November 21, 2024

Cincinnati Children's Educator Empowerment (C2E2) Series

From Theory to Practice:

Active Learning Strategies for Retention

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Next Cincinnati Children's Educator Empowerment (C2E2) Series Session

- Thursday, January 23, 2025 12p – 1p Tracy Stokes, MEd & Grace Shelby, PhD will present *The Power of Us: Using Storytelling to Promote Inclusive Learning*

- Celebrate the first Healthcare Continuing Education Professionals Day on January 24, 2025!

Engaging the Next Generation Learner: Evidence-Based Strategies for Joyful Learning Question 1

Key characteristics of the Next Gen Learner (age 20–44) include:

a. They have a shorter attention span
a. Their ability to personalize their learning experiences
b. Their decreased commitment to lifelong learning due to time constraints
c. Their lack of extrinsic motivation

Engaging the Next Generation Learner: Evidence-Based Strategies for Joyful Learning Answer 1

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Engaging the Next Generation Learner: Evidence-Based Strategies for Joyful Learning Question 2

The most impactful reason why learners can't recall new information:

a) The information was received too long ago
b) The information was too long
c) The information was too boring

Engaging the Next Generation Learner: Evidence-Based Strategies for Joyful Learning Answer 2

The most impactful reason why learners can't recall new information:

a) The information was received too long ago
b) The information was too long
c) The information was too boring

Active Learning Strategies for Retention Pre-Check Question 1

When presenting new information for one hour, the best time for learners to ask questions is:

a) During the first five minutes of the hour
b) Periodically throughout the hour
c) During the last five minutes of the hour

Active Learning Strategies for Retention Pre-Check Question 2

When drafting questions, the best memory retention answer option is:

a) Open ended
b) True/False
c) Multiple choice

Your Education Goals:

1. Describe the connection between active learning techniques and knowledge retention

2. Apply active learning techniques to design effective education

What is Active Learning?

any approach to instruction in which learners are asked to engage in the learning process

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Active Learning Definitions

- Higher-order thinking tasks
- Individual or group
- Range in complexity

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Active Learning Techniques (ALT) in this session

- Quiz
- Reflection
- Introductory Question
- Question & Answer
- Knowledge check
- Repetition
- Pre-conception check
- Small Group Discussion
- Large Group Discussion
- Commitment to Change
- Small group discussion
- Game-based learning
- Feedback
- Audience Response

