, organizational and interpersonal learning. For instance, it is not because *scaffolding* supports, encourages and allows the student to establish the required links between what she has learnt, what she sees and what she has to do, that her capacity for self-direction will be reduced.

But what is scaffolding?

For the psychologist, Jerome Bruner, learning necessarily occurs with a good dose of interaction between the teacher and the student being taught. This is what he refers to as the *tutorial interaction*, that is to say, for instance, the reciprocal action between the instructor and the student. This means that, in order to be able to structure knowledge autonomously, the student has to engage in interpersonal relationships with the teacher. This is what allows her later to move from cognitive dependence to cognitive independence. In other words, the teacher helps her to develop an effective process for acquiring knowledge for herself and creates the framework to facilitate this.

The other theme in Bruner’s theory that refines this concept is that of “*scaffolding*”. This refers to all the teacher’s interactions with the student that facilitate her learning, but without at the same time reducing the development of her autonomy. These interactions are by nature as much motivational as theoretical or organizational. The process of *scaffolding* consists therefore of enabling the student to become capable of solving the problems she encounters, of succeeding in tasks, which, without this help, would have been beyond her capacities. This is, in short, a process of guidance, support and reinforcement that helps the student overcome difficulties, master her ways of studying and her techniques of working and to become aware of the progress she is making. One might think that by the time students reach college level, they no longer need this type of relationship. However, it remains a factor contributing to academic success and the quality of learning, and especially, contributing to the pleasure of learning by generating the pleasure of succeeding.

The social constructivist teacher



- ❖ makes the student responsible for her learning;
- ❖ builds on knowledge already acquired;
- ❖ stimulates the student to ask questions, to generate hypotheses, to exercise her initiative and her creativity;
- ❖ allows her to express her point of view; the teacher gently makes her aware of any errors;
- ❖ enhances student’s answers and written assignments;
- ❖ proposes situations which generate significant new learning;
- ❖ encourages the student to ask herself questions, to interact, to discuss with other students, to benefit each other;
- ❖ supports individual effort and research.

Scaffolding activities

The scaffolding activities defined by Bruner are as much motivational and conceptual as organizational. These are as follows:

Recruitment: This involves setting up the learning activity, presenting the theme, showing why it is important, its appeal, in brief, showing the value of its goals and how it is going to be useful. It is a stage in the learning process that arouses the student's interest and motivation, and her attachment to the subject matter and her commitment to learning about this theme. It amounts in fact to giving her the desire to learn. This stimulation is particularly necessary at the beginning of any new training or course or when just starting to develop a new theme. But it must remain present throughout the training process, and should be considered whenever difficulties and discouragement arise and a certain loss of motivation is likely to emerge.

Reduction in degrees of freedom: Here it is a question of the subject's autonomy, her gradual development and her limitations. In this social constructivist approach, the student should, depending on her level and abilities, be considered autonomous and responsible for her own learning. But when necessary, the teacher can still give a helping hand, fill in certain gaps, by suggesting certain directions and providing, when appropriate, additional explanations that will allow the student subsequently to develop her own strategies. Yet this *ad hoc* help, reflecting specific needs, must never have an adverse effect on the student's initiative and creativity.

This degree of freedom also refers to the teacher who, using her own judgment, assesses her students' capacities and presents them with progressively greater challenges, in proportion to the progress they have made. In this way she will avoid generating anxiety in her students, cognitive overload or doubts about their ability to succeed – while still giving them with “something to get their teeth into”. Difficulties that are too great for students to handle can only generate discouragement. Therefore pedagogical soundness consists of finding the right balance between what is easy to do and what is too complicated.

Direction maintenance: A learning activity, whether it involves studying, a written assignment or a situation of giving care during practical training, contains objectives to be attained and a pre-defined direction; the student has to mobilize her energies along this axis in order to succeed. This means that the teacher needs to support her efforts by providing encouragement, by pointing her towards useful resources and by articulating the ways that will help her stay on course and encourage success.

