

Module 3-Subtopic 1: Active Learning Strategies
Introduction

In response to rapid and ongoing changes in the health care delivery system, the American Association of Colleges of Nursing (1998) overwhelmingly endorsed the use of [active learning strategies](#) in nursing education. Active learning techniques use a variety of strategies to involve students in their own learning.

The task of selecting or creating effective independent learning experiences for the online environment can be challenging (but not impossible), especially for the novice online instructor. Many traditional strategies can be easily adapted for online instruction.

Suggested active learning strategies:

- [One Minute Paper](#)
- [Mind Mapping](#)
- [Fishbowl](#)

References:

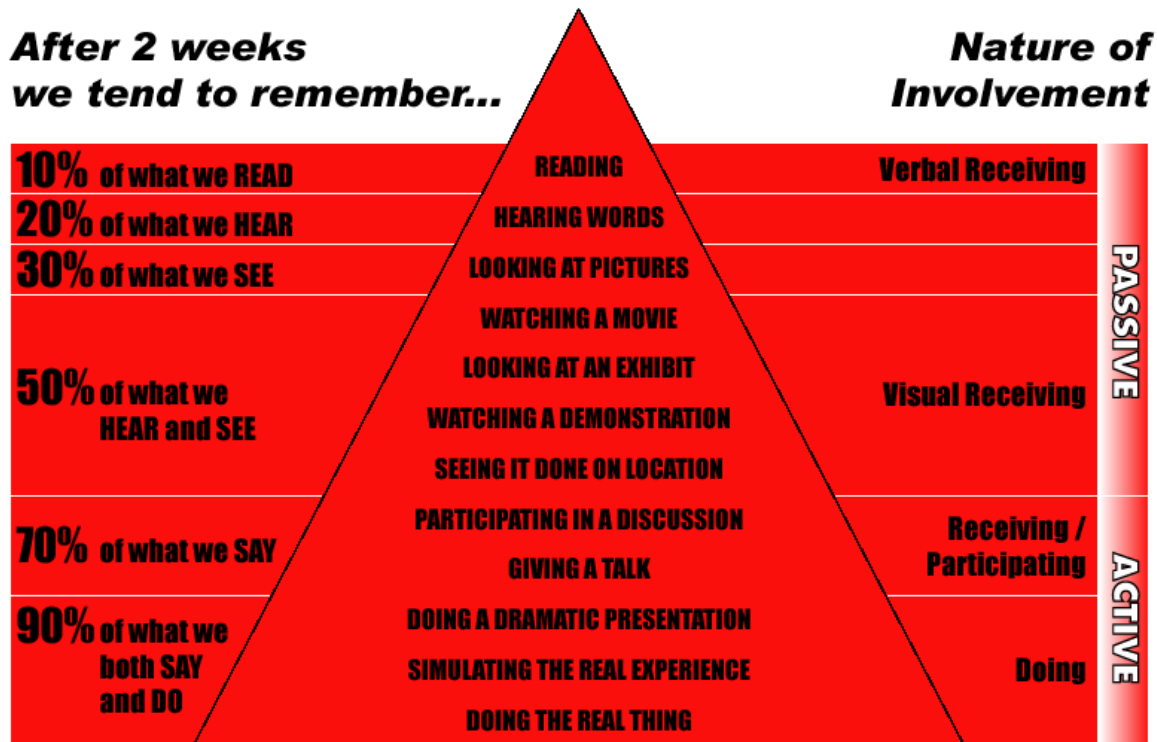
- American Association of Colleges of Nursing. The Essentials of Baccalaureate Education for Professional Nursing Practice. Washington, DC: Author; 1998.

Active Learning Definitions

"Learning is not a spectator sport. Students do not learn much just by sitting in class listening to teachers, memorizing repackaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, apply it to their daily lives. They must make what they learn part of themselves. (Chickering & Gamson, 1987)

In a typical classroom setting, students are often only **passively** in learning, i.e., in listening to the instructor, looking at the occasional overhead or slide, and reading (when required) the textbook. Research shows that passive involvement generally leads to a limited retention of knowledge by students, as indicated in the 'cone of learning' developed by Edgar Dale shown below. (McKeachie, W.J., 1998)

Cone of Learning (Edgar Dale)



Edgar Dale, *Audio-Visual Methods in Technology*, Holt, Rinehart and Winston.

