

Active vs Passive Learning In Clinical Setting: *Steps for Success*



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Title

Objectives

At the end of the presentation, the participant will be able to:

- 1) Discuss the difference between active and passive learning.
- 2) Identify the settings where passive and active learning are advantageous.
- 3) Discuss the importance of active learning in a clinical training setting.

Disclosures



I have no financial conflicts
of interest to disclose

I will not be discussing off-
label medication use

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Learning

“Acquiring knowledge and skills and having them readily available from memory so you can make sense of future problems and opportunities.” (*Make It Stick: The Science of Successful Learning* by Peter C. Brown, Henry L. Roediger III, Mark A. McDaniel)

“A persisting change in human performance or performance potential...[which] must come about as a result of the learner’s experience and interaction with the world.”
(*Psychology of Learning for Instruction* by M. Driscoll)

Learning

Learning

"Learning involves strengthening correct responses and weakening incorrect responses. Learning involves adding new information to your memory. Learning involves making sense of the presented material by attending to relevant information, mentally reorganizing it, and connecting it with what you already know."

(eLearning and the Science of Instruction by Ruth C. Clark and Richard E. Mayer)

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Learning

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Passive Learning

Students receive information from the instructor and internalize it

Examples:

- Lecture
- Podcast
- Modeled learning
- Direct instructions

Advantages

Disadvantages

Advantages

- Exposure to new material
- Better control of the classroom by instructor
- More structured classroom environment
- Presentation of a large amount of material in short amount of time
- More structured engagement from participants
- Able to clarify course materials presented
- Instructor and learner can be prepared in advance for material
- Learners absorb information on their own terms
- Less distractions

Passive Learning

Students receive information from the instructor and internalize it

Examples:

Lecture
Podcast
Modeled learning
Direct instructions

Advantages

Disadvantages

Disadvantages

- Teacher centered and not student centered
- Not great for real world situations
- Less back and forth communication
- Less analysis of knowledge or skills
- One-dimensional and perceived as boring
- Ignores student's opinions and contributions
- Less conducive environment for student's questions
- Encourages memorization versus critical thinking
- Relies on instructors speaking and presentation skills

Passive Learning

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Active Learning

Students are actively or experientially are involved in the learning process

Examples:

- Discussion ★
- Case studies
- Debates
- Peer teaching ★
- Games
- Group projects
- Asking questions ★
- Connect maps