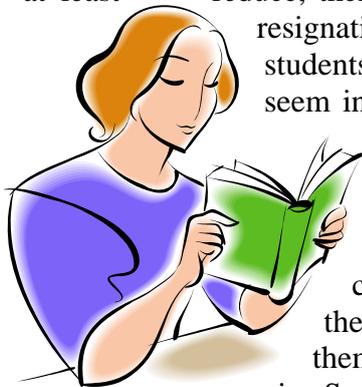
It also often happens that students are distracted from the goal of their training by their leisure-time activities, jobs they do to earn money, or also by their existential problems. As educators, we have to help them concentrate on what is most important for them and to maintain their ideal of successfully concluding their studies. To do this, honest dialogue, empathic listening, encouragement and the inducement to make a realistic self-assessment can have a substantial influence.

Marking critical features: Here it is a matter of the conceptual aspect of the task, whether for a written assignment, an oral presentation, or preparing for practical training. The teacher emphasizes through various means (descriptions, pictures, examples) the characteristics of the work that are relevant for carrying it out successfully. These indicators contain an element of

assessment, providing clear information on the difference between what the student produces and what the teacher expects of her. During her practical training, among other situations, the indicators are provided through the teacher's feedback to the student about her work. But we must be careful to ensure that our observations are not just negative or "confrontational": the student would be more discouraged than stimulated.

In addition, all pedagogical activities occur within a particular context, with their own rules and limitations. These are the time limitations and methodological markers, the various guidelines for making a presentation, conducting research or a written assignment, or even performing an activity during practical training. These well-defined markers are important in helping the student know where she is going and recognize the quality of work that is expected of her. This makes it possible to avoid unfortunate misunderstandings and setbacks.

Frustration control: The learning process is sometimes tedious and students do sometimes become discouraged. By determining the difficulty of activities and, sometimes, a bit of well-timed affective support when they are doing their work, we can allow the student to avoid, or at least reduce, their frustration and limit their feeling of alienation or their sense of resignation to what has to be done.



During the course of their training, students experience dissatisfactions of various kinds. Sometimes, these can seem insurmountable. For example, their studies may require more work than foreseen, their effort may fail to obtain the results expected, their courses are not always as interesting as they might wish, the expenses incurred are more than expected, or, again, the attitude of teachers towards them may be less than helpful. The instructor cannot solve all the problems students have, but she can encourage them, support them in their difficulties and, through dialogue, help them to see things more clearly in the situations they find themselves in. Sometimes it does not take much to put a person back on the right

track. (Image : http://www.fotosearch.fr/photos-images/enseignement-femme_3.html).

Demonstration or modeling: To provide the student with clear directions, the teacher can offer her examples, useful models, without however providing the solution to the task at hand. We should remember that social constructivism is a construction of knowledge by the student herself and not simply a carbon copy of what the teacher presents. (Jerome Bruner : http://en.wikipedia.org/wiki/Jerome_Bruner. It is, however, important that she understands clearly what she has to accomplish and, from this perspective, modeling, "road maps" of typical care, illustrations, can be very useful to her. Don't we say a picture is worth a thousand words? These representations allow her to see the important points of the work to be carried out, what has to be done and what should be avoided; through this very fact, she can understand how the work will be assessed. For the student, nothing is more frustrating than to be evaluated on elements that had not been clearly defined in advance.

The importance of this support in Nursing

The phenomenon of *scaffolding* is very important for us in Nursing since our role with students depends on its relevance and its appropriate dosage. Too strong, it detracts from the autonomy of her own learning; disorganized or insufficient, it creates insecurity, the feeling of incompetence, missed opportunities for learning, or learning that remains superficial, with a short life-span, and largely a matter of memorization. Which means that this would be counterproductive to the optimal use of learning situations and, in consequence, to the acquisition of the targeted competences?