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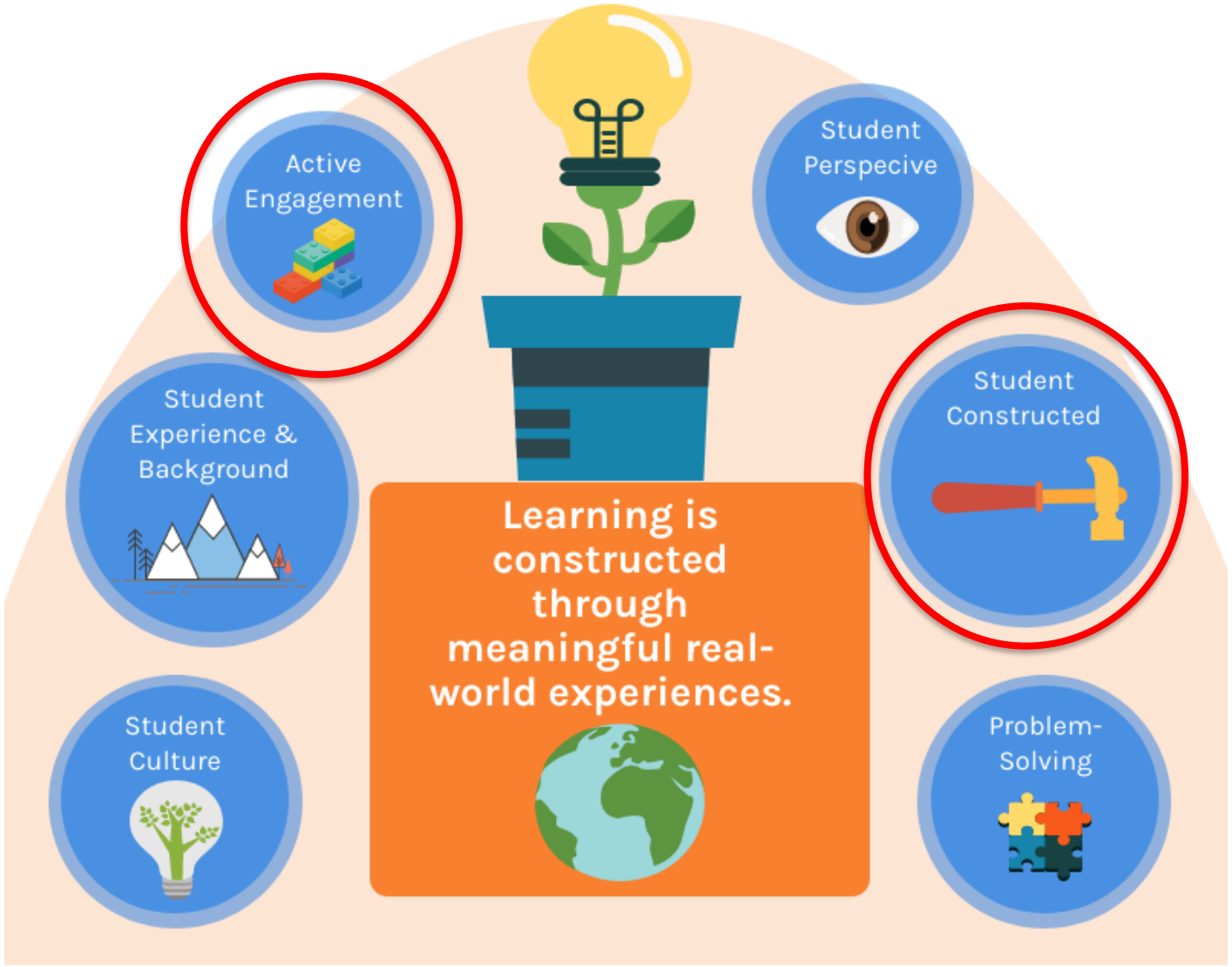
CONSTRUCTIVISM



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Why Active Learning?

