14. Principles of Teaching and Learning

Aliza Solomon, MD

I. Principles of Adult Learning Theory
   A. Professional development activities should be created with consideration for principles of how adults learn best. This enables the instructor to become an effective educator.

II. Principles of Adult Learning
   A. Assess the level of the learner
   B. Actively involve the learners in the learning process
   C. Encourage mutual feedback
   D. Teach information in the context within which it will be applied
   E. Encourage self-directed learning
   F. Adults learn better in an informal, non-threatening environment – the environment should be fun
   G. Adults learn better when they want or need to learn something. This integrates with demands of their own life
   H. Adults learn better when their individual learning needs and styles are met
   I. Adults learn better when their previous knowledge and experience are valued and used
   J. Adults learn better when there are opportunities for them to have some control over the learning content and activities
   K. Adults learn better through active mental and physical participation in the learning activities
   L. Adults learn better when sufficient time is provided for the assimilation of new information, practice of new skills, or development of new attitudes
   M. Adults learn better when they have opportunities to practice or to apply successfully what they have learned
   N. Adults learn better when there is a focus on relevant and realistic problems and the practical application of learning
   O. Adults learn better when there is guidance and some measure of performance, so that learners have a sense of progress toward their goals

III. Effective Learning Environment
   A. Learning is an active process. An effective learning environment relies on the educator to take into account the following principles:
      1. The objectives and expectations are clear to both the educator and learner
      2. The focus is on the development of problem-solving skills and attitudes
      3. The teaching level is appropriate for the learner
      4. There is active participation of the learner
      5. There is adequate supervision and provision of feedback to the learner
      6. There is the opportunity for reflection and discussion
      7. There is respect for privacy and dignity of patients
      8. There is continuity with the rest of the curriculum
IV. Teaching Methods:

A. Teaching can occur in many different locations, from the classroom to the bedside. Classic teaching occurs in lectures, allowing for a large volume of information to be distributed to many students. Small group discussions, bedside teaching, and simulation all provide excellent teaching opportunities, each with strengths and weaknesses. Time for reflection between learning opportunities is an important part of teaching.

B. “Learning is the process whereby knowledge is created through the transformation of experience.” (Kolb). The theory by Kolb is represented by cyclical model which consists of four stages:

C. Reflection– Reflection is the process of critically assessing and giving meaning to an experience. The “Reflective Practitioner” is able to critically analyze a situation using a theoretical background and practical experience (Schon). Consideration of the larger context is crucial. This type of reflection is necessary for lifelong self-directed learning.

V. Feedback and evaluation

A. Feedback is a crucial part of the learning process. Feedback should be given after a learner actively experiences an activity, so that when the learner consciously reflects on that experience, the evaluation may be incorporated to improve their future performance and ensure success.

1. Formative Evaluation – A formative evaluation is a method of providing feedback while the activity is happening. This type of assessment is good for setting short-term goals. It is usually performed in an informal manner, and provides opportunity for improvement. Potential methods of formative evaluation include:
   a. Direct Observation – Feedback provided in an ‘on the spot’ situation (procedural skills, lectures, written patient care notes, and informal oral presentations)
   b. Self Assessment Form – A method of critically assessing the learner’s own skills
   c. Semiannual Evaluation – Critical assessment of competency periodically throughout the learning experience/time period
   d. Competence forms for procedural skills

2. Summative Evaluation – A summative evaluation provides information about the overall effectiveness of the education program on the learner. It defines how the learner did. The summative evaluation is a means to assess the accomplishment of long-term goals. It can be more formal, and reflects the previous formative evaluations.
   a. Verification of Competence form as specified by the American Board of Pediatrics
      1) 6 ACGME competencies
      2) Scholarly activity
Recommended Reading