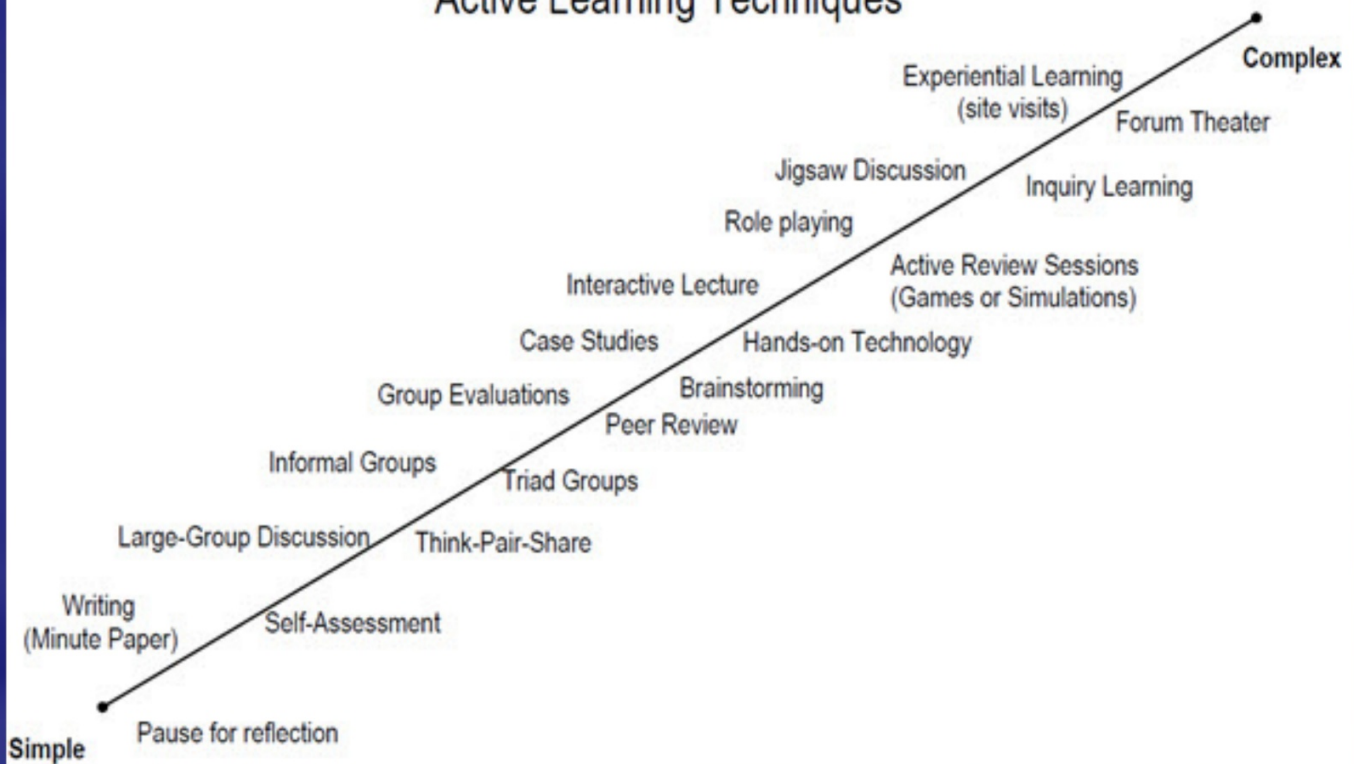
Advantages

- Learner is constantly involved
- Learner is center of the process
- Reinforces important material, concepts & skills
- Learner gets more frequent & immediate feedback
- Opportunity to think about, talk about and process material
- Improves communication skills
- Promotes collaboration
- Enhances critical thinking skills
- Enhances synthesis, analysis, and evaluation

Disadvantages

- Discourages listening to elders and teachers
- Distractions if not supervised properly
- Requires memorization
- Time consuming
- Peer reviews can be harsh and discouraging
- Learners may be resistant to participating
- Instructor may not be comfortable with material

Active Learning Techniques



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NAR I



NAR III

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Clinical Trial > Adv Health Sci Educ Theory Pract. 2004;9(1):15-27.

doi: 10.1023/B:AHSE.0000012213.62043.45.

A controlled trial of active versus passive learning strategies in a large group setting

Paul Haidet ¹, Robert O Morgan, Kimberly O'Malley, Betty Jeanne Moran, Boyd F Richards

Interventions: We randomly assigned residents to two groups. One group received a didactic lecture on effective use of diagnostic tests; during this session, the teacher spent a full hour delivering content. The other group received the same content in a session structured to foster resident-to-resident interactions. In the latter session, the teacher spent only 30 minutes directly delivering content to residents.

Conclusions: We reduced the amount of time spent in teacher-driven content delivery by 50 percent and covered the same amount of content with no detrimental effects on knowledge acquisition or attitude enhancement. Teaching strategies that foster learner-to-learner interactions will lead to more active engagement among learners, however, these learners may value the session less. Further research is needed to explore learner perceptions of the teaching process and other outcomes of active learning in medical education.

Haidet, P., Morgan, R. O., O'Malley, K., Moran, B. J., & Richards, B. F. (2004). A controlled trial of active versus passive learning strategies in a large group setting. *Advances in health sciences education : theory and practice*, 9(1), 15–27. <https://doi.org/10.1023/B:AHSE.0000012213.62043.45>

Controlled Clinical Trial > Nurse Educ Pract. 2021 Nov:57:103256.

doi: 10.1016/j.nepr.2021.103256. Epub 2021 Nov 13.