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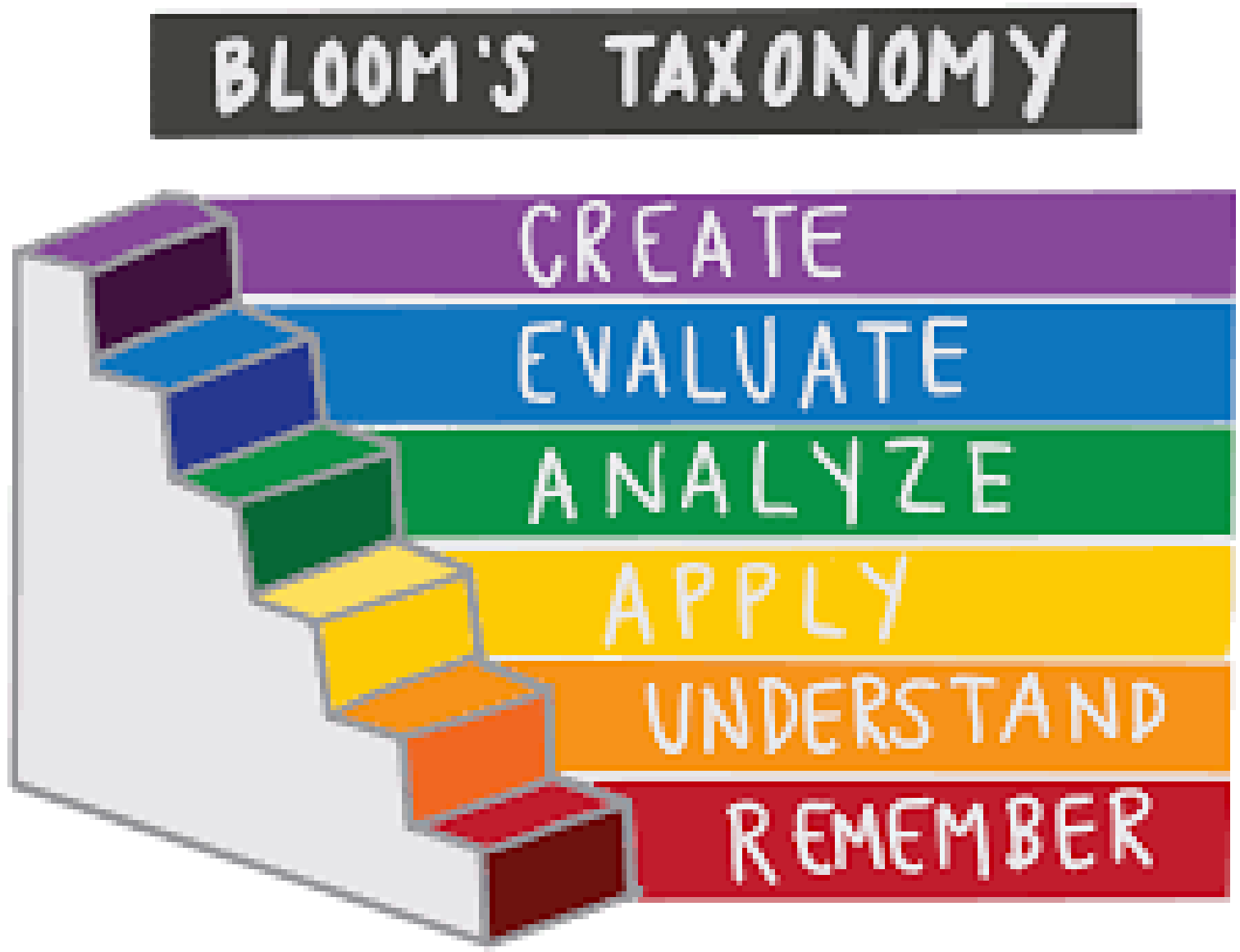

