



INTEGRATING ACTIVE LEARNING

What is Active or Interactive Learning?

Active or interactive learning: the active engagement of the learner in the learning process. This can mean engagement with others as in interactive activities or engagement with material as in reading, writing, formulating questions and responses to questions. Most educators agree that active learning is key to effective continuing education. Often an assumption is made that active learning therefore necessitates learning in small groups. Actually the key is in the word active; the size of the group is not as crucial as we might suppose for the purpose of knowledge gain and retention. It may have a greater impact on change in skill and attitude.

Why is it Important?

“Education is the art of the utilization of knowledge. This is an art very difficult to impart. “
~ Alfred North Whitehead

What we know about learning is that:

Learning is primarily the way in which people construct meaning
in their personal and shared organizational lives.”
~ Victoria Marsick 1987

We are constantly changing, adjusting and rearranging meaning. What we know now about learning is that no matter whether it is conducted alone or in groups, informally or formally, by reading, by listening, by discussing or practicing – it is an internal interactive event. It is never passive. New information does not reside in empty spaces in the brain but interacts with similar material that is already there.

It might be helpful to think of the mind is like an organism. As such, it constructs its own meaning through the creation of interconnections. The mind constantly constructs and reconstructs its own meaning and thus becomes more of a process than a thing. Learning therefore is active and implies change. The model learner becomes an active creator of new patterns and meaning. Perhaps Plutarch had it right all those years ago when he claimed, “The mind is a fire to be kindled, not a vessel to be filled”.

Given learning is not a passive activity, people learn in different ways and so being able to interact is more important to some than to others. However, research has shown that interaction with colleagues is an essential aspect of adopting new information into practice. Professionals rarely make any changes in practice without consulting with other professionals. Colleagues validate information presented through journals or CPD courses through talking about their own practice situations. Talking to colleagues stimulates thinking that does not normally occur when we are on our own in our own minds.

Questions? Comments? Suggestions? Contact one of our Educational Consultants at quicktips@utoronto.ca

INTEGRATING ACTIVE LEARNING

In order to receive accreditation from many CPD organizations the person responsible for educational planning must demonstrate the program requiring accreditation devotes at least 25% of the allotted time to interaction. This mandate is based on comprehension of how learning is solidified and carried to practice as well as knowledge of what is most likely to enhance both attention and retention.

We retain:

- 10% of what we read
- 20% of what we hear
- 30% of what we read and hear
- 50% of what we hear and see
- 70% of what we say ourselves
- 90% of what we do ourselves

Or as the ancient proverb states:

I hear... I forget

I see... and I remember

I do... and I understand

“Teaching without the accompanying experience is like filling a lamp with water – something has been poured in, but the result is not illuminating.”

~ William James

Learning Categories

Learning can be categorized into different domains – the most easily understood and most commonly used, are the domains of Knowledge, Skill and Attitude. When choosing methods it is important to match the method to the relevant domain

	What is it?	Methods Associated
Knowledge	The need to internalize information, provide theory to help facilitate application of learning and to widen horizons. “I understand.”	<ul style="list-style-type: none">• Lecture, mini-lecture• Panel• Debate• Books, journals, reading• Case studies• Self-learning modules• Journal club

Questions? Comments? Suggestions? Contact one of our Educational Consultants at quicktips@utoronto.ca

INTEGRATING ACTIVE LEARNING

	What is it?	Methods Associated
Skill	The need to incorporate new ways of performing. “I can do something differently.”	<ul style="list-style-type: none"> • Demonstration, return demonstration • Rehearsal • See one, do one, teach one • Puzzles, games • Simulation, role play
Attitude	The need to adopt new, or change existing beliefs or values. “What I feel or believe about something.”	<ul style="list-style-type: none"> • Role play • Video feedback • Small group discussion • Case studies • Problem-solving • Reflective exercise such as sentence completion “An effective leader is a person who...”

Active learning requires planning – it is important to ask:

1. In choosing a technique – ask what do I want them to do?
2. What is the purpose of the chosen activity? Knowledge, skills, attitude or practice?
3. Given the domain, which method is most appropriate?
4. How much time do I have?
5. Getting down to brass tacks - What are the precise instructions I need to give to the learner?
6. What physical set up is required if any?

Useful Methods and Techniques for Increasing Interactive Learning in Lectures

Techniques to promote interactive lecturing: practice change, you may choose to use verbs in the knowledge, skill, and/or attitude domains.

Questioning the audience through	<ul style="list-style-type: none"> • Straightforward questions • Rhetorical questions • Brainstorming • Surveying the audience/taking a vote • Pop (meaning surprise) quiz
----------------------------------	---

Questions? Comments? Suggestions? Contact one of our Educational Consultants at quicktips@utoronto.ca

© Continuing Professional Development, Faculty of Medicine, University of Toronto, 2016. May be reproduced for educational purposes without the express written permission by the owner with explicit credit given to the owner of the intellectual property.

QUICK TIPS

INTEGRATING ACTIVE LEARNING

Breaking the session into small groups	<ul style="list-style-type: none"> • Think. Pair-share • Buzz groups • Pyramid groups • Helping trios
Using audience responses	<p>For more detailed information see the Quick Tips on the use of ARS</p> <ul style="list-style-type: none"> • Quizzes • Touch pad technology – i-clickers, web-based polling • Voting
Presenting a case	<ul style="list-style-type: none"> • Live interviews • Written cases • Videotaped vignettes • Incremental cases • Audience brings in own cases
Using written materials	<ul style="list-style-type: none"> • Handouts and lecture notes • Diagrams and figures • Study guides • Selected readings
Writing	<ul style="list-style-type: none"> • One minute paper • Pop quiz
Flipped classroom	<ul style="list-style-type: none"> • Print, audio/video-based material distributed prior to the lecture; use time in class to apply abstract knowledge.
Debate and panels	
Role play and simulations	<ul style="list-style-type: none"> • Standardized patients • Task-trainers • High fidelity simulators • Virtual online
Break into “chunks”	<ul style="list-style-type: none"> • E.g. Ten minute presentation/lecture followed by a question period.

Please see attached for samples of interactive designs for a few different CPD events including at least one that is IP.

Questions? Comments? Suggestions? Contact one of our Educational Consultants at quicktips@utoronto.ca

© Continuing Professional Development, Faculty of Medicine, University of Toronto, 2016. May be reproduced for educational purposes without the express written permission by the owner with explicit credit given to the owner of the intellectual property.

References

Akl EA, Sackett K, Pretorius R, Erdley S, Bhoopathi PS, Mustafa R, Schünemann HJ. Educational games for health professionals. *Cochrane Database Syst Rev* 2008 Jan 23;(1):CD006411. Abstract

Cantillon P. Teaching large groups. *BMJ* 2003; 326:437-440

Casebeer L, Centor RM, Kristofco RE. Learning in large and small groups. In: The Continuing Professional Development of Physicians: From Research to Practice. Davis D, Barnes BE, Fox R (eds). Chicago: *American Medical Association*, 2003.

Jaques, D. ABC's of Learning and Teaching in Medicine: Teaching small groups. *BMJ* 2003; 326:492-494.

Premkumar K, Coupal C. Rules of engagement- 12 tips for successful use of “clickers” in the classroom. *Medical Teacher* 2008; 30:146-149.

Steinert Y, Snell LS. Interactive lecturing: strategies for increasing participation in large group presentations. *Medical Teacher* 1999; 21:37-42

Tiberius R and Silver I. Guidelines for conducting workshops and seminars that actively engage the participants. Department of Psychiatry, University of Toronto, 2001.