Comparative educational outcomes of an active versus passive learning continuing professional development activity on self-management support for respiratory educators: A non-randomized controlled mixed-methods study

Myriam Gagné ¹, Christine Hamel ², Sophie Lauzier ³, Sara-Edith Penney ⁴, Jean Bourbeau ⁵, Jocelyne Moisan ⁶, Louis-Philippe Boulet ⁷

Conclusions: Our results show that an active learning continuing professional development activity on self-management support could help educators to better apply knowledge and appears to engage them in a process of reflection on action.

Gagné, M., Hamel, C., Lauzier, S., Penney, S. E., Bourbeau, J., Moisan, J., & Boulet, L. P. (2021). Comparative educational outcomes of an active versus passive learning continuing professional development activity on self-management support for respiratory educators: A non-randomized controlled mixed-methods study. *Nurse education in practice*, 57, 103256. <https://doi.org/10.1016/j.nepr.2021.103256>

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Passive Learning



Active Learning

Skills

- Anesthesia machine checkoff
- Preoperative assessment
- Intubation
- Arterial line placement
- Regional anesthesia
- Central venous line placement
- Case management
- Postoperative assessment

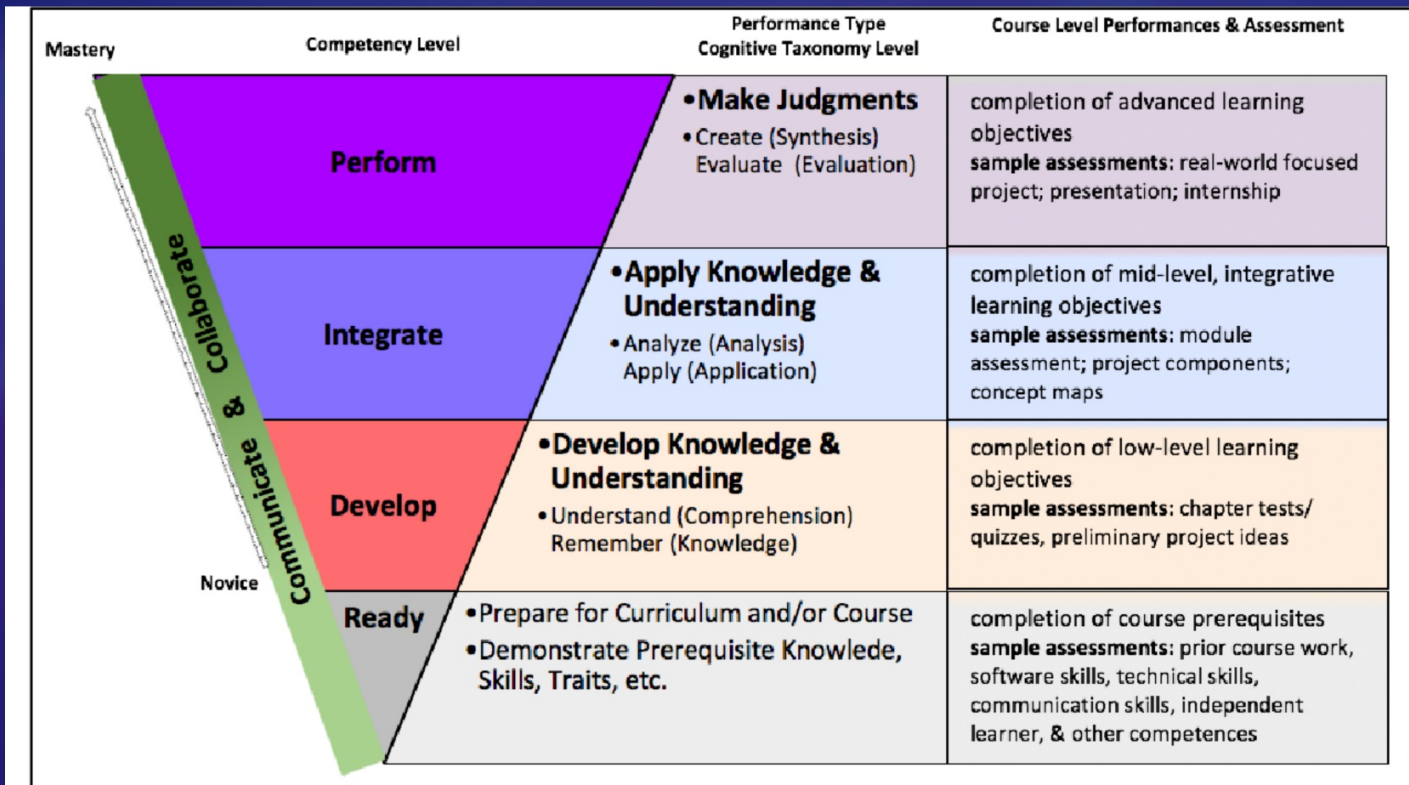
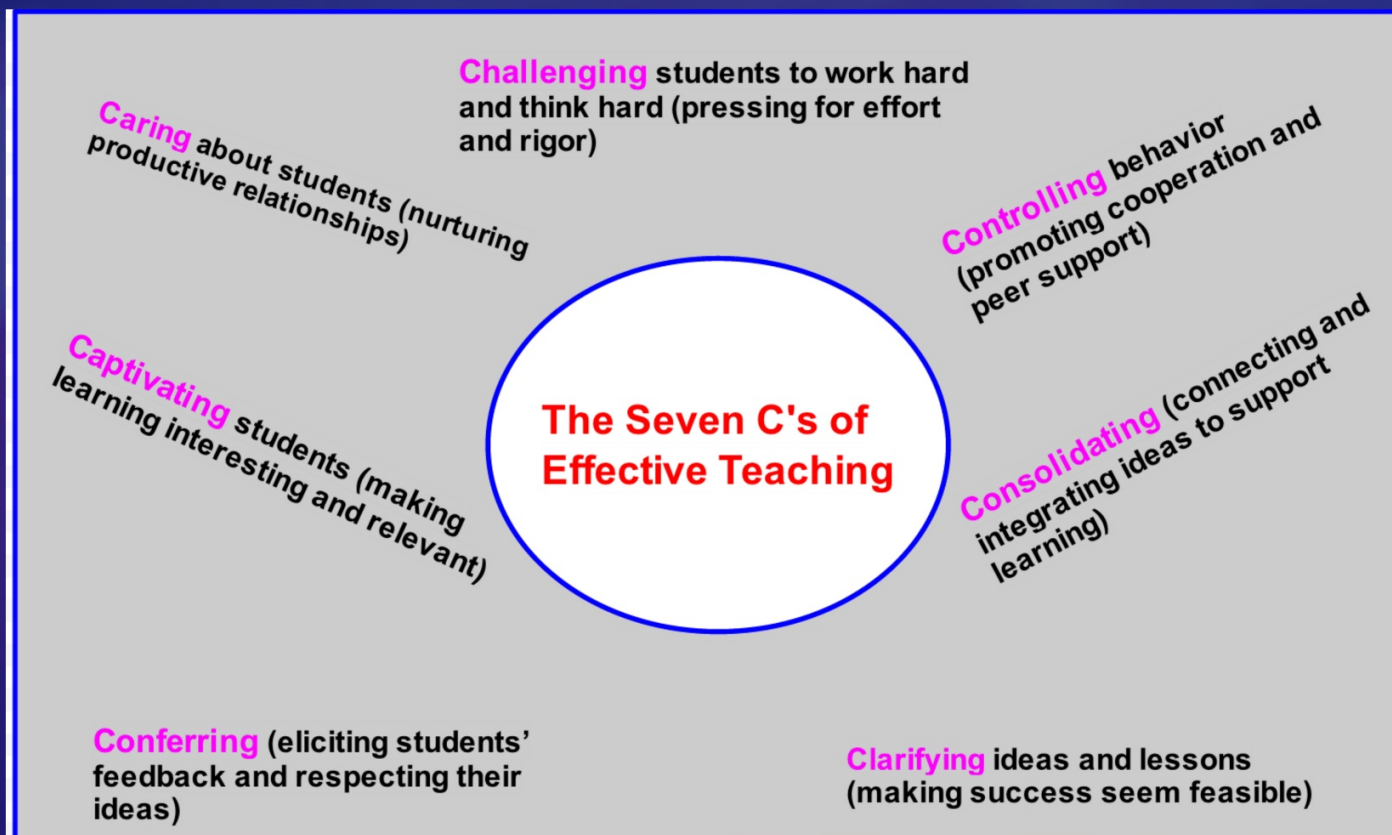
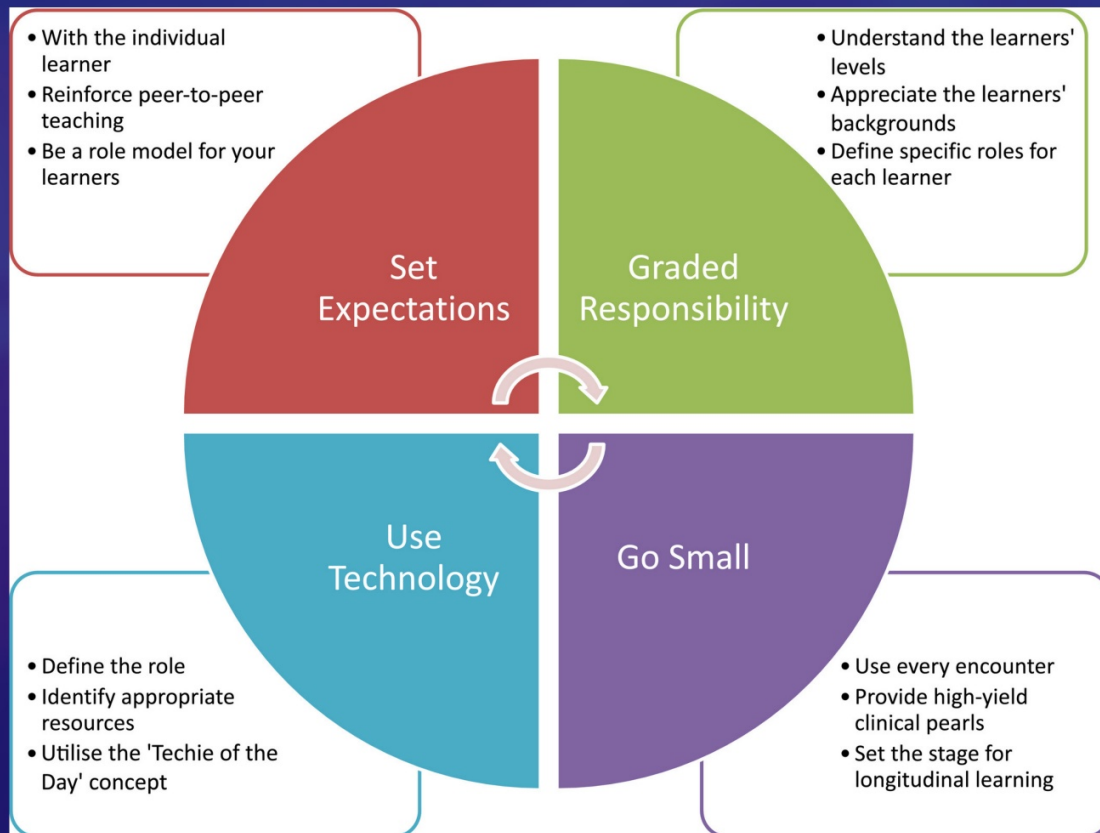


Figure 4. Author's Ready-Develop-Integrate-Model (partial model shown)



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Thank you!

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