


# ACTIVE LEARNING

TAKING CHARGE OF YOUR EDUCATION BY USING STRATEGIES  
THAT ENGAGE YOU IN YOUR LEARNING...

# What is Active Learning?

- **Active learning** refers to techniques where students do more than simply listen to a lecture. Students are **DOING** something including discovering, processing and applying information.
- **Active learning comes from two basic assumptions:**
  - learning is, by nature, an **active** endeavour
  - people learn in different ways



**Active learning means that you are involved in higher-order thinking (analysis, synthesis, evaluation) and this is done by creating learning activities for yourself (e.g., reading, discussing, writing)**

**People generally  
remember...  
(learning activities)**

10% of what they read

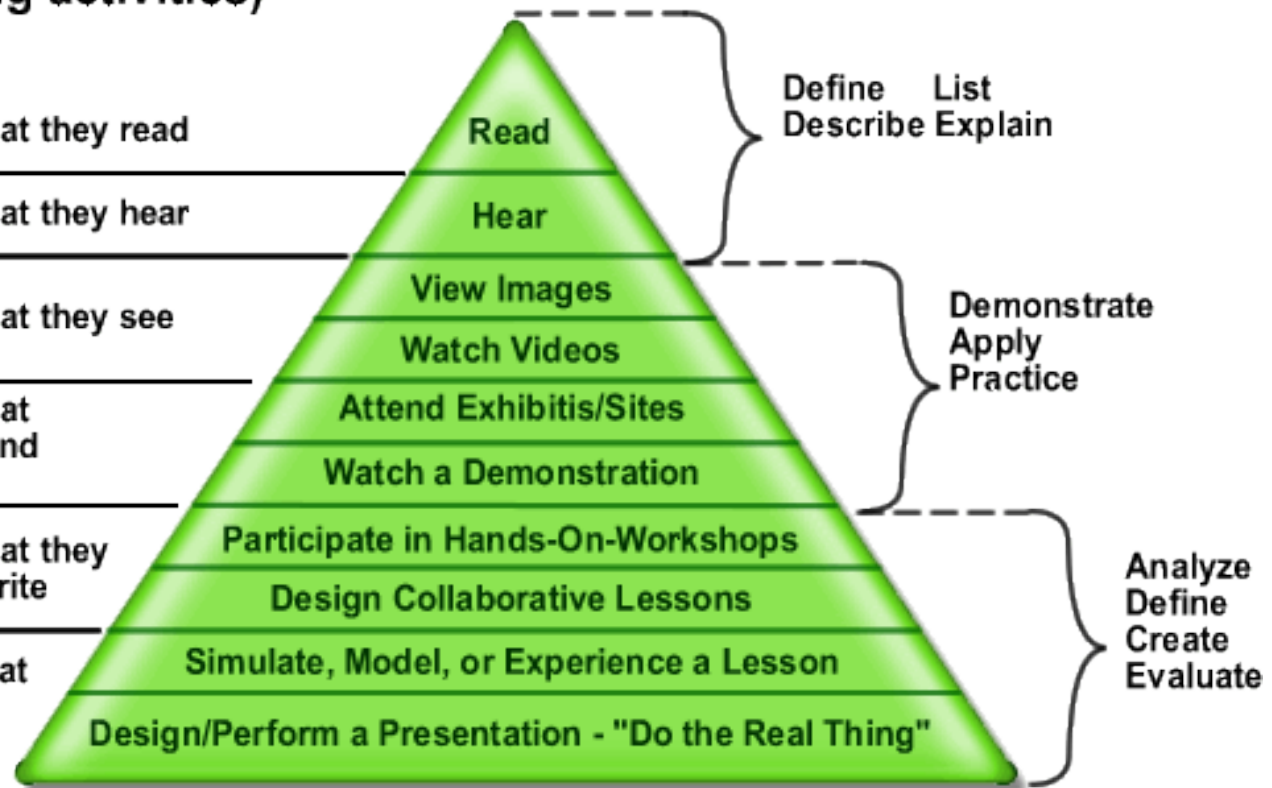
20% of what they hear

30% of what they see

50% of what  
they see and  
hear

70% of what they  
say and write

90% of what  
they do.