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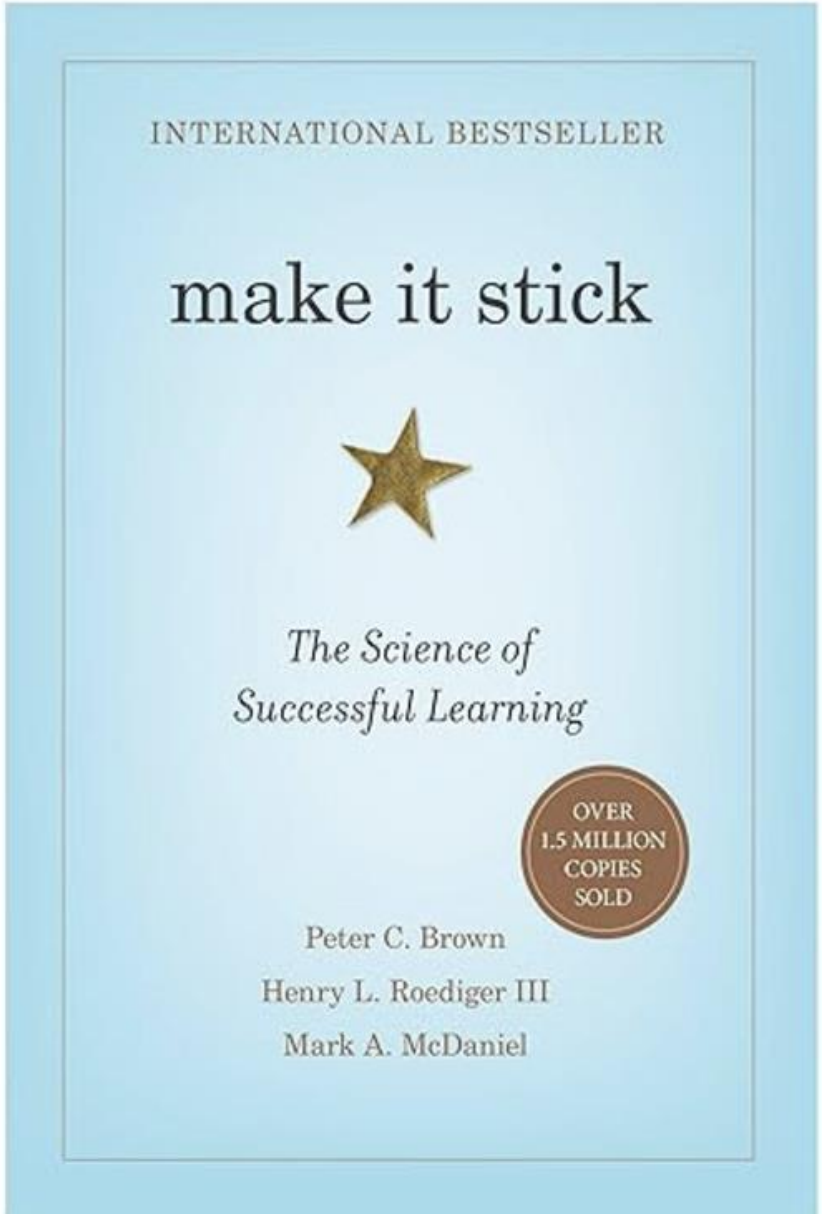
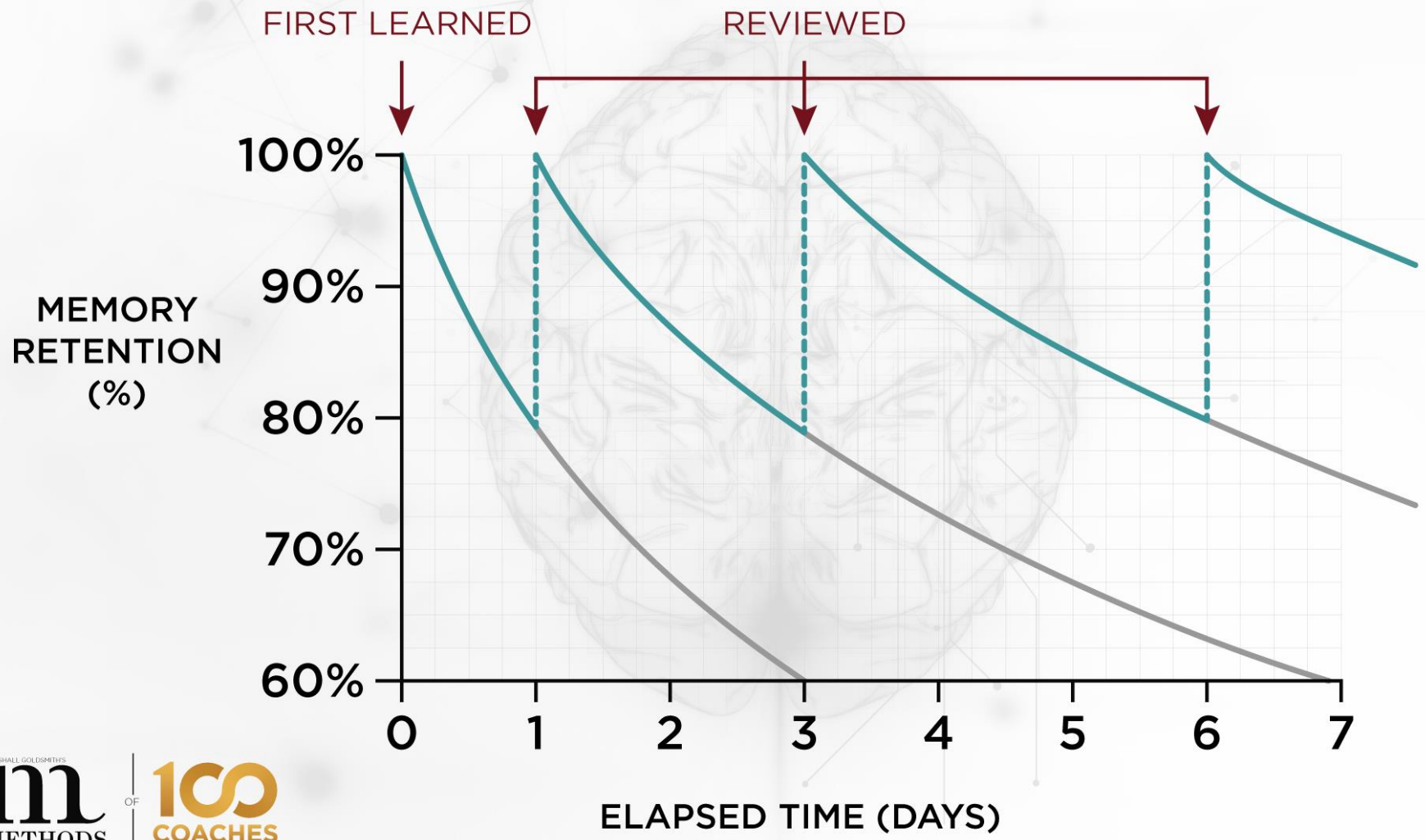