"Active Learning" is, in short, anything that students do in a classroom other than merely passively listening to an instructor's lecture.

<http://www.calstatela.edu/dept/chem/chem2/Active/index.htm>

The notion of active learning suggests that students must do more than simply receive information and substantive material but must also engage and participate in activities and tasks that enhance comprehension, understanding, and knowledge.

<http://pegasus.cc.ucf.edu/~jmorris/asatrg/jaffee.htm>

...students must do more than just listen: They must read, write, discuss, or be engaged in solving problems. Most important, to be actively involved, students must engage in such higher-order thinking tasks as analysis, synthesis, and evaluation.
<http://www.ntlf.com/html/lib/bib/91-9dig.htm>

It involves putting our students in situations, which compel them to read, speak, listen, think deeply, and write. While well delivered lectures are valuable and are not uncommon, sometimes the thinking required while attending a lecture is low level comprehension that goes from the ear to the writing hand and leaves the mind untouched. Active learning puts the responsibility of organizing what is to be learned in the hands of the learners themselves, and ideally lends itself to a more diverse range of learning styles.
<http://edweb.sdsu.edu/people/bdodge/active/ActiveLearningk-12.html>

...the common goal is the provision of opportunities for learners to integrate new information, concepts, or skills into their own mental schema, through rephrasing, rehearsing, and practice. Activities can utilize group methods such as brainstorming, buzz groups or small group work. Individuals can experience active learning through paper and pencil exercises or individual seat work.
<http://www.lib.utexas.edu/is/publications/active.html>

Most students have spent the majority of their school career in passive learning environments in which faculty were disseminators of information, and students were required to memorize information or use specified algorithms to solve problems. In an active learning environment, students are encouraged to engage in the process of building and testing their own mental models from information that they are acquiring. In such a learner-centered environment, faculty become facilitators of learning, and students become active participants, engaging in a dialog with their colleagues and with the instructor.
<http://www.uth.tmc.edu/apstracts/1996/advances/March/7s.html>

References:

- Dale, E. (1969). *Audio Visual Methods in Teaching*, (3rd ed). Holt, Rinehart, and Winston.
- Chickering, A.W. & Gamson, Z.F. (March 1987). Seven principles for good practice. **American Association Higher Education Bulletin**, 39:3-7.
- http://www.cte.usf.edu/bibs/active_learn/nurse/bib_nurse.html
- McKeachie, W.J. (1998). *Teaching tips: Strategies, research and theory for college and university teachers*. Houghton-Mifflin.

Subtopic 1: Active Learning Strategies
One Minute Paper

This is an effective technique for checking student understanding of and reaction to the course material. The instructor poses a question related to the module or course and asks the students to take **one minute** to respond and then submit their responses. Sample questions include:

- How do changes in neuroanatomy affect mental health?
- What is "beneficence"?
- What are three important principles in the teaching/learning process?
- What does an elevated CA 125 indicate to a post-menopausal woman?

One Minute papers can be sent to the instructor electronically (email or digital drop box) or posted in the course space on the web (discussion board or digital drop box). If students are required to post their papers to the online course, it is more recommended to assign a variety of questions to add interest. Students often complain that little is gained from reading multiples responses to the same question.

Another good use of the minute paper is to ask questions like, "What were the main points of this module?" Responses tell you whether or not the students are interpreting the material in the way you envisioned.

A variation of the One Minute paper is the "Muddiest Point" paper to allow students to identify concepts or materials that need more study or clarification. If submitted to the online instructor, points can be collated and posted by the instructor with clarification or with directions to the students to comment to each other.

