### METHOD Teach Back Process

#### Description

A simple mechanism by which a learner understands a topic or skill may be assessed. It begins by asking the learner to explain his/her understanding of the topic/concept or demonstrate a technique and explain it. Instructor (or other learners) then follows-up using open-ended questions to assess the learner's understanding and/or ability to transfer that understanding to a related but new topic. Misconceptions are then clarified (by instructor or other learners). It is an iterative process: "teach back", open ended questions, address misconceptions, and then "teach back" again.

#### **Advantages**

- Focuses on learner's comprehension and explore misunderstandings
- Role models a process that can be used with patients to assess their health literacy

#### Disadvantages

 May be threatening to learner as "exposes" thinking or skill errors

#### METHOD

### Madness to Methods (M<sup>2</sup>M)

#### Description

Interactive and engaging, the Medical College of Wisconsin's MADNESS TO METHODS (M<sup>2</sup>M) exercise can be adapted to any learning task that seeks to "stretch" learners' thinking and consider new possibilities. Key elements include: "a hub card deck" (in our case the objectives) and "methods". Using your computer to create the cards is easy. Use the address labels function in your word processing program to create the content for each card deck, print off the labels, and apply to index cards (one color for "hub" and other for "methods").

#### Advantages

- Quickly engages the learner and their "competitive" spirit
- Requires learners to link new ideas together thereby encouraging creativity
- A commitment to "change" can be obtained to promote "transfer" of behavior to real task

- Requires risk taking which some learners dislike
- Can go "too far" and be an unrealistic link between hub and method – however the creative spirit should be encouraged

### **Clinical Reasoning Theater**

#### Description

Clinical theater reasoning (CRT), developed by Borleffs, et. al. [*Acad Med* 2003;78(3):322-5], demonstrates the process of clinical reasoning to learners through the conversation of a doctor with a patient. Three actors: the doctor, the patient, and the learners who form the "audience". The performance occurs in two repeating acts. **ACT I**: Communication between doctor and patient focused on Hx Taking, PE, etc. **ACT II**: "Time out" in which doctor explains/ thinks out loud, to reveal the rationale for questions, line of reasoning, and/or need to silence or empathy. Audience questions and provides suggestions for further dialogue with the patient resulting in another Act I and II cycle.

#### **Advantages**

- Builds on clinical teacher's existing skills
- Reveals the physician's "behind the scenes" thinking and decision
- Engage the audience through Act II

#### Disadvantages

• Exploration learners' clinical reasoning is dependent on "doctor's" facilitation skills

#### METHOD

### **One Minute Micro-Lecture**

#### Description

The designer of the 1-minute lecture, David Penrose (SunGard Higher Education) insists that tiny bursts of knowledge, when paired with assignments and discussions, in either an on-line or F2F environment, results in learning equivalent to more traditional lectures. Steps: (1) List key concepts to convey in traditional lecture; (2) Write a 15-30 second introduction and conclusion to provide context for key concepts; (3) record/present (e.g., podcast); (4) design a follow-up assignment that will direct learners to readings or activities that allow exploration of key concept(s); (5) Create a written assignment.

#### Advantages

- Quickly engages the learner and when paired with an assigned task allows the learner greater ownership, control and engagement in learning process
- Works well with simple concepts

- Learners must self-regulate/self-direct to complete
  associated tasks
- Perceived "Face Validity" of method

### METHOD In 3 Words

#### Description

Adapted from ABC's Good Morning America's "My Week in 3 Words", this technique can be used as an ice-breaker, a cogent reflection strategy, as a summary of what was learned, what learner's believe... the possibilities are endless. Supplies: A large sheet of paper and marker for each learner who writes his/her 3 words (or image) on the sheet. Each learner then reveals his words (by holding up the sheet) and then the instructor debriefs to explore common themes, unique ideas, etc. Works for small and large groups for F2F or on-line.

