The Instructional Skills Workshop (ISW) Handbook

Part One:
Workshop Overview

April 2021

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Parts One, Two, and Three of this Handbook accompany the Instructional Skills Workshop Program and are not meant to be used as "stand alone" texts. ISW facilitators and trainers may use excerpts of the Handbook in their own teaching and learning contexts.

The ISW Executive Team requires that ISW facilitators or trainers request permission to translate the ISW Handbook into a language other than English.

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https://www.iswnetwork.ca/

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Reference Lists in Part One

Research, Scholarship, and Resources

A general reference list appears in Section I of Part One (page 1.38).
Further references appear in Parts Two and Three.

A. Acknowledgements

Guided by Glynis Wilson Boultbee, the 2018 version of this handbook was developed using a collaborative process that included over one hundred members of the ISW community. Our deep thanks to everyone who was involved in this major revision.

This April 2021 version includes editing done by the ISW Network Executive Team and incorporates suggestions from the community identified during the Beta phase between 2018 and 2020.

The 2006 editing and the abbreviation of the 2003 edition were completed by Pat Pattison and Russell Day.

Many individuals contributed to the 2003 revision of *The Instructional Skills Workshop (ISW) Handbook for Participants*. In particular, the following people deserve special recognition for their part in writing, reviewing, and revising the handbook:

Cheryl King * Jennifer Mann * Charles Miller * Diane Morrison * David Tickner
Judy Wilbee * Cheryle Wilson * Glynis Wilson Boultbee

We also acknowledge the contribution of others who prepared and revised earlier editions of the *ISW Handbook for Participants*. Those who prepared the 1993 version:

William H. (Bill) Bergquist * Earl Bloor * Linda Coyle * Eugene Hrushowy * Ed Kamps
Douglas Kerr * Melissa Sue Kort * Candace Matzke * Charles Miller * Diane Morrison
David Tickner * Cheryle Wilson * Glynis Wilson Boultbee

Those who prepared the 1989 version:

Wendy Hurst * Paula Anderson * Michael Bucher * Bill Hunt * Melissa Sue Kort
Colleen McGoff * Charles Miller * Janene Whitesell

Those who prepared the 1982 version:

Ted Anderson * Earl Bloor * Brian Thom

Douglas Kerr developed the original *Instructional Skills Workshop (ISW) Handbook for Participants* in 1978/9.

B. Preface

During the 1970s, as **community colleges** and institutes in the Canadian province of British Columbia matured, many recognized the need to provide support for instructors who had considerable professional experience and training, but no teaching credential. To address this need, Diane Morrison (then the Ministry of Advanced Education's coordinator of professional development programs) contracted with Douglas Kerr (a consultant then employed at Vancouver Community College) to design and pilot a program to enhance the instructional skills of these instructors. The program was to be brief and to provide the basic instructional skills required in the post-secondary environment.

This initiative led to the development of the Instructional Skills Workshop (ISW) in 1978/79. The ISW was initially intended for new instructors. However, during the development phase, early participants (who already held instructional roles) found themselves engaged in a meaningful reflective process. They recommended offering the ISW to both new and experienced instructors. They believed the format of the workshop was flexible enough to accommodate those from the wide range of disciplines and experience levels in the post-secondary network across the province.

In its first decade, the ISW became a component of faculty development programs in colleges and institutes across Canada and the United States. In 1992, the ISW program was introduced at the University of British Columbia— initially for teaching assistants, but soon for faculty, sessional instructors, and other graduate students as well. Since then, the ISW has been offered at a number of universities and colleges in Canada and the United States, as well as at learning institutions around the world. The ISW also provides facilitation and training opportunities in workplace settings, including health care, provincial and municipal government departments, business and industry, first responder agencies (police, ambulance services, and firefighters), and industry workplace training organizations.

C. The Handbook

Overview

This handbook has been developed over time by a large number of ISW **facilitators** and **trainers**. In preparing the handbook, the ISW community had to make difficult choices about what to include. Rather than compiling a massive resource that covers absolutely everything that might come up in or after an ISW, the community chose to model an important principle underlying the ISW itself. We recognize that in learning environments, "less" can be "more." Less content may often be more effective because it can result in deeper learning and greater retention.