This scaffolding may take the form of helping the student with school work, either helping her understand certain parts of the material to be learnt, directing her towards whatever resources are relevant or, even, in how to organize her work. But often it arises at the inter-personal and affective level: supporting the student in her learning difficulties or when faced with certain personal problems for which the teacher may be seen as a reliable person in whom to confide. But, it is clearly during the practical training that this scaffolding is most important in training nurses and most precious for students.

The teacher can help such a student in various ways. She can, among other things, offer her support when the student faces a shock in her first experiences in the health-care setting in the real world, or support her when the patients she is caring for live through critical, anxiety-inducing situations or emotionally hard to accept.

The affective dimension during practical training is extremely important and the helping relationship towards the student often becomes necessary, but scaffolding is also essential at the theoretical, organizational and technical levels. It is very productive for learning to ask the student questions in order to help her establish links between what she has learnt earlier in another course and what she is now doing, to encourage her to remember what she has already seen in theory or in a laboratory at the college. In this way, the student can recall information

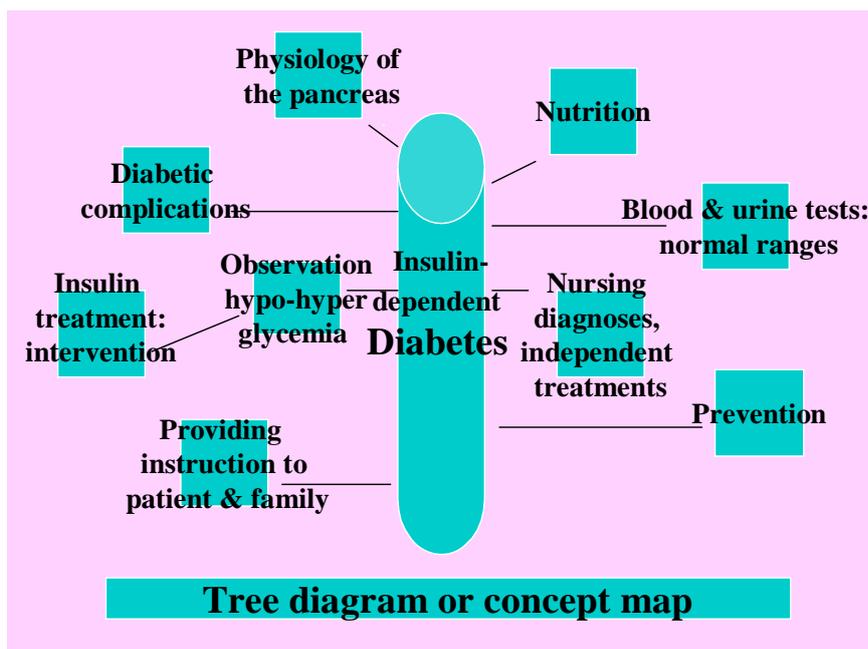
Appropriate strategies

Documentary research, finding convincing data, different kinds of projects: interviews with patients and with other students; writing summaries, writing reports, drawing diagrams, case studies, clinical analysis workshops, simulations, oral presentations to others in the group, peer tutoring, concept maps, genograms and sociograms, interaction analyses, essay writing, the analysis of real problems, using problem-based learning (PBL), using IT resources.

that is useful to the patients she is caring for. She can see how certain learnt notions are relevant, so that she can apply them in caring for patients, or even see the need to organize her interventions more effectively or correct her way of carrying out certain techniques. Through such frequent questioning and the directions she provides, the teacher creates cognitive and procedural guidelines which provide a scaffolding to help support the student in the way she functions and allow her to get the most out of any pedagogical activity.

Useful strategies

Teaching that is based on social constructivist pedagogy does not necessarily exclude all theoretical courses, but these become rarer and take on a different character, in which dialogue plays a significant part and didactics involve more active procedures. Meetings with students are not just for teaching, they are also there to organize learning rather than concentrate only on the oral transmission of knowledge. And for learning to occur, this type of instruction is combined with strategies that are more consistent with this kind of pedagogical approach.



