

MODULE 7: LEARNING STYLES

Cognitive Goals

At the completion of this module the student-instructor should be able to:

- 7.1 Use his or her own words to define and describe "learning style" and "learning preference"
- 7.2 List common learning styles found in adult learners
- 7.3 Identify the following characteristics for each learning style:
 - Student needs, desires and preferences in instruction
 - Strengths and weaknesses inherent in that style
- 7.4 Explain how learning styles impact classroom dynamics
- 7.5 Given a lesson plan, describe activities that may be used to target a specific learning style
- 7.6 Identify surveys and other tools used to classify learning styles
- 7.7 Describe how his or her own learning style will affect instruction

Psychomotor Goals

At the completion of this module the student-instructor should be able to:

- 7.1 Create a lesson plan which utilizes a stimulating variety of teaching techniques, activities and breaks for the purpose of maximizing the various learning styles present in students (this goal should only be attempted if Module 10: Lesson Plans has been completed)

Affective Goals

At the completion of this module the student-instructor should be able to:

- 7.1 Value the diversity found in the various learning styles
- 7.2 Support the use of learning styles assessment in EMS education
- 7.3 Support the use of a variety of teaching styles to reach all learning styles

Declarative

- I. Why this module is important
 - A. Classroom teaching is an ongoing experiment into the modes, models and preferences of thinking and processing information by learners
 - B. Maximize success within the classroom by understanding that various learning styles and preferences exist and vary among students
 - C. Incorporate activities that will maximize students preference
 - D. This will make learning more enjoyable for you and the student, but will also make it faster and easier for them to learn the material
- II. What is a learning style?

- A. Throughout this module, the terms “learning style” and “learning preference” will be synonymous
 - B. Each person perceives, processes, stores and retrieves material in a unique way that is individual to their preference and style
 - 1. Educational researchers, psychologists, and sociologists have observed adults in education settings to identify patterns of learner preferences and determine if there are any commonalties
 - 2. Learning style theories are the result of research
 - a. A learning style theory will look at only one aspect of the spectrum of learning
 - i. For example, a given theory may describe the manner in which an individual processes material
 - C. Learners have preferences for different types of input and experiences such as:
 - 1. Some prefer structure and others like flexibility
 - 2. Some prefer independence while others like a social or group learning environment
 - 3. Some prefer auditory (hearing) input, others visual (seeing) and still others like kinesthetic (movements) inputs
 - D. An important point to remember as you progress through this module: adult learners are flexible and adapt to a variety of presentation styles
 - 1. Although we have inherent preferences we will learn in most every environment
 - 2. Teaching and learning is more pleasant when our individual preferences are targeted in the methods chosen to present material
- III. Assessing students learning styles
- A. Instructors can assess learning preferences via entrance exams and learning style profiles
 - 1. Health Occupation Basic Entrance Test (HOBET)
 - 2. Myers-Briggs Personality Type Indicator (MB-PTI)
 - 3. Learning Styles Inventory (Dunn and Dunn)
 - 4. Many more instruments exist
- IV. Assessing your personal learning style
- A. Instructors should know their own learning preferences
 - 1. We tend to teach the way we like to learn which may be a disservice to our students
 - B. When a misunderstanding arises in the classroom use your knowledge of learning styles to reflect upon how you are presenting material
 - 1. This may provide clues to the reason there is a misunderstanding
- V. Using information on learning styles in your teaching presentations
- A. Provide variety in the classroom
 - B. Avoid labeling students by their preferences
 - 1. You may alter your expectations of students when you label them
 - C. Some choices for variety in class sessions and assignments include:

1. Provide visual stimulation through the use of Powerpoint, video, or overheads or writing on a chalk or white board or flip chart
 2. Provide kinesthetic activities such a model building, use of equipment, and skill labs
 3. Provide group or social activities such as discussion, work groups, and response teams
- D. Knowledge of learning styles and creation of diverse lesson plans helps each student to be comfortable in an optimal learning environment for their learning preference during part of each class session
1. Diverse lesson plans with lots of variety help students to grow and develop beyond their learning preferences
- E. As learners, we all can adapt to the different learning environments
1. As an example, reflect on an undesirable classroom experience to see if part of the problem may have been due to the differences in learning styles between the instructor and you
- VI. Examples of learning preferences, characteristics and successful teaching techniques to incorporate in to your teaching strategy
- A. These are only three examples of many types of learning styles or preferences
 - B. Auditory-visual-kinesthetic preferences
 - C. Social and independent learning styles
 - D. Analytic and global learning preferences
- VII. Auditory-visual-kinesthetic learners
- A. Expresses a preference in the manner in which information is received
 - B. Auditory learner
 1. Learns best through hearing information
 2. Benefits from oral presentation of information: discussion, listening, and verbalizing
 3. Encourage students to audiotape lesson
 4. Use lectures, oral presentations and class discussions to stimulate learning
 - C. Visual learner
 1. Learns best by taking information in visually
 2. Benefits from visual presentation of information, looking things up, writing things down, and “seeing” the words (forming word pictures in the brain)
 3. Provide handouts of content
 4. Use videotapes, slide presentations, overheads, illustrations, posters, X-rays, moulage and other visual props
 - D. Kinesthetic learner
 1. Learns best by manipulating information through physical means through handling and touch
 2. Benefits from taking things apart, making things work, using their hands and tactile stimulation
 3. Use 3 dimensional models and replicas, laboratory sessions, scenarios and role-play