Overall, this handbook is designed to provide:

- important information that supports full participation during the workshop,
- some information, resources, and references that can be used before, during, and after the workshop, and
- several tools for reflecting on teaching and learning, both as a facilitator of learning and as a lifelong learner.

In 10 minutes, one hour, or one handbook, we cannot be all things to all people. An essential instructional task is to decide what is critically important. Underlying this idea is the hope that if we build genuine interest and enthusiasm, learners will be motivated to follow up on their own.

The Reference Lists and Search Strategies

We have chosen to provide reference lists[1] throughout the handbook in order to emphasize and highlight that what we do is based on research, scholarship, and thoughtful reflection by many educators and thinkers. Lists in Part One include a relatively small number of references for a variety of the key topics. Some of the lists in Parts Two and Three are somewhat longer, and are provided for those who wish to learn more after the workshop.

Because the online world changes rapidly, we often provide lists of search terms so participants can look for the most current material on the topic. Simply use those terms in a search engine like Google, perhaps narrowing down using something like Google Advanced Search.[2]

As we developed the handbook, we asked people to help us identify resources that were useful and relatively current or seminal. Ideally, the resources appeared in peer-reviewed journals that were highly respected by many members of the community. We expect these reference lists to change regularly as we receive recommendations from the community.

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[1]Reference lists are presented using American Psychological Association (APA) style. (American Psychological Association. (2010). *Publication manual of the American Psychological Association*. 6th ed. Washington, DC: American Psychological Association.) However, this is a practical handbook, rather than a scholarly article. In order to enhance its readability, we have chosen to use footnotes rather than incorporating in-text citations.

[2] NOTE: If you limit your domain search to ".edu," you will be offered only American educational sites.

About Part One

Part One begins with this overview of the handbook (Section C). It then gives an overview of the ISW workshop (Section D), answering some questions that you may have before you begin. In the Lessons and Lesson Planning section (E), you are introduced to the core elements of an ISW lesson and to the importance of lesson planning. Because the workshop is based on giving and receiving feedback, Section F provides information to assist with this. After some final words (Section G), Part One ends with a glossary of teaching/learning terminology (Section H), a general reference list (Section I), and a preview of Parts Two and Three (Section J).

About Parts Two and Three

Part Two is a workbook, while Part Three contains information about important topics that may emerge during the workshop.

A Note about Terminology

The ISW is used in a wide variety of settings and organizations that have their own vocabulary and/or technical language. This handbook has been written and revised with a view to ensuring that it is as inclusive as possible. For the sake of clarity, however, choices had to be made about which terminology to use. For example:

- We often speak of teaching or instruction and we refer regularly to the post-secondary teaching environment. But this material is also used when working with individuals who offer facilitation and training in other settings.
- We have chosen to use the word *outcome* to describe what learners will be able to do/demonstrate, know/comprehend, or feel/value by the end of a lesson. Some may choose other terms, including *objectives*.

Because we know the terminology we have selected may not completely match what you use in your organization or institution, we have included a glossary (Section H). Words that are included in the glossary have been highlighted. They appear highlighted in blue when viewed online and blue or grey in the print version depending on whether the copying has been done in colour or black and white.

D. Overview of the Workshop

Introduction

The Instructional Skills Workshop (ISW) takes a highly participatory approach as groups examine their values and practices related to teaching or training and learning. It generally runs for a total of 24-30 hours, and it may be conducted in a variety of formats. Some ISWs include technology-supported elements; others focus exclusively on face-to-face teaching. Some workshops are offered in an intensive and compressed time frame, while others are spread out over time and may be offered in blended learning formats using one or more technologies. Usually participants (a group of about four to six) work with one or two facilitators, although several groups may be meeting concurrently and will likely interact periodically.

At the workshop, participants are encouraged to review core ideas about teaching and learning, reflect on current practices, and try new **instructional strategies, techniques**, and approaches within a respectful and supportive environment. Using lesson planning models for learning outcomes and/or expressive outcomes, participants offer short lessons to each other in a small group setting. Feedback on lessons is provided verbally, in writing, and by means of video recording. Workshop facilitators also offer sessions that explore topics related to teaching and learning.