First, there is the solution of real, complex problems (PBL), playing a key role. It consists of proposing situations in which the students, meeting in small groups, have to apply their knowledge, expand on this through doing research and find acceptable solutions for the problems they are set, and finally make a report of this to the class. This is a strategy that is very well adapted to this active pedagogy.

(Caroline Larue and Nicole Roger: *L'apprentissage par problèmes dans un programme d'études* <http://www.infiressources.ca/MyScriptorWeb/scripto.asp?resultat=718025>)

There is also another, more simple approach, in which a student prepares the detailed situation of a patient and the student becomes the resource-person for this case. The other students in the class ask her questions and propose nursing diagnoses, objectives and appropriate interventions. These are then noted down and collected together in a procedure of normative care that can be used as an example. These strategies are effective, give meaning to learning and encourage the development of competences. (Cécile Drury: *Apprentissage par problèmes, à distance: présentation et analyse d'un dispositif de formation*, 2004, p. 69-82 <http://fulltext.bdsp.tm.fr/Rsi/79/68.pdf?7QMX1-J4116-MJ6W4-903DD-61366>).

Some advantages of IT

- An interesting variation in stimuli
- Increased student motivation
- Development of intellectual abilities
- Commitment to one's own personal development
- Greater autonomy in looking for information
- Maintaining activity over time
- Multiplication of sources of information
- Accessibility of information
- Increasing retention of knowledge acquired
- Optimizing time devoted to learning

Other fruitful strategies are: case studies, documentary research, collecting evidence-based data and clinical research projects about the care to be provided or its use with different clienteles. One can also think of other kinds of projects in which the students can practically apply their knowledge, for instance when they meet elderly people or students at a different educational level, either in order to collect information, to inform patients about something, or to give them psychological support.

A project of peers-tutorials is yet another interesting possibility. In this system, the tutor and the “tutored” both have valuable learning experiences. There are also the reports students write about their overall practical in health-care settings during their specific practical training, and also reports focusing in detail on a particular patient and presented later to the group. Oral presentations, on various subjects, both inductive and deductive exercises on nursing diagnoses or health-care objectives, concept-restructuring whereby the student takes a concept, such as the effects of diabetes on the human organism, explains it, provides examples and illustrations and adds the care needed for its prevention or treatment. Other active strategies that should be used include conceptual maps, clinical reasoning workshops, focusing on identifying nursing diagnoses. These furnish important elements of training founded on social constructivist pedagogy. (Margot Phaneuf *A few thoughts on strategies adapted for a program by “competence”*)

http://www.infiressources.ca/fer/Depotdocument_anglais/20050816%20Strategies_adapted_competence_revised_August05.pdf and *The concept of competence: a means to structuring the nursing care program* http://www.infiressources.ca/fer/Depotdocument_anglais/THE_CONCEPT_OF_COMPETENCE.pdf

Neither should we forget information technology (IT) strategies that make it easier for students to exchange information with each other and with the teacher, and which encourage creativity and allow students to write draft texts, write reports, or prepare illustrations.

The role of the teacher

A social constructivist approach presupposes an important change in the teacher’s role. She