#### **Advantages**

- Brevity is Revealing
- Patients Are Scary
- Try It Now (In3Words)

#### Disadvantages

- Requires Focused Trigger
- Learner's Won't Share
- Instructor Debrief Needed

### **Measurement Magnetism**

#### Description

Adapted from concept mapping using modified "scrabble" rules, a team of 3 learners collaborate to correctly place preprinted "tiles" with measurement-related concepts and terms (reliability, discrimination, measurement error, validity, standardized patients, multiple questions, distracters, etc) to a "hub" tile (e.g., table of specifications) on a magnetized mat. Each team then "presents" their "mat" to the class, justifying linked (i.e., touching) tiles. Other teams may challenge the link(s) accuracy, scoring points if successful based on class vote. Total points wins! MATERIALS FOR EACH TEAM: Pre-print terms/concepts onto magnetic sheets; cut terms in squares. Magnetic mat, challenge magnets (to be placed on questionable links) & score card. Magnetized materials allow tiles to be easily moved/displayed during presentation without tiles sliding off!

#### Advantages

- Quickly engages the learner and their "competitive" spirit
- Requires learners to accurately link concepts.

#### Disadvantages

Instructor correction may disrupt exercise

### WORKSHOP

#### Description

A course for a small group; emphasizes problem solving. Workshops include group exercises, discussions, and handouts. The length of workshops varies from one hour to full-day sessions

#### Advantages

- Allows use of multiple other strategies
- Use of different methods often allows for instruction in multiple components (knowledge, skills, attitudes)

#### Disadvantages

• Time for planning and organizing; Resource intensive

### METHOD

### SONGS

#### Description

Students can compose lyrics to learn terms, concepts, content/subject matter and sing along to a familiar melody or song.

#### Advantages

- Repetition encourages learning
- Engaging and fun

#### Disadvantages

• Learner is uncomfortable with singing

### SCAVENGER HUNT

#### Description

Learners are given a list of findings to discover in the course of their experiences.

#### **Advantages**

- Promote self directed learning.
- Presentation to the team allows for group exposure to findings.

#### Disadvantages

• Time intensive both in set-up and application

#### METHOD

### **QUESTION LOGBOOK**

#### Description

Learners are directed to keep a list of their questions. Learner keeps logbook with him/her while in the classroom, in lab, on rotations, etc. and records questions when they occur into the log book. An option: Students discover/find answers to questions on even days, preceptor/instructor provides answers on odd days.

#### Advantages

• Promotes self directed learning

#### Disadvantages

Consistency of recording questions and seeking answers

### **GUIDED PRACTICE**

#### Description

The learner and teacher discuss a specific task/scenario and identify a skill to be improved.

The learner is supervised and guided through performance of a specific task

#### **Advantages**

• Feedback is immediate and specific to task.

#### Disadvantages

 Personality and communication differences can hinder progress.

#### METHOD

### **MAGIC TRICKS**

#### Description

Tricks that can be used to provide metaphors or analogies for some important element of the content (e.g., Magic Pinky). Debriefing is essential to link to objectives, principles, concepts.

#### Advantages

- Visual presentation / demonstration offers variety to presentation
- Intriguing and entertaining

- Tricks must be engaging and goof-proof
- Tricks work best if easy to set up with few props
- Tricks should be convincing and easy to learn



State a method that you think would be BEST for the objective under discussion.

Wild Card

Go WILD!

### METHOD ANCIENT SYMPOSIUM

#### Description

A group of 5-30 persons who meet in a private room to enjoy good food and fellowship with the desire to discuss informally a topic of mutual interest.

#### Advantages

• Casual environment encourages conversation

- Can be difficult to remain on topic
- Need skilled facilitator



State a method that you think would be BEST for the objective under discussion.

Wild Card

Go WILD!



State a method that you think would be BEST for the objective under discussion.

# Wild Card

Go WILD!

### Lecture

#### Description

A lecture is an oral presentation intended to present information and teaches learners about a particular subject.

#### Advantages

- Presents factual material in direct, logical manner
- Accommodates large numbers of learners
- Structured presentation of complicated topics
- Helps students acquire "must know" information about subject

#### Disadvantages

- Minimal to no audience participation
- May be ineffective for promoting student thought, changing attitudes, or teaching behavioral skills

#### METHOD

### **Lecture with Discussion**

#### Description

An oral presentation of information designed to teach people about a particular subject and the presenter plans time for a group discussion after the presentation

#### Advantages

- Involves audience somewhat by inviting comments and questions related to the lecture
- Learners can question, clarify and challenge
- Allows learner to apply newly acquired knowledge

- Audience participation limited
- May be ineffective for promoting student thought, changing attitudes, or teaching behavioral skills