- The ISW uses a *developmental peer-based* approach. The workshop is facilitated *by* people who teach and is designed *for* people who teach. While workshop facilitators have special training in the ISW process, most have (or have had) instructional roles similar to those of their participants. Some facilitators teach adults in a post-secondary education environment. Others are trainers in a variety of workplace settings including health, government, business, and industry.

- The ISW encourages *active, experiential learning* and is based on principles of **learning-centred instruction**; the instructor is viewed as a **facilitator of learning**. Many ISW participants report on the benefits of experiencing and reflecting on instruction from the learner's perspective.

- The ISW raises the awareness of, appreciation of, and sensitivity to the *many individual differences*— visible and invisible— learners bring to any learning environment.

Values

The ISW has evolved to meet the needs of instructors in diverse contexts because its inherent values give it great flexibility. The ISW community believes:

- We should treat one another and our learners with respect.
- Learning is enhanced when we are inclusive, being sensitive to the many needs and differences in any learning environment.
- We should continually strive to act with honesty and integrity.
- We will all learn more when we act in concert with these values.

Workshop Goals

The overall goals of the Instructional Skills Workshop are to:

- help participants develop increased competence and confidence as facilitators of learning, and
- provide resources to assist participants with their ongoing practice of professional reflection.

In an ISW, you will have opportunities to:

- work closely with peers to improve each other's teaching,
- connect with colleagues from a range of fields and backgrounds,
- practice a variety of instructional strategies and techniques,
- recognize the importance of establishing a positive learning environment,
- experience and explore some of the individual differences found in contemporary learning environments,
- consider inclusive teaching and facilitation practices that respond to a wide variety of learning needs in these environments, and
- increase your knowledge of yourself as a teacher and facilitator.

More specifically, you will experience and/or practice:

- using learning outcomes or expressive outcomes to inform learners of expectations,
- giving consideration to the many and various learning needs of learners,
- writing useful, practical lesson plans,
- conducting participatory lessons,
- using common instructional media and resources competently,
- using basic techniques to assess learning from a lesson,
- giving and receiving constructive feedback, and
- planning for application and reinforcement of learning outside the ISW learning setting.

Participant Activities

There are no **casual observers** in an ISW. The success of the workshop depends on commitment and engagement from the facilitators and from each participant for the entire duration of the workshop. As a participant, you will:

Teach – You will prepare and conduct three 10-minute lessons. While planning and offering these lessons, you are strongly encouraged to experiment with a range of teaching strategies and techniques, and to adopt/adapt strategies modeled by other workshop participants or the facilitators. This is an opportunity to experiment and receive feedback on the impact of the strategies you chose.

Learn – During each lesson, while one member of the group is instructing, the others are learning. This is not a role play situation. You bring a unique perspective to the workshop, including previous knowledge, skills, and experiences, as well as your own learning preferences. As a learner during a lesson, you are asked to engage authentically. (It is perhaps important to note that you will be learning informally during the workshop as well!)

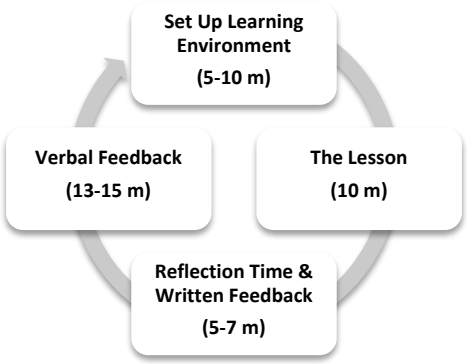
Provide feedback – Following each lesson, learners give the instructor feedback based on their reflections on their experiences as learners. This honest, constructive feedback focuses on the impact of instructor behaviours and choices on the learners and learning. The feedback includes: a) written feedback and b) verbal feedback in a session guided by a workshop facilitator. Lessons are also **video-recorded**— which provides another source of information. During the verbal feedback session, a key point from the recording may be played and discussed.

Reflect – **Reflection** is important, both in this workshop and in your development as an instructor. Sections F and G of Part Two (the workbook) provide a variety of worksheets designed to assist you as you reflect on your learning.

And finally… Because respect is at the heart of the work, your facilitators will also periodically ask you to engage in exercises that are designed to build trust and community within your small group of learners.