"Learning is deeper and more durable when it's effortful"

EBBINGHAUS FORGETTING CURVE

https://methodsof.com/blog/the-ebbinghaus-forgetting-curve/

EBBINGHAUS FORGETTING CURVE



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Active Learning Strategies for Retention Answer 1

When presenting new information for one hour, the best time for learners to ask questions is:

a) During the first five minutes of the hour
b) Periodically throughout the hour
c) During the last five minutes of the hour

Active Learning Strategies for Retention Post-Check Answer 2

When drafting quiz questions, the best memory retention answer option is:

a) Open ended
b) True/False
c) Multiple choice

Active Learning Technique Selection Considerations

- Learners
- Learning objectives
- Time allotment
- Group size
- Desired complexity

Active Learning Techniques

Writings – Increase memory retention by synthesizing information:

- **Commitment to Change Exercise:** Learners write a reflection on personal goals and values to document an obligation to improve personal practice behavior.
- **Concept Mapping:** Learners create a conceptual diagram that depicts suggested relationships between concepts to organize and structure knowledge.
- **Guided Notes:** Learners write key facts, concepts, and/or relationships.
- **Introductory Question:** Learners write down a case or questions they have on the topic before the presentation of new information.
- **Message Board:** Learners write comments about a particular issue or topic and reply to others feedback.
- **Small Paper Case:** Learners write about a case diagnosis and care management.
- **Table-Top-Exercise:** Learners write down next steps in an evolving case at various set points. Best practices at each step are discussed.
- **Writing Test Items:** Learners write test items that are evaluated by peers. Feedback is received from peers throughout the writing process.
- **Written Responses:** Learners write down what they have learned and indicate what practices they plan to maintain or change. Can incorporate walking exercise asking learners to physically move information to a specific location or use a whiteboard.
- **Artwork and Drawing:** Learners create artifacts that depict key facts, concepts, relationships and/or summarize new information.