People generally  
remember...  
(learning activities)

People are able to...  
(learning outcomes)

10% of what they read

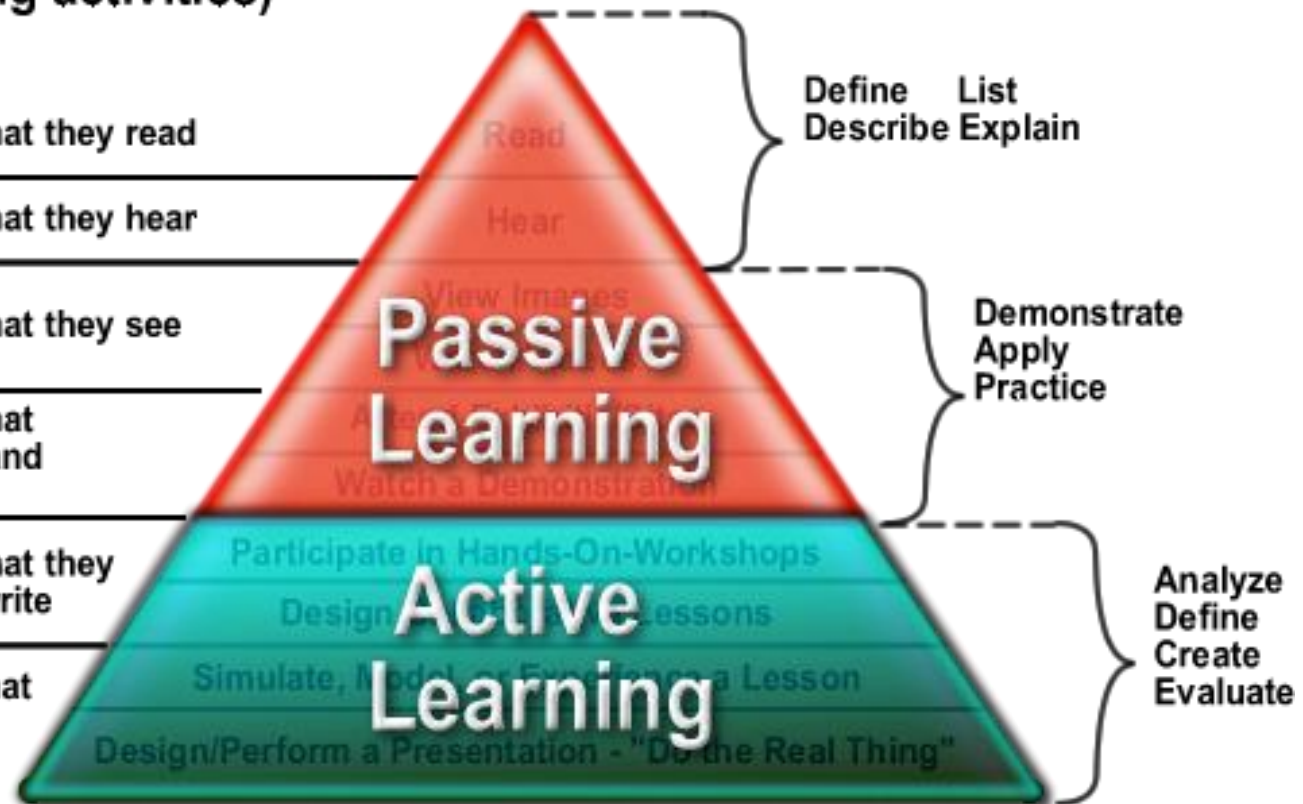
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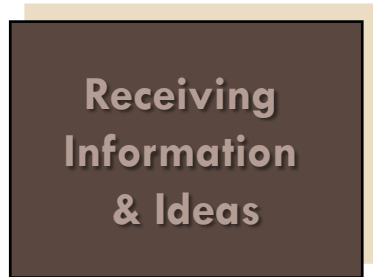
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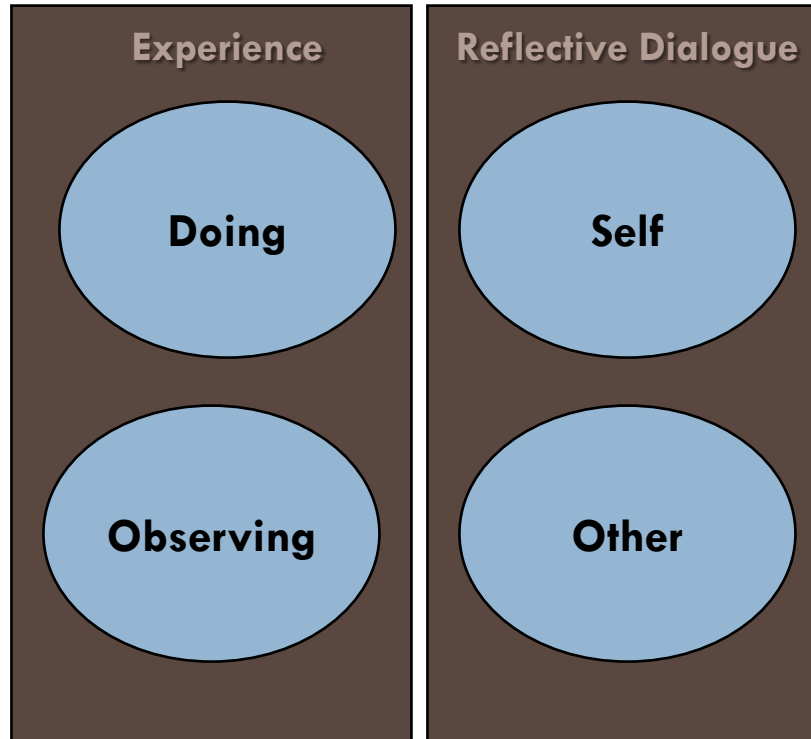


