

## **Chapter 2.**

### **Applying Principles of Adult Learning**

#### **A. Domains of Learning**

Three domains of learning are blended into most learning activities. The cognitive domain includes knowledge and thinking. The affective domain includes feelings, attitudes, values and beliefs. The psychomotor domain includes technical skills. Learning in each domain is further characterized by levels of complexity. For example, the levels of the cognitive domain, in increasing order of complexity, are: knowledge, comprehension, application, analysis, synthesis, and evaluation. Sometimes the highest three levels are considered together as components of critical thinking. For more information about domains of learning, see Appendix A.

##### **1. Cognitive learning**

- **Refer the student to resources:** books, journals, video-assisted instruction (CAI), and on-line sources. What sources of information do *you really use in practice*? Students are often overloaded with information about references and resources from faculty. Your role is to direct the student to those resources you find most efficient and practical for the various areas of your practice.
- **Ask questions that will lead the student to discover the information.** For example, if the student is unfamiliar with outcomes performance management principles or terminology, ask the student what he/she knows about evaluation. Based on the level of knowledge, you can direct to the most appropriate sources. Sometimes this means referring the student back to the faculty.
- **Limit the amount of information that you supply.** Although you act as a resource, you do not substitute for the student investigating, collecting and interpreting information.
- **Make a habit of incorporating discovery learning on a regular basis.** For the next clinical day, you might ask the student to report to you on two articles, each of which recommends a different strategy for implementing a project discussed today.

##### **2. Affective learning**

- **Explore through questions that elicit student's attitudes, values and beliefs.** For example, suppose that an employee refuses to work overtime in a situation where the unit manager is requiring additional coverage. Ask the student to think about how he/she would feel if they were the manager in charge, or if they were the employee. As a first step to fully appreciating and respecting other perspectives, help the student raise awareness of his/her own perspectives on issues such as mandatory overtime.
- **Provide information on differing perspectives.** Place the student in situations in which he/she will encounter attitudes, values, and beliefs that are different from his/her own. Some of these differences may reflect differing ethnic background, others may reflect differences arising from age and work experiences, the differing perspectives of various

health care disciplines, or any host of other differences that lead to distinct attitudes and values.

### 3. Psychomotor learning

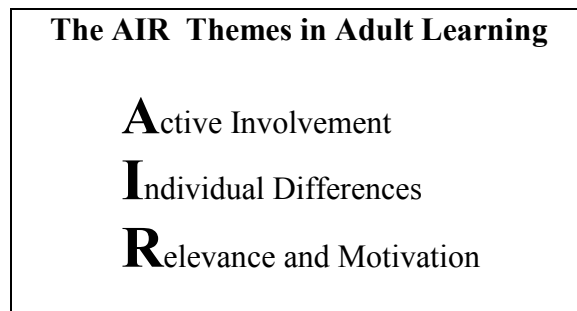
- **Provide opportunities for demonstration and practice.** This may include activities such as entering data using a data analysis software package, or using the patient electronic medical record. Recommend that the student practice with a fellow student or employee who has already mastered the technique.



In all domains, one of the preceptor's most effective strategies is to model competent practice, allow the student to observe you in action and point out the critical features of your practice to the student.

## B. Principles of Adult Learning

Authorities in the field of adult learning have described numerous principles of learning. Three themes predominate: active involvement, individual differences, and relevance and motivation. These themes, represented by the acronym AIR, form a convenient frame of reference for applying adult learning principles to precepting (Case, 1996).



### 1. Active involvement

Educational research has shown that as more senses are incorporated in the learning process, the learner learns and retains more. For example:

- “ We remember:   10% of what we read  
                          20% of what we hear  
                          30% of what we see  
                          50% of what we see and hear  
                          80% of what we say  
                          90% of what we say and act.”

From Kornikau and McElroy (1992) in Pike, p79.

Compare the differences in recall between <u>3 hours later</u>	vs	<u>3 days later:</u>
Telling used alone:	70%	10%
Showing used alone:	72%	20%
Blend of telling and showing:	85%	65%

From Benschoffer in Pike (1992), p. 79.