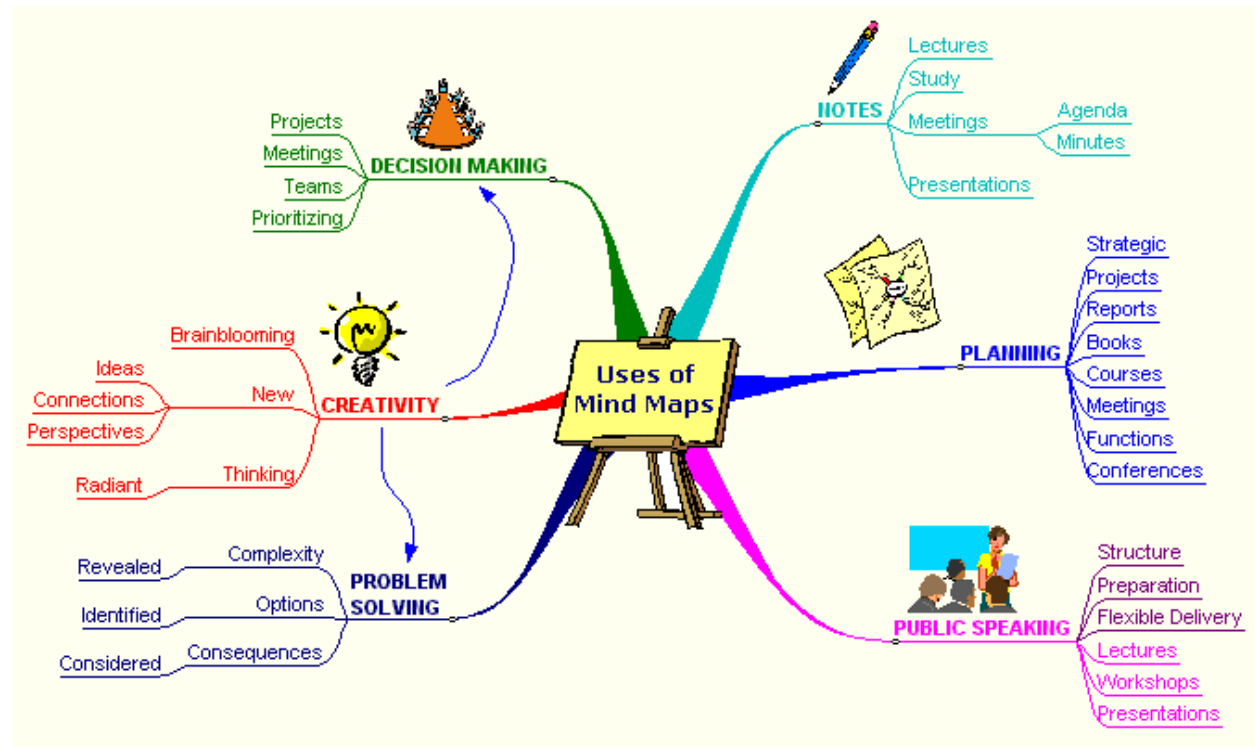
References:

- <http://chemistry.calstatela.edu/Chem%26BioChem/active/>

Subtopic 1: Active Learning Strategies Mind Mapping

A mind map (also called "concept map") uses words, lines, logic, colors, images, and even sounds to stimulate the brain. Mind mapping has four important characteristics:

- The subject is represented by a central image.
- The main themes of the subject radiate from the central image as main branches.
- Minor themes are linked to the main themes.
- All the branches are connected forming a nodal structure.



How to Mind Map

- Use just key words, or wherever possible images.
- Start from the center of the page and work out.
- Make the center a clear and strong visual image that depicts the general theme of the map.
- Create sub-centers for sub-themes.
- Put key words **on** lines. This reinforces structure of notes.
- Print rather than write in script. It makes them more readable and memorable. Lower case is more visually distinctive (and better remembered) than upper case.
- Use color to depict themes, associations and to make things stand out.
- Anything that **stands out** on the page will stand out in your mind.
- Think three-dimensionally.
- Use arrows, icons or other visual aids to show links between different elements.
- Don't get stuck in one area. If you dry up in one area go to another branch.
- Put ideas down as they occur, wherever they fit. Don't judge or hold back.

- Break boundaries. If you run out of space, don't start a new sheet; paste more paper onto the map. (Break the 8x11 mentality.)
- Be creative. Creativity aids memory.
- Get involved. Have fun.

More information and examples can be found in **The Brain Book** and Tony Buzan's **The Mind Map Book**.