### Brainstorming

#### Description

A group activity technique designed to generate a large number of ideas for the solution to a problem

#### Advantages

- Encourages full participation because all ideas equally recorded
- Draws on group's knowledge and experience
- Spirit of congeniality is created
- One idea can spark off other ideas
- Listening exercise that allows creative thinking for new ideas

#### Disadvantages

- Can be unfocused
- Needs to be limited to 5 7 minutes
- People may have difficulty getting away from known reality
- If not facilitated well, criticism and evaluation may occur

### METHOD

### Panel of Experts

#### Description

A moderator presents questions to group of 4-5 content experts and encourages organized participation from the entire panel.

#### Advantages

- Allows experts to present specific content, offer different views, share their experiences
- Can provoke better discussion than a one person discussion
- Frequent change of speaker keeps learners' attention

- Audience participation limited
- May be ineffective for promoting student thought, changing attitudes, or teaching behavioral skills

### **Video Triggers**

#### Description

Recorded images and sound; short movies

#### Advantages

- Entertaining way of teaching content and raising issues
- Keep group's attention
- Stimulates discussion
- Generates discussion
- Uses Technology

#### Disadvantages

- Can raise too many issues to have a focused discussion
- Ddiscussion may not have full participation
- Effectiveness depends on the discussion which follows

#### METHOD

### **Class Discussion**

#### Description

Students discuss questions aimed at analyzing key points of a presentation, film, or experience

#### Advantages

- Pools ideas and experiences from group
- Allows everyone to participate in an active process
- Permits assessment of learner needs
- Suitable for higher order cognitive objectives
- Can address affective
  Objectives

- Not practical with more than 20 people
- Few people can dominate
- Some may not participate
- Is time consuming to organize
- Can get off the track and lose the focus
- Requires careful planning by facilitator to guide discussion & question outline

### **Role Playing**

#### Description

Students act as characters in a simulated "real life" situation to solve problem(s)

#### Advantages

- Introduces problem situation dramatically
- Provides opportunity for people to assume roles of others and thus appreciate another point of view
- Allows for exploration of solutions
- Provides opportunity to practice skills
- Efficient and low cost

#### Disadvantages

- people may be too self-conscious
- not appropriate for large groups
- people may feel threatened
- trainer must define problem situation and roles well and give clear instructions

### 

### **Case Studies**

#### Description

Use of real or simulated stories that include patient problems/ symptoms which students analyze and, working in small groups, arrive at a solution by applying course concepts and evidence found in literature

#### Advantages

- Helps analytic and problem solving skills
- Allows for exploration of solutions for complex issues Allows student to apply new knowledge and skills

- people may not see relevance to own situation
- insufficient information can lead to inappropriate results
- clearly defined case study must be prepared

### Worksheets

#### Description

Pre-printed "fill-in-the-blank" sheets of questions, diagrams, or maps to help students review content learned in teaching session

#### **Advantages**

- Work at own pace
- Independent learning
- Helps students acquire "must know" information about subject
- Can cover required subject definitions, terms, topics

#### Disadvantages

- can be used only for short period of time
- facilitator has to prepare handouts

#### METHOD

### **Index Card Exercise**

#### Description

Learners pick a card with random concept that they are then responsible for researching and reporting back to the class

#### Advantages

- Opportunity to explore difficult and complex issues
- Given a topic or term, find information on own, present to group, end with question for group about the issue

- people may not do exercise
- facilitator must prepare questions/concepts

### **Guest Speaker**

#### Description

Expert imparts wisdom, experience, and knowledge

#### **Advantages**

- Personalizes topic
- Offers expertise
- Brings current knowledge and experience to the subject or topic

#### Disadvantages

- May not be a good speaker
- Time consuming to contact speakers and coordinate travel, reimbursement
- Must prepare to introduce speaker appropriately

#### METHOD

### **Distance Learning**

#### Description

Distance learning, sometimes called e-learning, is a formalized teaching and learning system specifically designed to be carried out remotely by using electronic communication.

#### Advantages

- Self-paced and accessible can be more flexible in terms of time and can be delivered virtually anywhere
- not constrained by geographic considerations

- Rely on technology
- Hidden costs
- Advance planning
- No immediate feedback
- Social isolation

### **Team-based Learning**

#### Description

Team-based learning (TBL) is a well-defined instructional strategy that allows a single instructor to teach through conducting multiple small groups simultaneously in the same classroom.

