



Choosing Instructional Methods and Integrating Active Learning

Choosing Instructional Methods - Part 1

Choosing instructional methods that are in alignment with identified learning needs and intended outcomes (objectives) will help guarantee your CPD program’s effectiveness and ability to enable practice change. One of the simplest and most logical ways in which to choose appropriate methods is by determining the actual domain of learning to which your program and/or segment of your program is directed. The most commonly used learning domains include Knowledge, Skills and Attitudes.

Learning Domains:

Knowledge: Acquiring information: “I can interpret something differently”.

Skill: Performing a technique: “I can do something differently”

Attitude: Forming or affirming values: “I feel differently about something. It now has a different value.”

This table details the definition of the three domains and provides some examples of associated instructional methods.

Domains	What is it?	Teaching Methods Associated
Knowledge	The ability to internalize information, acquire knowledge, provide theory to help facilitate the application of learning and to widen horizons. <i>“I understand something differently.”</i> <i>“I can interpret something differently”.</i>	<ul style="list-style-type: none"> • Lecture, mini-lecture • Panel • Debate • Books, journals, reading • Case studies • Self-learning modules • Journal club
Skills	The ability to perform a technique and/or incorporate new ways of performing. <i>“I can do something differently.”</i>	<ul style="list-style-type: none"> • Demonstration, return demonstration • Rehearsal • See one, do one, teach one • Puzzles, games • Simulation, role play
Attitudes	The ability to adopt new, or change existing beliefs or values. <i>“What I feel or believe about something.”</i> <i>“I feel differently about something. It now has a different value.”</i>	<ul style="list-style-type: none"> • Role play • Video feedback • Small group discussion • Case studies • Problem-solving • Reflective exercise such as sentence completion. For example, “An effective leader is a person who...”

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When choosing methods, it is important to match the method to the relevant domain.

If you have determined if you are seeking to improve knowledge, skills or attitudes when writing your goals and objectives, the process of choosing methods is more straightforward. Simply ask yourself the question: “What is the most appropriate method for achieving this objective?” Are the learning needs identified in the needs assessment or gap analysis related to a lack of knowledge, an inability to perform necessary skills, or is it instead related to a need to change attitudes?

It is possible that all the above apply in which case a variety of methods are recommended.

Matching learning needs, learning objectives and instructional methods:

Below we use an example taken from the area of appropriate management of opioid dependency to illustrate how you can align needs, objectives and methods as you design a program:

Learning Needs	Learning Objectives	Teaching Methods
<ul style="list-style-type: none">• Knowledge - content of current guidelines• Skill - how to deal with addictive behaviours)• Attitudes: changing personal judgments about addictive behaviours	<ul style="list-style-type: none">• Through active engagement in this program participants will be able to...• Define professional responsibility to manage patients' chronic pain (knowledge)• List ways in which to determine patients' global risk of overdose and use disorder (knowledge)• Complete a comprehensive assessment of patients with chronic pain (skill)• Initiate and monitor opioid therapy for your chronic pain patients (skill)• Gain confidence in effectively communicating with chronic pain patients (attitude)	<ul style="list-style-type: none">• Lecture: Data will be presented on the current crisis, the recommended guidelines and appropriate methods for management of opioid dependency.• Case discussion: Based on a short clinical illustration participant will identify current attitudes and personal resistance towards patients dealing with opioid addiction.• Question period: 20 minutes of one hour lecture will be dedicated to Q and A• Role play/standardized patient: Participant will have the opportunity to explore effective behavioural techniques in working with patents addicted to opioids.

A Case for Increasing Active Learning

In the past, we have made assumptions that just because a learner is present, they are learning. This isn't the case. Studies show that we need to be more purposeful in how we teach, aiming to actively engage the learner. We need to design our CPD programs with a focus on matching needs, learning objectives, and instructional methods and incorporate means by which learners can connect new knowledge with their unique practice experience.

“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

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Choosing Instructional Methods: Part 2: Integrating Active Learning

Active learning is the active engagement of the learner in the learning process. This can mean that the learner actively engages with others (as in group activities) or that they actively engage with material (as in reading, writing, formulating questions and responses to questions).

Most educators agree that active learning is key to effective continuing professional development. Sometimes teachers assume that active learning necessitates learning in small groups but actually, the key is the word **active**. The size of the group is not as crucial as we might suppose for the purpose of knowledge gain and retention. Having the learner actively engaged in the learning process is crucial if we are to have an impact on both their skills and attitudes.

Why is it important?

*“Education is the acquisition of the art of the utilization of knowledge.
This is an art very difficult to impart. “*

Alfred North Whitehead, 1967

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 active 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 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.

*“Learning is ... primary to the way in which people construct meaning in their
personal and shared organizational lives.”*

Victoria Marsick, 2015

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

While we do not need to be in a group to be active learners, interaction with peers and colleagues is also important to engagement, comprehension, solidifying learning and 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 programs through talking about their own practice situations. Talking to colleagues stimulates thinking that does not normally occur when we are on our own.

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In order to receive accreditation from many CPD organizations the person responsible for educational planning must demonstrate that the program devotes at least 25% of the allotted time to interaction.

Steps to integrate active learning into your teaching

Active learning requires planning – it is important to ask:

1. In choosing an active learning technique – ask “what do I want them to do?”
2. What is the purpose of the chosen activity? Knowledge, skills, or attitudes?
3. Given the domain, which teaching 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?
7. What technology is needed if any (assuming the interaction is not face-to-face)?

Examples of learning techniques for increasing active learning

While there are many ways to encourage active learning, below are a few examples of techniques that we have found to be useful. These can be interwoven with or used instead of the traditional didactic lecture style of teaching.

Active Learning Technique	Examples
Asking the audience questions	<ul style="list-style-type: none"> • Straightforward questions • Rhetorical questions • Brainstorming • Surveying the audience/taking a vote • Short, surprise quiz
Breaking the session into small groups	<ul style="list-style-type: none"> • Think. Pair-share • Buzz groups • Pyramid groups • Helping trios
Using audience responses	<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

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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

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