<http://www.peterussell.com/Mindmaps/HowTo.html>

Advantages of Mind Maps

- Mind maps work the way the brain works -- which is not in nice neat lines.
- Memory is naturally associative, not linear. Any idea probably has thousands of links in your mind.
- Mind maps allow associations and links to be recorded and reinforced.
- The mind remembers key words and images, not sentences -- try recalling just one sentence from memory! Mind maps use just key words and key images, allowing a lot more information to be put on a page.
- Because mind maps are more visual and depict associations between key words, they are much easier to recall than linear notes. (For example, although you may not have studied it in depth, see how much of the Home Mind Map of this site you can recall in your mind's eye.)
- Starting from the center of the page rather than top-left corner allows you to work out in all directions.
- The organization of a mind map reflects the way your own brain organizes ideas.
- Mind maps are easy to review. Regular review reinforces memory. Best is to try reviewing in your imagination first, then go back and check on those areas that were hazy.
- We remember what stands out (where were you when John Lennon was shot?). Visual quality of mind maps allows you to make key points to stand out easily.

Disadvantages of traditional linear notes:

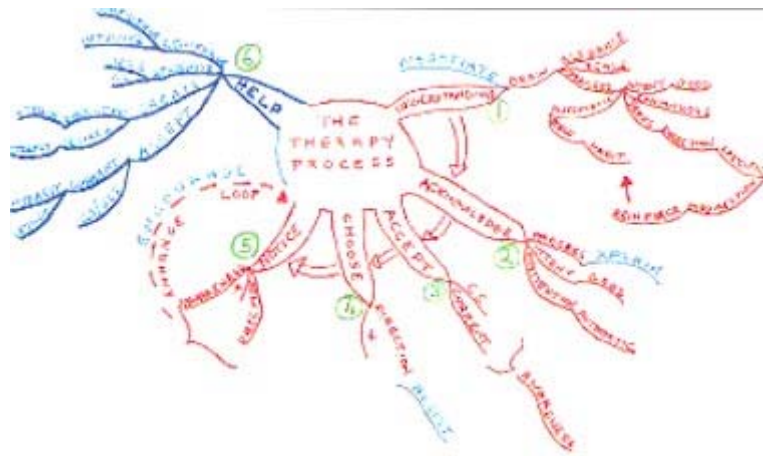
- Energy and time wasted writing down superfluous words.
- Other information may be missed while noting down one idea.
- Take longer to read and review.
- Associations and connections between key words and ideas not readily apparent.
- Attention wanders easily.
- Lack of color and other visual qualities handicap memory.
- Traditional notes aid forgetting not memory.

More information and examples can be found in **The Brain Book** and Tony Buzan's **The Mind Map Book**.

<http://www.peterussell.com/Mindmaps/Advantages.html>

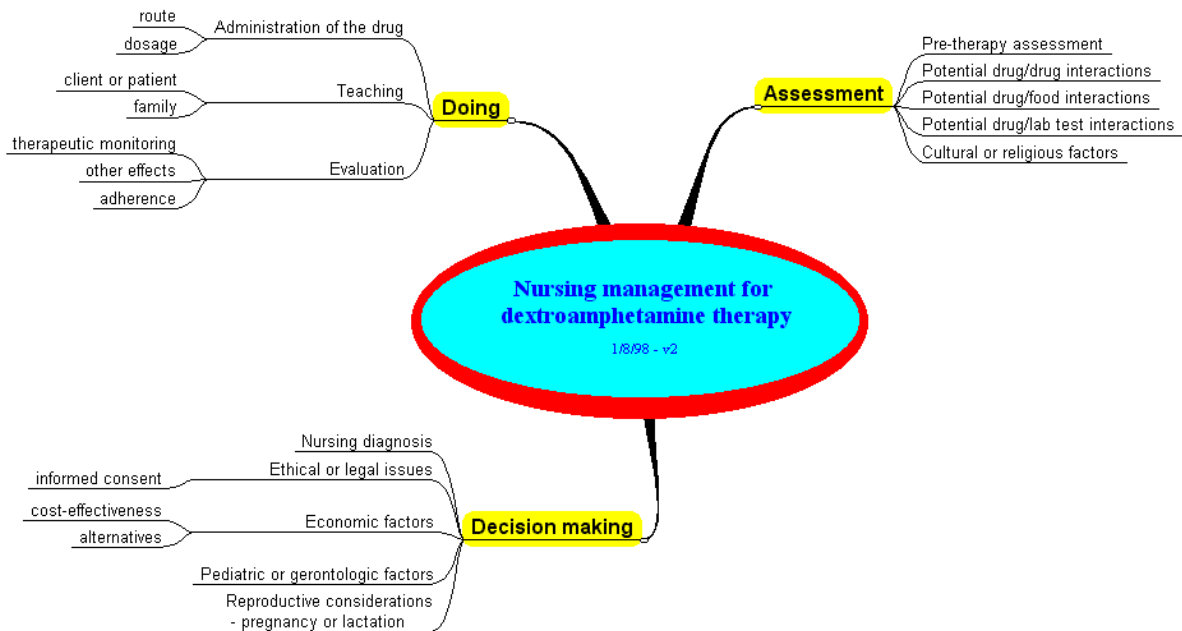
Possible mind mapping assignments include:

Example 1: Create a mind map of the therapy process.

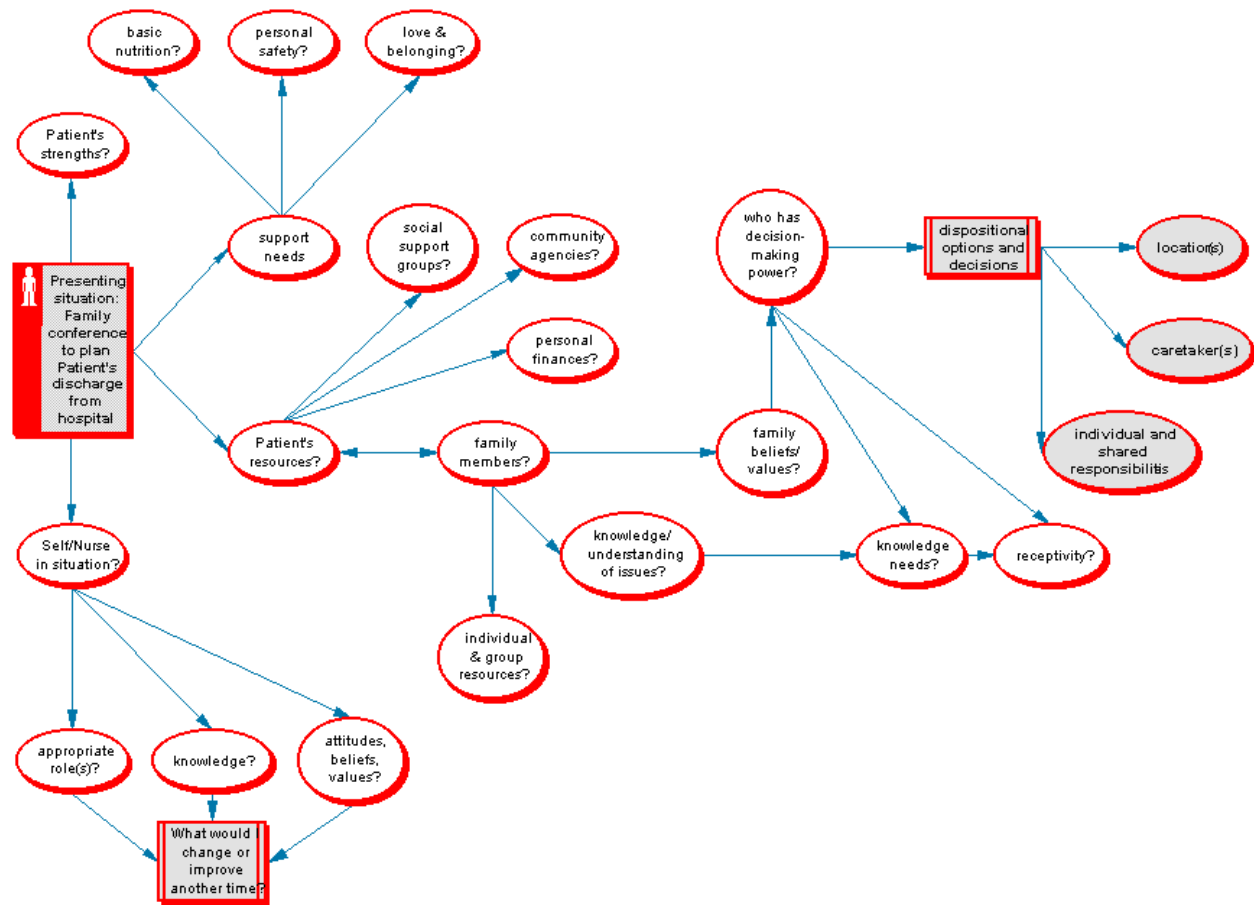


<http://www.positivehealth.com/permit/Articles/Mind%20Matters/wood16.htm>

Example 2: Map the process of nursing management for a patient on dextroamphetamine therapy.



Example 3: Develop a mind map depicting the discharge plan for a specific patient/family.



<http://www.cravener.net/articles/iblne.htm>

Mind maps can be placed in the student's portfolio, drawn and faxed to the instructor who can scan one or more to post online for others to preview , or created with word processing software using flow charts and drawing tools or using specialized software products (most offer free demos):

- MindMapper (<http://www.mindmapper.com/homepage.htm>)
- SmartDraw (<http://www.smartdraw.com/specials/flowchart.asp>)
- Concept Draw (<http://www.conceptdraw.com/en/products/mindmap/main.php>)
- SMART Ideas (<http://www.smarttech.com/products/smartideas/index.asp>)
- Inspiration (<http://www.inspiration.com/productinfo/Inspiration/index.cfm>)
- Knowledge Manager (<http://www.knowledgemanager.us/KM-KnowledgeManager-eng.htm>)

Subtopic 1: Active Learning Strategies
Fishbowl



A fishbowl is traditionally a classroom discussion group divided into two parts: the "inner circle" or fishbowl, consisting of four or five people who discuss a topic, and the "outer group," consisting of up to 20 people who observe. This strategy is effective in facilitating discussion and can be modified for use in the online classroom in a variety of ways.

1. The instructor assigns 4 or 5 students to the fish bowl (on the discussion board) to discuss a specific topic, answer a question or solve a problem.
2. The remaining students observe and comment on both the process and content of the discussion.
3. At a designated point, the instructor then selects a new group and new topic for the fish bowl.

or