#### **Advantage**s

- Learners must actively participate in and out of class through preparation and group discussion.
- Class time is shifted away from learning facts and toward application and integration of information.

#### Disadvantages

- Team management
- Team members personalities may clash or may not assume equal responsibility

#### METHOD

### **Critical Thinking/Reflection**

#### Description

Critical thinking is the use of cognitive skills that increase the probability of a desirable outcome.

#### Advantages

- Reflection is a part of the critical thinking process that analyzes and makes judgments about what has happened.
- Reflection supports learning and helps promote change and improved action.

- Method not easy to teach
- Trial and error can be time consuming
- Difficult to evaluate, students frequently respond defensively

### Simulators

#### Description

Simulation technologies are used to assess and teach competencies through the provision of reproducible stimuli.

#### **Advantages**

• They have exceptional utility in assessing responses to clinical stimuli that occur sporadically or infrequently.

#### Disadvantages

- Programming or mechanical error
- Not real / actual experience
- Set-up costs

#### Description

(Objective Structured Clinical Exam) An assessment method that is based on objective testing and direct observation of student performance during planned clinical encounters or test stations.

METHOD

OSCE

#### Advantages

- Opportunity to practice "real life" situations in high stakes environment
- Allows observation of student's ability to apply knowledge and skill sets
- Immediate feedback

#### Disadvantages

• Requires more work and planning than the standard exam Cost is high both in human resource needs and money

### **Evidence-Based Medicine**

#### Description

EBM is a way of combining the best-available scientific evidence, the practitioner's clinical judgment, and the patient's values to make medical decisions. Morning report, if a regular part of a program, is a natural place to teach EBM. Lectures can easily incorporate EBM

#### **Advantages**

• Evidence-based medicine should be patient-centered.

#### Disadvantages

- Practioner's clinical skills need to be strong
- Learners should possess adequate knowledge or have easy access to evidence

#### METHOD

### **Small Group Discussion**

#### Description

Discussing in a small group has been shown to improve students' understanding, retention of material, and problem-solving abilities. Ideal group size of 4 - 6 learners.

#### Advantages

- Learners may be more comfortable in small groups
- Increases participation of everyone

- May have domineering personalities
- Some may be intimidated with the limited numbers in the group

### **Problem-based Learning**

#### Description

Problem-based learning (PBL) is focused, experiential learning (minds-on, hands-on) organized around the investigation and resolution of real-world problems.

#### Advantages

• PBL provides authentic experiences that foster active learning, support knowledge construction, and naturally integrate school learning and real life.

#### Disadvantages

• Requires time for advance planning and setting up the learning investigation

#### METHOD

### **Student-facilitated Learning**

#### Description

Students are encouraged to take more control of in all aspects of their own learning (e.g., setting objectives, assessment). The teacher adopts the role of a "guide on the side" who provides resources and support to learners.

#### Advantages

- Learners use skills like synthesis and analysis
- The learner is actively involved
- Learners interact with and learn from each other
- There is no need for large amounts of learning materials
- Learners can work in an environment similar to that of the real world
- A variety of learning methods are used

- Pace of instruction is based on the group rather than the individual learner
- Teacher's role is not clearly defined
- There is a need for extra facilities to allow for group wor, etc.
- The learning is relatively time consuming in proportion to the amount of material covered

### Handouts Study Guides, Test Reviews

#### Description

A small written guide created to provide direction, and point out critical information to students.

#### **Advantages**

- Helps students synthesize content and focus on what they need to learn
- Consolidates necessary information in organized manner
- Students think for themselves without being influenced by others

#### **Disadvantages**

• Preparation is time consuming for teacher

#### METHOD

### Independent Learning Projects (ILP)

#### Description

Instructor establishes objectives plus standards and guides student's development as an ILP as well as progress

#### Advantages

- Engages learner; personalizes learning experience
- Highly motivating to discover things for themselves
- Can work at own pace
- Increases ownership of subject
- Builds on prior knowledge
- Promotes lifelong learning

- Potential to confuse the learner if no initial framework
- Requires substantial student effort and time

### **Interactive Learning**

#### Description

Interactive learning describes a method of acquiring information through hands on, interactive means.