- VIII. Social and independent learning styles
- A. Describes preferences in receiving information
 - B. Social learners
 - 1. Process information best when multi-tasking in busy environments with other people
 - 2. Tend to enjoy study sessions, group projects and cooperative learning
 - 3. Use group work in class, classroom discussions, study groups, skills groups
 - a. Allow music or other background noise
 - C. Independent learners
 - 1. Process information best when working independently or isolated
 - 2. Tend to work best in quiet, undisturbed, regular study environments
 - 3. Use reading assignments, written exams, papers and reports
- IX. Analytic and global learning theory
- A. This theory describes the order in which a learner prefers to process information received by looking at the whole then breaking it down into individual parts or by looking at each individual part and then combining it into a whole
 - B. Sometimes called right-brain and left-brain
 - C. Global learner (right-brain)
 - 1. Needs to process the big picture (overall) view first then can concentrate on the individual parts that make up the big picture
 - 2. They are uncomfortable learning when they do not have a sense of the big picture
 - a. These students appreciate an overview of the material before you start teaching
 - 3. Process information globally and simultaneously, deals in images
 - 4. Tend to be creative, artistic, imaginative, emotional, and intuitive and generally like working on teams
 - 5. Try mental imagery, drawing, maps, metaphors, music and dance, experiential learning
 - D. Analytic learner (Left-brain)
 - 1. Process information logically, sequentially, in small parts
 - 2. They are uncomfortable with learning that is occurring out of sequence
 - 3. Tend to enjoy spelling, numbers, thinking, reading, analysis and speaking
 - a. Try lectures with outlines, reading assignments, and multiple-choice exams
 - E. The differences between analytic and global learners: The forest or the trees?
 - 1. Analytic learners separate the forest from the trees: analytic learners look at every tree in the forest before being comfortable enough to declare that they are in the forest
 - 2. Global learners will walk up to several trees, quickly declare it is a forest, and then will begin to look at the individual trees
- X. Theory of multiple intelligence's
- A. Howard Gardner described “multiple intelligence's”

1. Gardner's idea was that measuring "IQ" through a series of cognitive exercises does not fully measure the range of intelligences expressed by each individual
 - a. Hypothesized that each person has aptitude in the following areas, with each individual having some areas with greater aptitude than others
 - i. Linguistic: enjoys working with the spoken word and languages
 - ii. Spatial: enjoys visual, artistic imagery, has the ability to construct visual pictures in their mind
 - iii. Logical-mathematical: enjoys puzzles and problem-solving requiring thought
 - iv. Musical: enjoys music and understands the language of music
 - v. Body kinesthetic: has aptitude for sports and recreational activities involving bodily movements
 - vi. Interpersonal: works well with others and is tuned into those around them
 - vii. Intra-personal: enjoys self-reflection and introspection, is aware of their body
 - b. Further work by Gardner and his team has added categories in the area of religious/theological and botanical science

Bibliographical Resources

- Ast, H. J. (1988). *Learning styles: Implications for curriculum and instruction*.
- Dunn, Joe. (1994). *Reflections of a Recovering Lectureholic*. The National Teaching and Learning Forum, 3:6.
- Dunn, R., Ed., and Griggs, S. A., Ed. (2000). *Practical approaches to using learning styles I higher education*. Westport: Greenwood Publishing Group.
- Entwistle, N. J. (1983). *Understanding Student Learning*. New York: Nichols Publishing.
- Kariuki, P. N. (1995). *The Relationship between student and faculty learning style congruency and perceptions of the classroom environment in colleges of teacher education*.
- Newble, D. I. & Entwistle, N. J. (1986). Learning styles and approaches: Implications for medical education. *Medical Education* 20, 162-175.