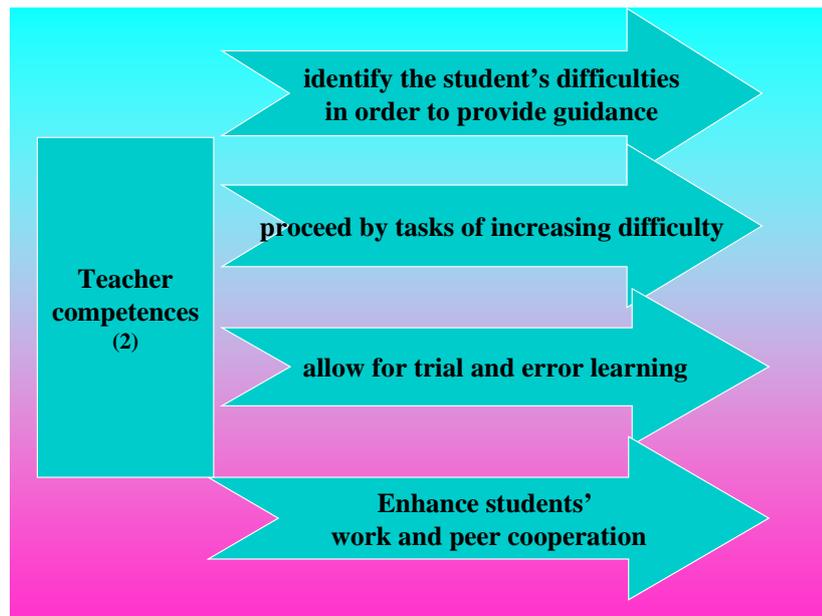
now finds herself facing new challenges. She has to change how she relates to knowledge, to the student and to the group. She is no longer the sole dispenser of knowledge. Her role has become more varied: she becomes motivator, guide, and resource-person. The relationship is in a sense reversed: the teacher no longer has the sole responsibility for students’ learning, since no-one,

however good a teacher she may be, can oblige another person to learn anything. This phenomenon occurs within the head of the student and it is she who has the responsibility for learning to occur. “In brief, the role of the teacher is only to create situations that encourage learning, to direct the students towards useful resources, to advise them and to fill the gaps in their knowledge. Allowing the student to think for herself, and to create her own thought processes, this is simply showing respect for her abilities.” (Margot Phaneuf, *A few thoughts on strategies adapted for a program by “competence”*)

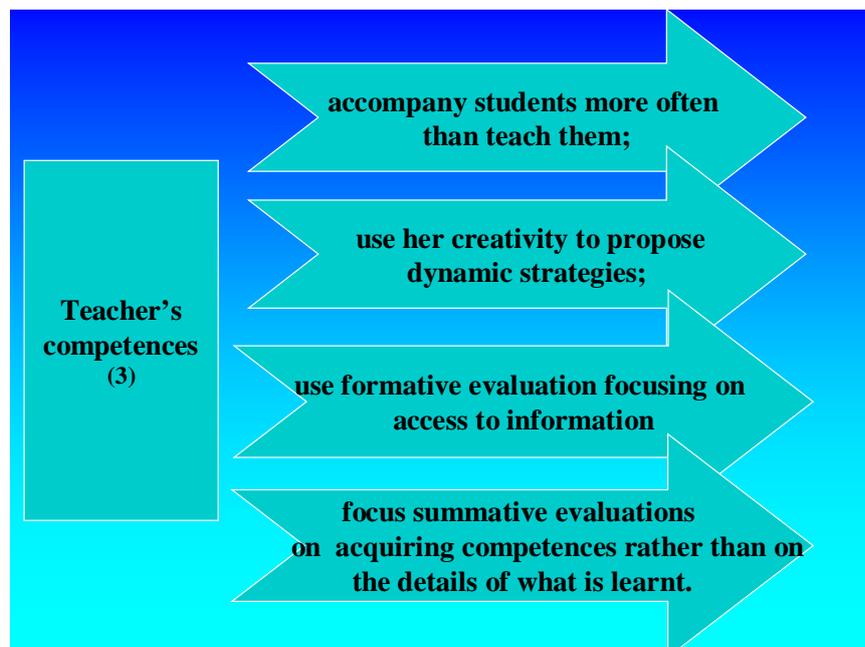
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Conclusion

We often believe that the pedagogical principles guiding how we teach are something abstract and far removed from reality. Yet the principles that underlie the social constructivist approach are realistic and practical. And applying them promotes the enrichment of training in Nursing by generating reflection and thus allowing the training



to become more effective and profound. Among other things, scaffolding in the classroom and during practical training is an essential element to get the student to make the necessary



linkages with what she has learnt. It is a positive way of creating a strong and functional pedagogical relationship. Some people are keener on controlling, yet the use of constraints and negativism are hardly conducive to learning. In education, we have to remember, as the writer Germaine Guèvremont put it, “a little help goes a long way”.

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