#### **Advantages**

- Interactive exercises engage the learner
- Exercises can be creative and innovative

#### Disadvantages

- Planning and development is labor intensive
- Technology costs can be expensive
- Not all subjects can be taught through series of activities. Some subjects need passive listening.

#### METHOD

### Programmed Instruction/Tutorial

#### Description

Instruction, originally presented in printed form but now primarily by computer, in which a skill or subject matter to be learned is broken up into very small parts to which the learner responds, step by step, and receives immediate information on the accuracy of each response

#### Advantages

- Good for learning facts and skills
- Learner applies new knowledge
- Learner progresses at own pace
- Safe simulations for learners

- Development is time consuming
- Programming and Technology may be costly
- Limited interaction

### Readings

#### Description

Printed materials assigned for study outside of classroom

#### Advantages

- Method used to cover needed content for subject knowledge
- Opportunity to supplement learning
- Low cost, minimal preparation time

#### Disadvantages

- Increase to student time and effort may be unwelcomed
- Must consider Copyright

#### METHOD

### Video Demonstrations, Video Segments, Film

#### Description

Electronically processed and storage formats for moving pictures

#### Advantages

- Beneficial for the" visual" learning style student
- Efficient to teach concepts
- Entertaining way of teaching content and raising issues
- Professional in appearance
- Good for large or small groups

- Quality depends on capture method and storage used
- More expensive than other visual aids
- Requires special equipment
- Require accurate cueing

### **Mentors**

#### Description

Long-term, one-to-one process of helping individuals to learn and develop

#### **Advantages**

- requires only time and two people
- Unique to the needs and interests of each person
- Engages hearts as well as minds
- Is a feedback system
- It can happen alongside, or in addition to, all other learning processes

#### Disadvantages

- Mentor abilities are unequal= inequitable experience
- Demands commitment and clarity of expectations

#### METHOD

### **Self-Directed Learning**

#### Description

Individuals take on the responsibility for their own learning process

#### Advantages/Strengths:

- Learners set individual learning objectives
- Suitable for higher-order cognitive objectives
- Integrated with daily routines
- Triggered by an internal or external motivation
- An inductive process of reflection and action
- Linked to learning of others

#### Disadvantages/Weaknesses:

- Some learners unable to engage in self-directed learning
- Unstructured= learners can easily be distracted by their own needs, assumptions, values, and misperceptions

### **Standardized Patients**

#### Description

An actor trained to portray a particular condition, who can be used as a teaching "tool" for medical students

#### **Advantages**

- Ensures appropriate clinical material
- Approximates "real life"
- Safe environment for skills practice
- Learners can be given feedback in a timely manner

#### Disadvantages

- Labor intensive
- Situation is controlled and scripted; can feel artificial
- Patient actors' abilities to portray patient vary

#### METHOD

### Surveys

#### Description

Series of questions to evaluate the learner's attitude and/or knowledge prior to instruction or to evaluate the instruction of a given course

#### Advantages

- Information/baseline data collection
- Opportunity for individual opinions
- Individual thoughts can then be shared in large group

- Teacher prep time
- May not ask the correct questions for the information required

### Debate

#### Description

The debating process teaches learners how to investigate new ideas, develop critical thinking, and open their minds to different viewpoints.

Five steps to the debating process:

- 1. Gather information.
- 2. Explore all sides of the issue.
- 3. Form an initial opinion.
- 4. Defend the position in a debate.
- 5. Refine opinions through knowledge gained in the debate.

#### **Advantages**

• Both sides of an issue are presented

#### Disadvantages

 Can become so heated that it deteriorates into an argument and there is no respectful listening to the opponent's side

#### METHOD

### **Intellectual Coaching**

#### Description

Guidance through modeling and questioning. Can begin with a teacher modeling solving a problem, or hypothesizing about a reaction.

Intellectual Coaching often happens by questioning as well as through positive or corrective feedback.

#### Advantages

- Learners observe and get immediate opportunity to question/discuss with instructor
- Learners may do follow up practice with feedback

#### Disadvantages

• Time consuming

### ANGEL Discussions & Postings

#### Description

Registered users conduct internet forum to exchange ideas, brainstorm, and contribute to others' knowledge.