# Active vs Passive Learning

## Passive Learning

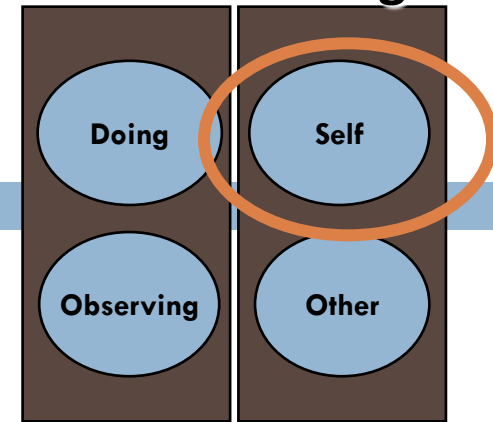


## Active Learning

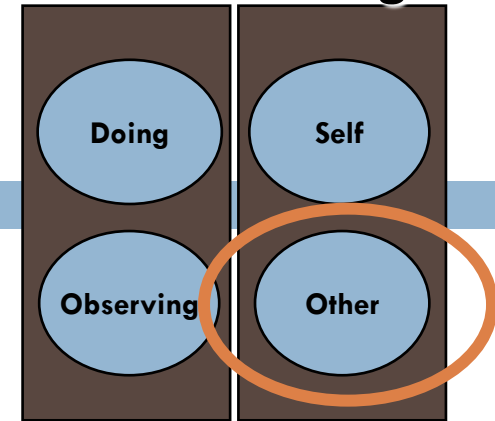


# Dialogue with Self:

## Active Learning



- This is what happens when a learner thinks reflectively about a topic
  - ▣ ask yourself what you think, what you feel about the topic, etc.
  - ▣ You can, on a small scale, to keep a journal for a course, or, on a larger scale, to develop a learning portfolio.
  - ▣ In either case, you could write about **what** you are learning, **how** you are learning, what role this knowledge or learning plays in your own life, how this makes you **feel**, opinions, etc.