The ISW Lesson Cycle

Each participant offers three short lessons over the course of the workshop. Each lesson is part of a 40-minute cycle of teaching and feedback known as the ISW lesson cycle. This kind of "microteaching" experience is a useful (and experiential) component of professional development for both new and seasoned teachers and trainers.



Research, Scholarship, and Resources (Micro-Teaching)

"Microteaching has the potential to promote reflexivity, enabling the fledgling teacher to review their set of priorities and renegotiate their position with regard to their previous, taken for granted attitudes, values and assumptions." (I'Anson et al., 2003, p. 197)

Arsal, Z. (2014). Microteaching and pre-service teachers' sense of self-efficacy in teaching. *European Journal of Teacher Education, 37*(4), 453-464. Retrieved from http://dx.doi.org/10.1080/02619768.2014.912627

Kloet, M. A. V., & Chugh, B. P. (2012). An interdisciplinary analysis of microteaching evaluation forms: How peer feedback forms shape what constitutes "good teaching". *Educational Research and Evaluation, 18*(6), 597-612. Retrieved from http://dx.doi.org/10.1080/13803611.2012.704171

Kourieos, S. (2016). Video-mediated microteaching— A stimulus for reflection and teacher growth. *Australian Journal of Teacher Education, 41*(1), 65-80. Retrieved from http://ro.ecu.edu.au/ajte/vol41/iss1/4

I'Anson, J., Rodrigues, S., & Wilson, G. (2003). Mirrors, Reflections and Refractions: The contribution of microteaching to reflective practice. *European Journal of Teacher Education, 26*(2), 189-199. Retrieved from http://dx.doi.org/10.1080/0261976032000088729

The 40-Minute Cycle

Set Up the Learning Environment (5-10 minutes)

During this time, the instructor prepares for the lesson cycle. Set-up time may include moving tables and chairs into a more effective arrangement, erasing the whiteboard, posting flip charts, testing instructional media, and so on. The facilitator and instructor will also speak briefly, perhaps reviewing the lesson plan together or discussing potential areas for feedback afterward. Meanwhile, other participants may assist with setting up, do preparations for and/or reflections on their own lessons. They might also be asked to leave the room for a short break.

The Lesson (10 minutes)

During this segment, the instructor conducts the lesson for the other participants. The facilitator makes a video recording of the lesson, while noting down specific observations and providing pre-arranged time signals to the instructor. When the facilitator indicates that "time is up", the instructor brings the lesson to a close— even if it is not completely finished.

Instructor Reflection Time & Written Feedback (5-7 minutes)

At this time, the instructor and the facilitator have a short one-on-one conversation about the lesson. The main purposes of this conversation are to a) identify immediate feelings or thoughts about the lesson and b) identify points to be brought up during the verbal feedback segment. The facilitator may also replay part of the video, with the sound off or on low volume. During this segment, the learners complete written feedback forms or other feedback tools.

Verbal Feedback (13-15 minutes)

The cycle concludes with facilitated group discussion in which the learners offer feedback to the instructor about the lesson. Each participant provides information about his or her own experience as a learner. Within this peer-based process, the instructor is encouraged to listen actively and patiently, while also responding with clarifying questions. The facilitator will encourage the group to provide relevant, constructive feedback that focuses on the teaching and learning processes, rather than on the content of the lesson. The facilitator may also share one or more brief video segments to highlight specific moments in the lesson.

This final segment of the cycle is not intended as a re-teaching of the lesson or a discussion about general instructional concerns. Instead, it is an opportunity for the instructor to receive useful information that builds on his or her strengths and offers insight into the impact of instructional choices. The instructor can then take this information away, reflect upon it, and consider if/how it might be used in future lessons within the workshop and beyond. Meanwhile, the learners are also encouraged to consider how they might incorporate ideas that came up during the discussion into their own teaching practice.