#### Advantages

- Learners can respond to questions posted by a teacher or fellow students.
- The learners can post questions from their readings or lectures from teachers.
- The teacher can respond to the postings of the learners

#### Disadvantages

• Needs computer / specific platform access

#### METHOD

### Audience Response System

#### Description

Interactive audience response services, by using wireless keypads for audience participation during presentations.

#### Advantages

- Teacher can easily acces the learners' knowledge, opinions on selected subjects
- Learners can quickly assess their knowledge by viewing the large group results

- Cost
- Logistics

### Games

#### Description

Structured group interactive exercise or contest with rules to promote new perspectives , introduce new concepts, reinforce definitions of terms

#### Advantages

- develop interaction among students
- can be used for collaborative and cooperative learning
- elicit a strong imaginative response
- competition promotes interest and participation
- "play" in contrast to work of learning

#### Disadvantages

- Conflicts can develop
- Students may lose the real focus on the content and becoming wholly absorbed in game itself
- Time consuming

#### METHOD

### **Audio Recordings**

#### Description

Recording of sounds.

#### Advantages

- Provides learner the opportunity to hear interviews, feedback, evaluations, specific sounds related to medical equipment, medical procedures, etc.
- Simple technology
- Low cost
- Can be listened to repeatedly

- Communication may be difficult without visuals
- Revisions require new recording

### **Clinical Experiences**

#### Description

Observation of and practice in inpatient and outpatient healthcare

#### **Advantages**

- Promotes higher-level cognitive, attitudinal, skill and performance learning
- It is "real life"
- Promotes learner motivation and responsibility
- Higher level of retention

#### Disadvantages

- Labor intensive
- DX and TX Skills learned depend upon patient complaints

#### METHOD

### Collaborative Learning Projects

#### Description

Work in small groups on same task simultaneously; learners of different abilities complete a project or solve a problem.

#### Advantages

- Active learning
- Encourages cooperation, team-work among learners
- Allows multidisciplinary approaches
- Suitable for problem-based learning, clinical decision making, community-based projects

- Group dynamics/ conflict
- Individual comfort level
- Time spent on irrelevant topics

### **Demonstrations**

#### Description

An explanation accompanies the actions performed

#### **Advantages**

- Efficient method for illustrating skills and procedures
- Use of several senses; students hear, see, etc.
- Promotes the "see one, do one, teach one" practice

#### Disadvantages

- May fail
- May limit participation
- May limit audience/client input
- Require pre-preparation

#### METHOD

### **Experiments**

#### Description

A set of actions and observations, performed in the context of solving a particular problem or question, to support or falsify a hypothesis or research concerning phenomena

#### Advantages

- Promotes higher-level cognitive learning
- Draws on current knowledge to develop additional knowledge
- Reinforces principles, theories

- Time consuming and expensive (lab space)
- Ethical questions
- Difficult to control potentially relevant factors

### INDIVIDUAL LEARNING PLAN

#### Description

Often included as part of a portfolio but can occur without the associated evidenced included in a portfolio. It typically includes a list of learning areas/competencies to be accomplished, methods/ strategies for learning, benchmarks for monitoring learning progress and timelines.

#### **Advantages**

- Meets educational needs of individual student
- Allows for personal participation and reflection on learning
- Easily integrated with portfolio as records academic goals and achievements

#### Disadvantages

• Should be computerized; Paper-based is burdensome

#### METHOD

### Portfolio

#### Description

A purposeful collection of work done over time that provides evidence of learning associated with pre-determined objectives.

#### **Advantages**

• Learners develop skills associated with how to plan, create, review and update.

Ref: ACGME Instructional Toolbox

#### Disadvantages

• Must remain current with collection

### REFLECTION/REFLECTIVE PRACTICE (RP)

#### Description

RP includes: 1) examining own reasoning and decision making in a disciplined manner; 2) making your reasoning explicit (i.e., open to review and critique); and, 3) modifying your professional practice according to the insights acquired through this process.

#### **Advantages**

- It makes you more sensitive and guides choices for further learning
- It makes you uncover new information and improves
  practice
- It makes you facilitate action that has broad ownership
- It makes you learn from the experience of others

#### Disadvantages

- People can become more introspective and anxious about their actions
- It can be time consuming
- Need to adhere to ground rules
- Lack of experience can affect
- reflective practice

#### METHOD

### GUIDED LEARNING EXPERIENCES (GLE)

#### Description

A family of experience-based teaching methods that use learning guides (e.g., questions, cues, published guidelines) to direct the attention of learners.