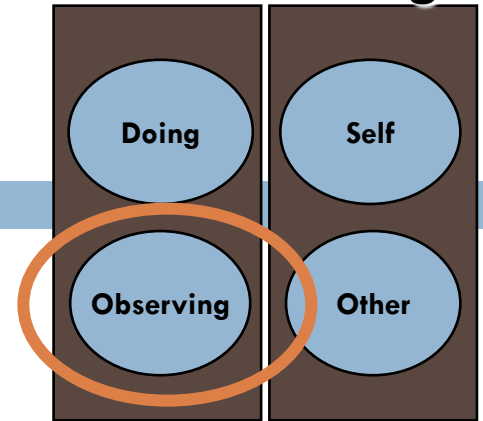


# Dialogue with Others:

- **This can and does come in many forms.**
  - ▣ In traditional teaching, when you read a textbook or listen to a lecture, you are "listening to" another person (teacher, book author); this can perhaps be viewed as "partial dialogue" but it is limited because there is no back-and-forth exchange.
  - ▣ A much more dynamic and active form of dialogue occurs in small group **discussion** on a topic, either in class or outside of class.
  - ▣ Whomever the dialogue is with, it might be done live, in writing or by email. **Participate in the discussion!**

# Observing:

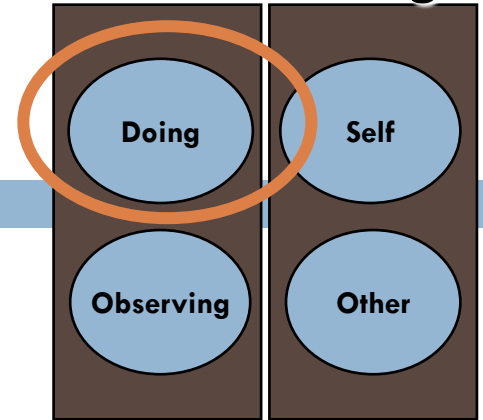
## Active Learning



- This occurs whenever a learner watches or listens to someone else "doing" something that is related to what they are learning about.
- This might be such things as observing one's teacher do something (e.g., "This is how I critique a novel."), listening to other professionals perform (e.g., musicians), or observing the phenomena being studied (natural, social or cultural)
- The act of observing may be "direct" or "vicarious."
  - A **direct** observation means the learner is observing the real action, directly
  - A **vicarious** observation is observing a simulation of the real action.

# Doing:

## Active Learning



- **This refers to any learning activity where the learner actually does something.**
  - ▣ design a reservoir dam (engineering)
  - ▣ conduct a high school band (music education)
  - ▣ design and/or conduct an experiment (natural and social sciences)
  - ▣ critique an argument or piece of writing (the humanities)
  - ▣ investigate local historical resources (history)
  - ▣ make an oral presentation (communication)



# **The SQ4R Method**

# The SQ4R Method

- **The SQ4R** method has been a proven way to sharpen study skills.
- **SQ4R** stands for the following:
  - **S**urvey
  - **Q**uestion
  - **R**ead
  - **R**espond
  - **R**ecord
  - **R**evue
- Take a moment now and write SQ4R down. It is a good slogan to commit to memory to carry out an effective study strategy.

# The SQ4R Method: **Survey**

- **Survey** - get the best overall picture of what you're going to study **BEFORE** you study it in any detail. It's like looking at a road map before going on a trip. If you don't know the territory, studying a map is the best way to begin.

# The SQ4R Method: Question

- **Question** - ask questions for learning. The important things to learn are usually answers to questions. Questions should lead to emphasis on the what, why, how, when, who and where of study content.
  - ▣ Ask yourself questions as you read or study. As you answer them, you will help to make sense of the material and remember it more easily because the process will make an impression on you.
  - ▣ Don't be afraid to write your questions in the margins of textbooks, on lecture notes, or wherever it makes sense.