Active Learning Techniques

Answers – Enhance memory retention through repeated information retrieval:

- **Audience Response System/Polling:** Learners respond to written or visual prompts via an electronic system or manual interaction (e.g., raised hands or answer cards).
- **Knowledge Check:** Learners are asked periodic questions and feedback is provided.
- **Misconception/Preconception Check:** Learners' prior knowledge is assessed to elicit information about prior ideas and beliefs in a content area. Focuses on uncovering prior beliefs that may hinder further learning.
- **Question & Answer:** Learners ask questions and receives answers during or after the presentation of new information.
- **Pre/Post/Quiz:** Learners assess performance against applicable criteria. Best answer to each question is shared.
- **Reflection:** Learners are asked thought-provoking questions and given one min. periodically throughout the education to summarize learnings.
- **Crowdsourcing:** Learners generate resource solutions that are shared back to the group.
- **Eye Spy:** Learners are shown an image or video and provide reactions, verbally or annotated, to what they see.
- **Strip Sequence:** Give Learners the steps in a process on strips of paper that are jumbled. Ask them to work together to reconstruct the proper sequence.

Active Learning Techniques

Solutions – Create long-term memories through thinking, perception, remembering, recognition, logical reasoning, imagining, problem-solving, sense of judgment and planning:

- **Game-Based Learning:** Learners play games to aid in achieving learning outcomes. Gameplay aids retention and application in the real world by providing mental stimulation and practical skill applications, as it encourages players to decide, choose, define priorities and/or solve problems.
- **Problem-Based Learning:** Learners solve an open-ended problem to encourage self-directed learning, critical-thinking, problem-solving, and teamwork skills.
- **Pro-Con Grid:** Learners consider the advantages and disadvantages of an identified issue, procedure, action, or decision. Promotes a deep level of thought by requiring interaction and encouraging the sharing of ideas.
- **Choose Your Own Adventure:** Learners choose different pathways to navigate an unfolding scenario to an outcome.
- **Good/Bad Example:** Learners compare different identified issues, procedures, actions, or decisions. Learners debrief on improvement opportunities and best practices.

Active Learning Techniques

Discussion – Improve long-term memory by actively providing explanations during a discussion:

- **Buzz Group:** Learners participate in a small group discussion responding to a specific prompt to obtain feedback and generate questions. Each small group reports the results of their discussion to a larger group.
- **Case Based Discussion:** Learners are presented with an organized case and asked a series of questions to reflect upon. Learners then share how they would approach a case at various stages. Case outcome is shared.
- **Debate:** Learners engage in a formal discussion on a particular topic in which learners put forward opposing arguments.
- **Muddiest Point:** Learners are asked to reflect and discuss the most difficult or confusing part of new information received.
- **Pyramiding:** Learners start in paired discussions, then move to slightly larger groups of 4 or 6, finally involving the entire group.
- **Small Group Discussion:** Learners are given a topic or idea to reflect upon an discuss in which everyone contributes many ideas.
- **Think-Pair-Share:** Learners form individual ideas then share with one other person.
- **Care to Share:** Provide learners with content then ask them to teach the information to another person.