Use of learning guides provides the structure to direct residents' attention to areas that may be ignored or overlooked.

Write questions/guides at a "conceptual or principle" level rather than at the "fact" level. A "laundry list" of issues does not provide the same effect.

#### Advantages

- Nurtures curiosity, initiative, and risk taking.
- Promotes critical thinking.
- Develops students' responsibility for their own learning and habits of life-long learning.

#### Disadvantages

• More effective in small groups

### INTERVIEW AN EXPERT

#### Description

Learner identifies an individual who has the attributes that are of interest (e.g., diagnostician, communication, teacher, professionalism) and using a semi-structured interview (with questions typically provided by instructor to match objectives), learner conducts the interview and then reports back to learning group, incorporates into a portfolio, or some other documentation strategy that enhances reflection and application to learner.

#### **Advantages**

• Personalizes content and learning experience

#### Disadvantages

- Logistics may be a problem
- Learner gets one person's viewpoint

### METHOD PERSPECTIVE TAKING

#### Description

Learner is asked to adopt the perspective of someone else involved in the situation (e.g., nurse, patient, preceptor, hospital admin, family member). Perspective taking is a critical skill in communication, professionalism and is highlighted in mediation and leadership as an essential attribute. Comparing perspectives through debriefing or some other structured format is essential to maximize gains.

#### Advantages

- Increases social and environmental awareness
- Decreases stereotypes
- Collaboration motivator

#### Disadvantages

• Difficulty in assuming another person's role

### METHOD SINK OR SWIM!

#### Description

Learners sometimes perceive they are "competent" and ready to move on to next stage/step in learning (e.g., needs assessment is clear so ready to write objectives; memorizing the Hx questions so easy to "interview" patient).

#### Advantages

- Provides learner with accurate self assessment of his/her own competence
- Illuminates learner's deficiencies

#### Disadvantages

• May be surprising or embarrassing to realize one doesn't know what he/she thought they did

## METHOD "THIS | BELIEVE..."

#### Description

Adapted from Edward R. Murrow and more recently the NPR series... each learner writes a short essay/or oral presentation around the topic under discussion.

#### Advantages.

- Encourage learners to communicate openly about their values and beliefs that guide them through life
- Develop respect for beliefs different than one's own

#### Disadvantages

• Uncomfortable sharing personal thoughts

### SOCIAL NETWORK OR SOCIAL UTILITY SOFTWARE

#### Description

An e-based approach to engaging learners around a topic. Can be used as "closed" group for discussion, to post topics/messages, podcasts, video images, and/or assignments. Allows all in "group" to see and to post (rather than the drop box challenges associated with ANGEL, D2L, Blackboard. Commonly known as <u>http://www.myspace.com/</u> or http://www.facebook.com/

#### **Advantages**

- Provides non-threatening platform for exchange of ideas
- Promotes class / cohort socialization and communication skills in a virtual, online environment

#### Disadvantages

• Lack of privacy

#### METHOD

### **E-LEARNING SYSTEMS**

(Ex. ANGEL, BLACKBOARD, D2L)

#### Description

Learning management systems/content management systems are typically used for "on-line courses" or combined with face to face (F2F) learning in a hybrid (blended) learning environment.

#### Advantages

- More than a "repository" for content.
- Actively engages the learner with interactive elements, video/audio links, projects and shared results, message boards and threaded discussions, white boards, quizzes, games, and grade book functions.

#### Disadvantages

• Need familiarity with computer technology

### LEARNER PRODUCED AUDIO OR VIDEO POD CAST

#### Description

Learners are assigned a topic, provided appropriate guidelines (including objectives, duration, format) and production hardware (e.g., recorder, laptop) and produce their own project. Typically done as a team and then posted/presented for peer and teacher review.

#### **Advantages**

• Learners "learn" the content as they produce, but allows them to use a media other than "print".

#### Disadvantages

• Need familiarity with technology

#### METHOD

### **CRITICAL INCIDENT**

#### Description

Learner writes/reports on a situation or event in which they were directly involved as a participant or close observer that evoked a strong positive or strong negative emotional response associated with learning/competency goals.