# The SQ4R Method: Read

- **Read** - Reading is **NOT** running your eyes over a textbook.
  - When you read, read actively. Read to answer questions you have asked yourself or questions the instructor or author has asked.
  - Always be alert to **bold** or *italicized* print.
  - Also, when you read, be sure to read everything, including tables, graphs and illustrations. Often tables, graphs and illustrations can convey an idea more powerfully than written text.

# The SQ4R Method: Respond

- **Respond** - When you respond, you stop reading periodically to recall what you have read.
  - ▣ Try to recall main headings, important ideas of concepts presented in bold or italicized type, and what graphs charts or illustrations indicate.
  - ▣ Try to develop an overall concept of what you have read in your own words and thoughts.
  - ▣ Try to connect things you have just read to things you already know.
  - ▣ When you do this periodically, the chances are you will remember much more and be able to recall material for papers, essays and objective tests.

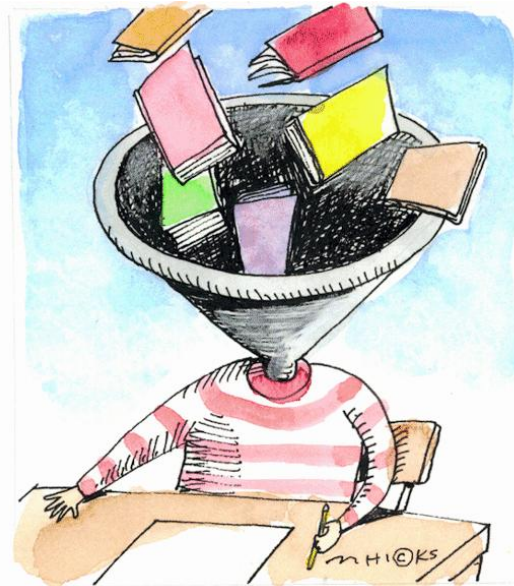
# The SQ4R Method: Record

- **Record** - Once you've understood the material and can summarize it in your own words, the next step is to record the information in some way.
  - ▣ Some common methods are to highlight and/or mark the text
  - ▣ or take notes (Cornell System)
  - ▣ or some combination of both.
  - ▣ It's critical to remember to read and understand the material **first**, and then go back and record.

# The SQ4R Method: Review

- **Review** - A review is a survey of what you have covered.
  - ▣ Reread with the idea that you are measuring what you have gained from the process.
  - ▣ During review, it's a good time to go over notes you have taken to help clarify points you may have missed or don't understand. The best time to review is when you have just finished studying something.
  - ▣ Don't wait until just before an examination to begin the review process. Before an examination, do a final review. If you manage your time, the final review can be thought of as a "fine-tuning" of your knowledge of the material.

# Active Learning Strategies



# One Minute Papers

- This is an opportunity to synthesize your knowledge and to ask unanswered questions.
  
- **Use a few minutes at the end of class to answer the following questions in writing:**
  - What was the most important thing I learned today?
  - What important question(s) remains unanswered?

**These questions generate and enhance your learning process and provide you with feedback on your understanding of the subject material.**

# Brainstorming

- At the end of class, quickly list verbally or in writing, all the concepts that you covered in this lecture.
- You can do this between and before tests, quizzes and exams, to check your memory of the learned concepts.
- This can also help to link together the concepts that you learn each class.