Active involvement uses a variety of learning processes to engage the student: discussion, computer-assisted instruction, lab/field experiences (e.g., data entry; leading a team meeting), individual and group projects, simulations, role-playing. Even when the learning does not involve a psychomotor skill, learners can become active by responding to questions and organizing information instead of receiving information passively. Some active involvement strategies for preceptors include:

1. Ask questions that will help the student discover the information. “What about the demographics of clients using this state agency affect funding opportunities?”
2. When asking questions, allow the student enough time to process the question and formulate an answer. Research has shown that teachers do not allow sufficient “wait time” before the student answers.
3. Ask questions that require students to answer with more than a “yes” or “no”. In addition to stating complete answers, encourage students to draw a diagram or picture for you when appropriate (for example, a process diagram or system flow chart for a component of an information system).
4. Ask questions that will lead the student to constructing his or her own learning and connecting new learning to previous experience. For example, “How does our agency’s method for costing out care and resource allocation compare with your own work site?” “What accounts for the difference?”
5. Turn questions around. When a student asks you a question, instead of answering immediately, ask a question (a what, when, where, how or sometimes why question) that will lead the student to answering his or her own question. Often a very important question of this type is “Where could you look to find that out?” A part of the process a student needs to learn from you is how to access needed information. Sharing important resources, including on-line references, URLs, and human resources, serves to empower the student. Refer to Chapter 6 for additional information on the use of questions in coaching.
6. Share your own active learning strategies, such as your schemes for organizing data and other aspects of your practice.
7. Give the student advance organizers. Share agency forms ahead of time so the student can be familiar with any agency specific terms. This may include performance appraisal sheets, financial spread sheets, even organizational charts.
8. Before the student observes you in action, ask a few questions for which you will expect answers after the observation. For example: “How did I get the staff to volunteer to collect data on clinic ‘no-show’ rates?” Or “How did I get the project manager to select more appropriate project deliverables?”
9. When you are tempted to give a mini-lecture, challenge yourself to sprinkle your comments generously with questions. For example, instead of telling students the most important questions to ask prior to designing an evaluation project, ask the student to tell you what is

most important to consider, then offer corrective feedback. This approach gives you insight into the student's thinking and learning needs.

**Some sample questions prior to designing an evaluation project**

- What is the current program (description)?
- Who are the stakeholders?
- Who wants the evaluation?
- What type of evaluation is appropriate?
- Why is an evaluation wanted?
- When is the evaluation needed?
- What resources are available to support an evaluation?

10. Ask questions that require students to reflect on their own practice experiences, to identify ways to improve and to plan for a more successful next encounter.

John W. Newburn wrote: "People can be divided into three groups:

- those who make things happen
- those who watch things happen
- and those who wonder what happened.

Newburn notwithstanding, an active learning process includes some watching and some wondering (reflecting) about what happened.

## 2. Individual differences

Each of our students presents as a unique constellation of individual differences. Some of the ways may include:

➤ Ethnicity	➤ Age/generation
➤ Experience as a healthcare consumer	➤ Talents
➤ Race	➤ Interests
➤ Professional expertise	➤ Family roles
➤ Religion	➤ Disability status
➤ Practice specialty	➤ Learning styles
➤ Formal education	➤ Personality type
➤ Gender	➤ Conflict management style
➤ Workplace culture	➤ Aptitudes
➤ Sexual orientation	➤ Achievements

Here are some strategies for preceptors that relate to individual differences.

a. Ask questions to assess the student. In addition to establishing rapport, knowledge about the student gives you insight into ways to connect new learning with prior knowledge and experiences. Chapter 5 provides in-depth information about precepting culturally diverse students.

b. Assess your student's learning style and other dispositions. Most students will not have completed formal learning style inventories. However, people do have insight into how they learn best. So for practical purposes:

- Ask the student about previous learning: what techniques have worked best in the past.
- Observe how the student goes about learning new information.
- Note the activities toward which the student gravitates.
- Review learning styles in Section C later in this chapter.

c. At times you will be teaching the student a way of doing something that differs from the way he/she has performed it in the past. Emphasize how the new way differs and discuss your rationale. Acknowledge that there may be several ways to accomplish the same end. This learning experience serves to broaden the student's repertoire of skills, not downgrade them.