The situation is briefly described (with all personal/patient identifiers omitted and presented as "roles" – a nurse, a patient, a student) by the learner. Learner also explains why this evoked the strong positive/adverse reaction.

Discussion proceeds to analysis of the situation, alternatives and is connected to the key concepts/principles of interest

#### Advantages

• Provides opportunity to learn from incident

#### Disadvantages

• May cause emotional turmoil

### METHOD FAST FACTS

#### Description

One page, evidence based practical resource in a topic area. Developed by content experts, the documents are focused on "just in time" learning and practical application specific to task/performance needed (e.g., how to pronounce a patient). References provided at end.

#### Advantages

• Can be available as pocket guide, web-based, and/or download to PDA, cell, or other portable device as a push or pull technology.

#### Disadvantages

• May not be able to cover sufficient information

Examples:<u>www.eperc.mcw.edu</u>

#### METHOD

### IN-BASKET /E-MAIL/PAGER

#### Description

Instructor creates a series of rapid fire events/tasks that are "in" the learner's e-mail, pager, etc. (whatever delivery method matches how tasks appear in real life).

Learner must prioritize, make decisions, handle any difficulties, respond to time deadlines and pressure, etc, in order to complete the work. Feedback and debriefing are critical. Piskurich HM. *Rapid ID*. 2006

#### Advantages

Assess learner's knowledge/ skills in real life scenario

- Instructor set-up time
- Learner may experience stress

### NAME THAT \_\_\_\_\_

#### Description

A series of specific items (e.g. diagnoses, procedures) are identified and key features created as a series of clues that lead to the correct answer.

The clues are presented, usually in a game format, with learners guessing the answer.

#### **Advantages**

• Can be done as individuals, as teams with collective points to promote active engagement.

#### Disadvantages

• Time consuming set-up

#### METHOD

### **Reader's Theater**

#### Description

Learner's take any piece of narrative (case report, journal article, literature, reflection), analyze it, and adapt it into a script. It is this performed with a minimum of preparation, props or scenery. Following the performance (which is usually a read/walk through), discuss the story, key learning issues/points, challenges/dilemma's and how one resolves.

#### Advantages

• Encourages creativity and application of concepts

#### Disadvantages

• Learner may be self-conscious

#### SERVICE LEARNING LCME IS 14.A

#### DESCRIPTION

"Service-learning" is defined as a structured learning experience that combines community service with preparation and reflection.

#### **Advantages**

• Students engaged in service-learning provide community service in response to community-identified concerns and learn about the context in which service is provided, the connection between their service and their academic coursework, and their roles as citizens and professionals.

#### Disadvantages

• Requires extensive debriefing and "structuring" of assignments.

[Definition from Seifer SD. "Service-learning: Communitycampus partnerships for health professions education." *Academic Medicine*, 73(3):273-277 (1998).]

### METHOD

### **CONCEPT MAPS**

#### DESCRIPTION

Mapping can promote problem solving and critical thinking by helping leaner's process complex relationships (simple to complex). A concept map is a graphical representation of the interrelations between concepts in an integrated, hierarchical manner.

#### Advantages

- Learner can visualize and make connections between concepts during the learning process.
- Learner constructs/ recognizes new meanings, events or objects based on the prior knowledge
- They identify major relationships between ideas, and concepts, procedures or principles.

#### **Disadvantage:**

• Learner finds the concept map to be too time-consuming to construct

http://www.scientificjournals.org/journals2007/articles/1025.htm

METHOD

### COLLOQUY

#### DESCRIPTION

Like a panel, but in instead of being populated with experts, half of the participants are learners and the other half experts. The learners ask questions; pose issues, cases, scenarios for the experts to respond to.

#### Advantages

• Follow-up - summarization is needed to reinforce emergent themes, and concepts.

#### **Disadvantages:**

- Time to organize expert panel
- Students not prepared to ask appropriate questions

Piskurich HM. Rapid ID. 2006

### JOURNAL CLUB

#### DESCRIPTION

Journal articles are pre-selected to focus on a specific topic and/or task (e.g. research design).

A presenter (single person or group) is responsible for leading discussion to identify key concepts.

#### Advantages

• Often used for learning about critical analysis of the literature and/or discussions of research design

- Learners do not listen to presentations
- Learners do not complete readings in advance