# Clear as Mud!

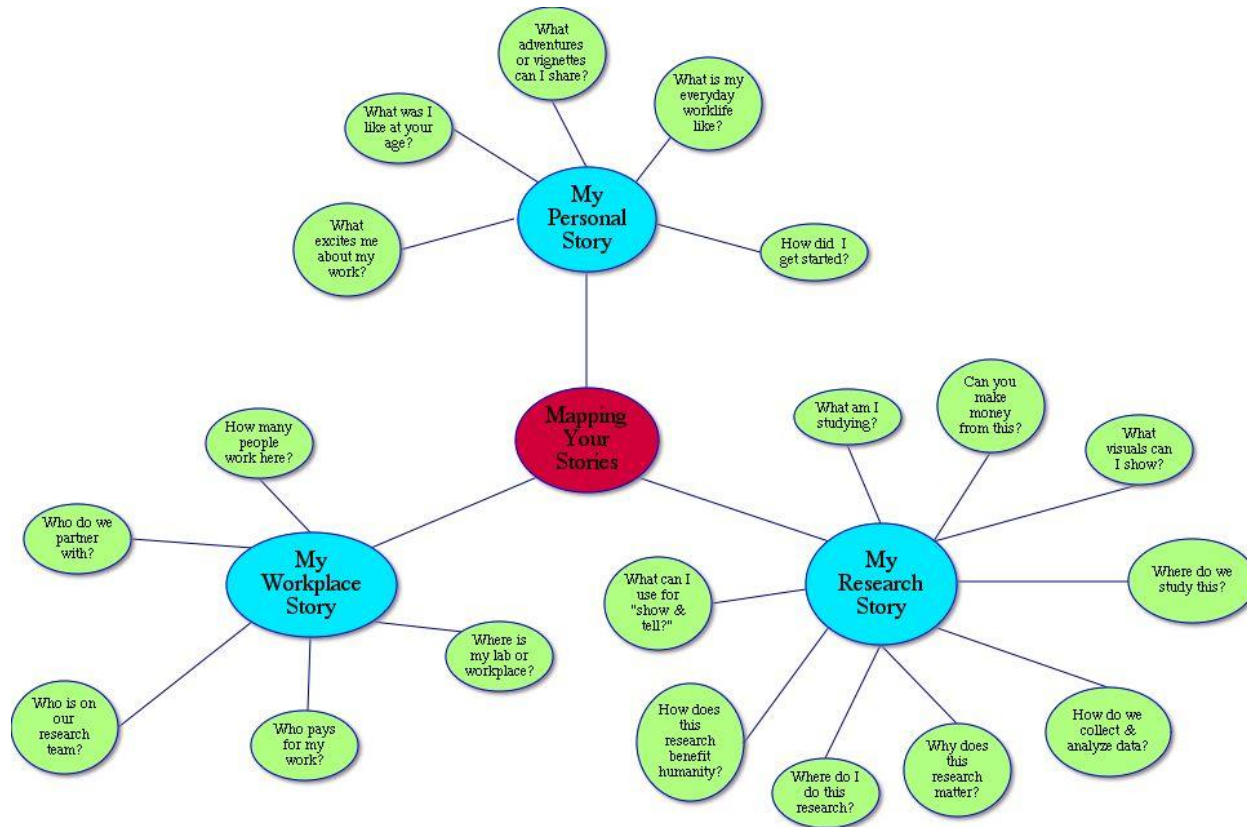
## Ask Yourself...

- "What was the "muddiest point" in today's lecture?"
- What was the "clearest" point" in today's lecture?

# Concept Mapping

- Here you create visual representations of models, ideas, and the relationships between concepts. You draw circles containing concepts and lines, with connecting phrases on the lines, between concepts.

# Concept Mapping





# Analyze Case Studies

**Case studies** use real-life stories that describe what happened to a community, family, school, or individual can prompt you to integrate classroom knowledge with knowledge of real-world situations, actions, and consequences.

- You can get this information from the following sources: credible web pages, films, books, real life examples, YouTube, etc.