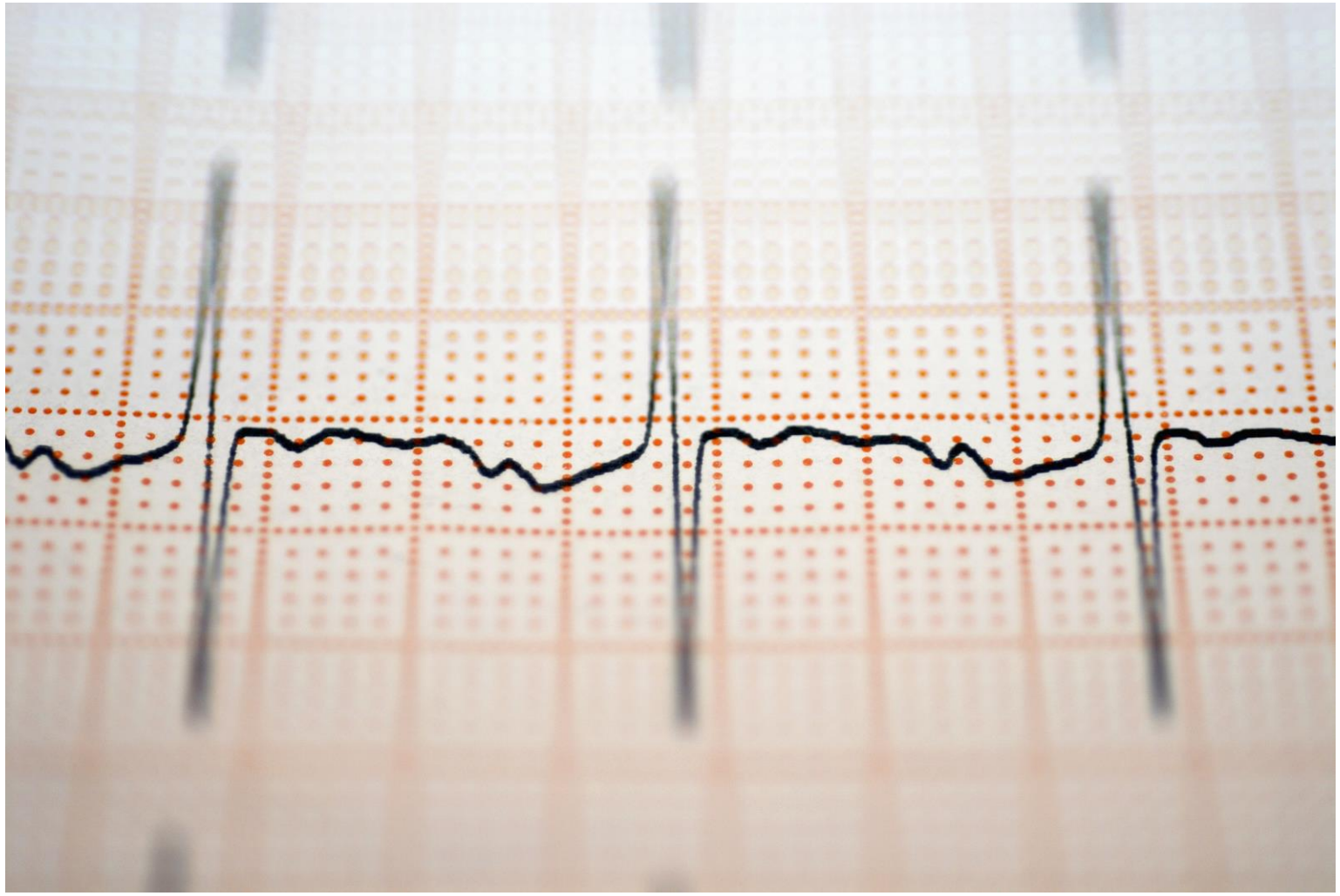
Active Learning Techniques

Simulation – Improve cognitive skills with a multi-task interface that provides simultaneous decision making, reasoning and maintenance of high levels of attention:

- **Role Playing:** Learners perform first-person roles in a safe and supportive environment. Could be conducted with other learners, standardized patients and/or paid actors.
- **Storytelling:** Learners use their imagination to reveal the elements and images of a story.
- **Three-Step Interview:** Learners are divided into groups of three and rotate through the roles of interviewer, interviewee, and note taker on a topic.
- **Virtual Reality:** Learner's work through improvised scenarios which can vary in complexity from the use of low-tech models to high-fidelity manikin or standardized patients.
- **Hands-on**: Imitate a situation or process which mimics real-world problems or events that can be used to practice a new skill and/or procedure.

Your turn…Clinical Case

Report Out 1



Non-Clinical Case

Report Out 2

Take-Home

- AL techniques work because they require effort
- Effortful learning is deeper and longer lasting
- Spaced retrieval is crucial for long-term memory retention
- Choose from a large menu of AL techniques depending on the learning objective

References/Suggested Reading

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- Phillips JM. Strategies for active learning in online continuing education. J Contin Educ Nursing. 2005;36(2):77-83

Commitment to Change

Which new active learning technique do you plan to try first and why?

Please Provide Session Feedback

Thank You!

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