d. Recognize that your own individual characteristics contribute to the effectiveness of the preceptorship. Certain of your characteristics promote successful precepting better than others. In addition, your own characteristics will create more positive chemistry with some students than with others. Explore some of your own characteristics in a Thumbnail Sketch of the Myers-Briggs Type Inventory and the precepting implications in Appendix B.

e. Disclose some of your own characteristics. This is especially important if you place special value upon certain elements of a student's behavior. For example, if you value taking initiative, let the

student know your value, and also describe some examples of taking initiative in the student role. Without such clarification, you and your student may each translate initiative into different behaviors. It is important to come to a mutual understanding of expectations and interpretations.

### 3. Relevance and motivation

You can't motivate anyone. You can only connect with and use the person's own motivators. Hopefully the student views the practicum experience as an opportunity to practice the theory she/he has mastered in class or to learn management strategies to enhance an upcoming job opportunity, and not simply as a required course that must be completed as painlessly as possible. Robert Pike (1992) makes the following motivational suggestions.

- a. Offer choices. Activate the learner by letting her/him select from a range of possible experiences and projects. Work closely with faculty in finding a mutually rewarding experience for both preceptor and student.
- b. Link learning to a problem that the student will be able to solve (or prevent) by knowing the information or process. Clearly describe problems that can arise when a student does not master the learning at hand. Or, for a more active approach, ask the student to identify problems that might arise for a manager who did not know how to....
- c. Hold the student accountable for performing tasks, duties, and assignments that make a helpful contribution to your practice. When nurses are in the learner role, they often feel motivated when they believe that what they already know and know how to do can contribute to the situation.
- d. Get excited yourself about the student's project. Give praise for work done. Protect and enhance the learner's self-esteem.
- e. Remember the hierarchy of basic needs. Comfort, safety and belonging come first. If students are made to feel "different" from the culture of the organization, perceive a threat or have a compelling personal or family need, not much learning will occur until those basic needs can be addressed. It is not realistic, nor is it the preceptor's role, to resolve the student's personal or family issues, but it might be helpful to acknowledge an issue and ask the student what needs to happen in order to benefit from the learning experience. For example, a brief phone call to a baby-sitter might put the student at sufficient ease to gain from the experience. If the student perceives a threat to his person, competence, or relationships with colleagues and patients, explore the student's concern and offer some suggestions for building confidence and comfort level.

## C. Learning Styles

One of the most used formulations of learning style was developed by Kolb. He identified four modes of learning, as noted below, along with some of the characteristics that accompany the modes.

Concrete Experience =	learning by feeling and intuition
Active Experimentation =	learning by doing.
Reflective Observation =	learning by observing and perceiving
Abstract Conceptualization =	learning by feeling and intuition

Kolb's model consists of four learning styles along with some of the characteristics that accompany the learning styles. Each style combines two of the four modes of learning:

Accommodator =	Concrete Experience + Active Experimentation
Diverger =	Concrete Experience + Reflective Observation
Converger =	Abstract Conceptualization + Active Experimentation
Assimilator =	Abstract Conceptualization + Reflective Observation

In practice, it is helpful to identify your student's preferred learning style. For example, if the student is a "converger", then he/she will benefit from hands on, practical, problem-solver type of activities. However, this learner tends to be more pragmatic, preferring learning situations where there is only one correct answer or solution. Since today's healthcare environment does not offer such a limited choice of solutions, the preceptor can expect to focus much of the learning experience on why alternative approaches must be considered and often adopted.

Some authorities believe that the learning process is really a cycle that incorporates four of the modes of learning. According to this viewpoint, a learner's preferred mode will be the approach taken first. Then as learning proceeds, other modes are brought into play. For example, you may be teaching data entry skills to a student who prefers to learn by doing (Active Experimentation). This student will connect best with the new learning by practicing with the computer and psychomotor skills involved. However, to use the advanced skills competently, the student will need to learn via other modes as well: Reflective Observation (by observing you when you enter data and by reflecting on his/her performance), Abstract Conceptualization (by thinking about the process of data entry and interpreting it), and Concrete Experience (by incorporating your coaching feedback and by considering the student's feelings and responses to the behavior learned).