# Generate Exam Questions

## **Pretend you are your professor...**

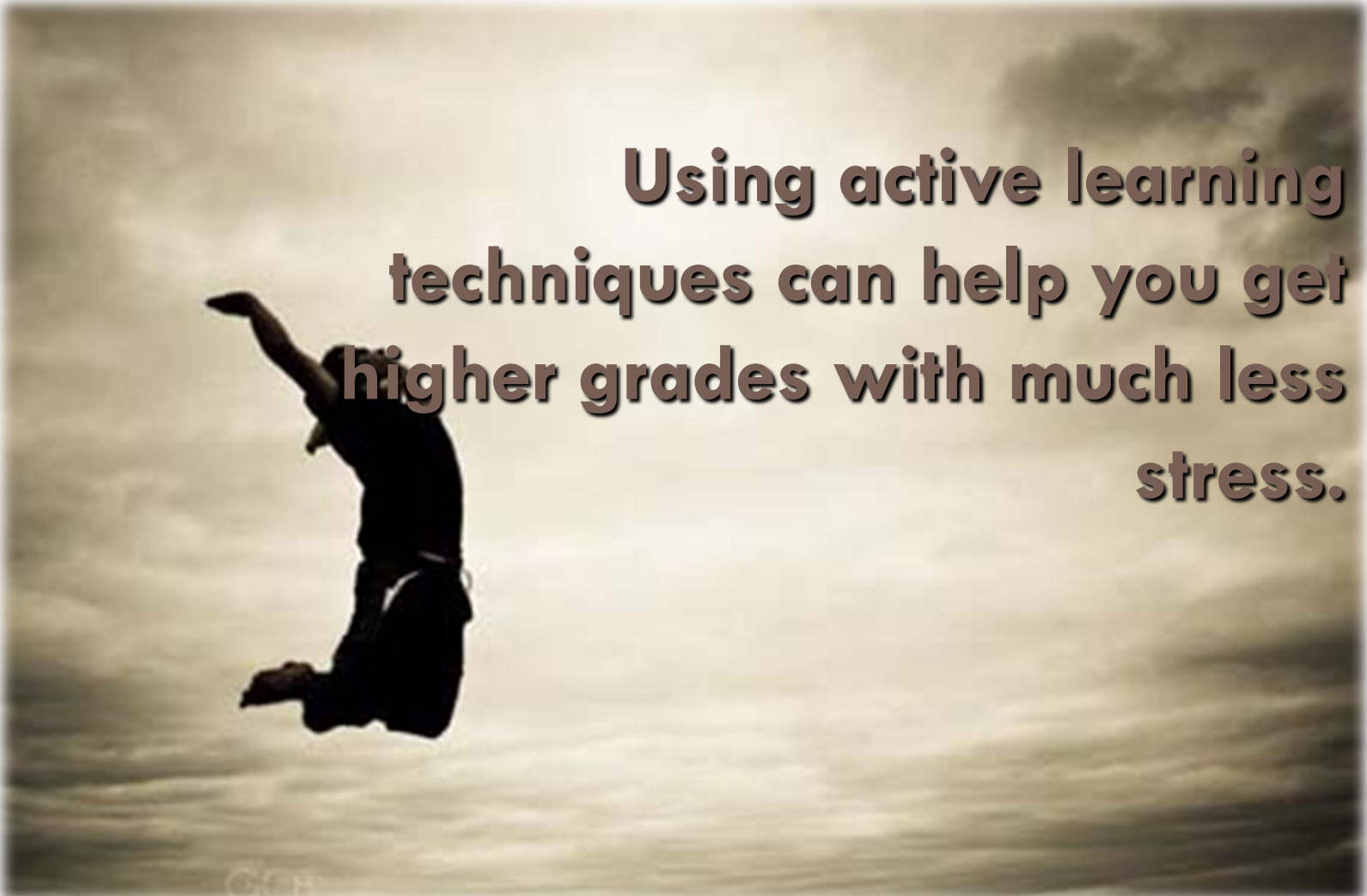
- ▣ Generate exam questions you think that they may ask. This can be used for review or for the actual exam.
- ▣ This technique helps you actively process material, gives you a better understanding of the difficulties of writing reliable and valid exam questions, helps you review material, and gives you practice for the exam.

# Student Debates

- These can be formal or informal, individual or group, graded or not, etc. Debates allow you the opportunity to take a thesis or position and gather data and logic to support that view, critically.
- Debates also give you experience with verbal presentations.

## **Create Games** related to the subject...

- ▣ This can easily increase your learning and participation.
- ▣ Games such as solving puzzles, pictionary, memory games, trivia games, etc.

A person is captured in mid-air, jumping or falling, against a backdrop of a cloudy sky. The person is silhouetted, with their arms and legs spread out. The text is overlaid on the right side of the image.

**Using active learning  
techniques can help you get  
higher grades with much less  
stress.**