1. Students are asked to submit one question concerning the course material in a specific module for the "fishbowl" (discussion board, digital drop box, email, etc.).
2. At a designated point, the instructor assigns questions to groups of 4-5 students for discussion while the remaining students observe and comment on both the process and content of the discussion.

Example:







The following sample module is in a beginning medical-surgical nursing course. One of the learning activities is the fish bowl.

RNSG 1431 - Principles of Clinical Decision Making Nursing Care of the Individual Experiencing Fluid and Electrolyte Imbalances

Module Objectives: 

1. Identify the distribution of water in the body.
2. Calculate fluid gain or loss.
3. Identify the major anions and cations in the fluid compartments of the body.
4. Define the terms related to body fluid chemistry.
5. Define the mechanisms controlling fluid and electrolyte movement.
6. Describe the forces creating fluid movement in capillaries.
7. Describe fluid movement between extracellular fluid and intracellular fluid.
8. Identify the role of each organ or gland involved in the regulation of water balance.
9. Discuss the relationship of sodium and volume imbalances.
10. Discuss signs and symptoms exhibited by a patient experiencing gains and losses of sodium and volume.

Learning Activities: 

	Review module objectives.
	Read: <ul style="list-style-type: none"> • Lewis et.al, Ch. 15. pp. 323-350.
	Complete the following exercises: <ul style="list-style-type: none"> • Review the terms on the vocabulary list. • Review handout on Laboratory Tests. • Use this handout to review fluid and electrolyte imbalances • Complete the case study. Compare your answers to the ones provided at the end of the case study.
	Submit your #1 question related to fluid and electrolytes to the digital drop box by 5 p.m. on Tuesday. The instructor will post fishbowl assignments by 8:00 a.m. on Friday.
	Review module objectives and check for knowledge gaps.
	Complete "Fluid Balance" quiz.