Tips for Selecting Topics

- An ISW lesson is a complete unit of instruction. You have 10 minutes in total. The topic you select must fit within that time frame.
- Many participants have found that selecting a topic from a personal (rather than a professional) pursuit or area of interest helps them to focus on the process rather than on the content.
- If you choose to use material you already teach, avoid "lifting" a section from the middle of a larger unit or attempting to condense a longer presentation (e.g., the third class in a course on interpersonal communications for nurses or a lesson on how to complete an entire risk assessment).
- This is NOT a role play situation in which participants are asked to assume an identity other than their own. When you select your topic, consider what you know about the learners who are in the room (rather than asking them to pretend they know more or less than they do, for example, or to pretend they normally behave in a particular way).
- Avoid topics that require highly specialized knowledge, advanced skills, or complex technologies.
- Ideally, you should be highly interested in and motivated by the topic you select.

Sample Topics

Some participants are concerned about finding a topic. Here are just a few ideas to get you thinking about what you might choose:

• four steps to better listening	• clarifying our values in teaching and learning
• the benefits of bird watching	• simple stretches at the computer
• debits and credits in accounting	• the history of the drum
• selecting the best tools for working with plywood and veneers	• ratings for fire extinguishers
• essential equipment for back country skiing or another sport	• napkin folding
• how to put on sterile gloves	• searching with an academic database
• what makes a great poem	• selecting good walking shoes
• the physics of the roller coaster	• simple string games
• the concept of caring in a helping profession	• cloud naming
• reflective practice and learning communities	• stress management and mindfulness practices
	• tips for how to remember names

Why Ten Minutes?

A lesson is designed to achieve one or more desired outcome(s). It contains a sequence of activities that engages both the instructor and the learners. A lesson might take five minutes or 50 minutes or more.

In the ISW, lessons are no more than 10 minutes long— which may seem very short. When interacting in real time (whether face-to-face or while using technology), instructors and trainers generally have at least 40 or 50 minutes with their learners. However, it is useful to remember that a single "lesson" is often composed of a series of shorter components or lessons. (The time may be chunked like this in recognition of the attention span learners bring to a given task or activity.)

The 10-minute lesson reflects a balance between keeping the total time for the workshop to a reasonable length and providing a lesson that is long enough to offer material for feedback. Ten minutes encourages the focus of the instructor and the learners to remain on the instructional or training process, rather than the subject content of the lesson. Ten minutes is also a reasonable length for participants to recall specific details when they provide feedback.

Designing a 10-minute lesson is a useful exercise in improving your ability to be concise. A key challenge in real life teaching is to set an appropriate level of detail for lesson material, while finding processes that work within the parameters. Whether you have 10 minutes or 10 hours, you will not be able to cover all the content that now exists on any given topic! And you will need to select active learning tools that work within the time frame you have.

Why Three Lessons?

One rationale for three lessons is based on the theory that change includes **discovery**, **experimentation**, and **consolidation**. The first lesson often provides an opportunity for instructors to discover what they know about teaching and what they want to learn. The second may then provide an opportunity for experimentation, risk, and innovation. And the third provides an opportunity for consolidation and integration of learning about teaching.

For *other* instructors, the first lesson is the discovery lesson. The second provides opportunities for consolidation. And in the third lesson, they feel comfortable to really experiment with their teaching.

By teaching and receiving feedback three times, participants are able to see their own progress in a short space of time. Three lessons may also provide an opportunity to design instruction in each of three learning domains which may include **cognitive** (knowledge), **psychomotor** (skills), and **affective** (attitudes, feelings, and values).

In addition to designing and offering three lessons, all participants have the opportunity to learn from their experiences as learners and as feedback providers for the lessons in which they are learners.

A Note about Attendance

Because of the highly interactive and participatory nature of the ISW, the attendance of all participants throughout is essential. You are asked to attend (and participate) for the full 24-30 hours of the workshop.

While the atmosphere is relaxed (often fun and informal), it is a challenging and intensive learning experience in which every minute counts. Everyone will get the most from the workshop if participants are fully present throughout—in body and in spirit.

In fairness to the other participants, please do not make commitments for any outside activities during the hours when the workshop has been scheduled.

E. Lessons and Lesson Planning

Participants in the ISW work in a wide variety of settings. Perhaps you:

- introduce apprentices to important concepts and attitudes related to safety or…
- teach third year university students about historiography or…
- facilitate on-the-job skill development in an industrial setting or…
- introduce MBA students to important concepts in financial accounting or…
- facilitate further learning for new social workers.

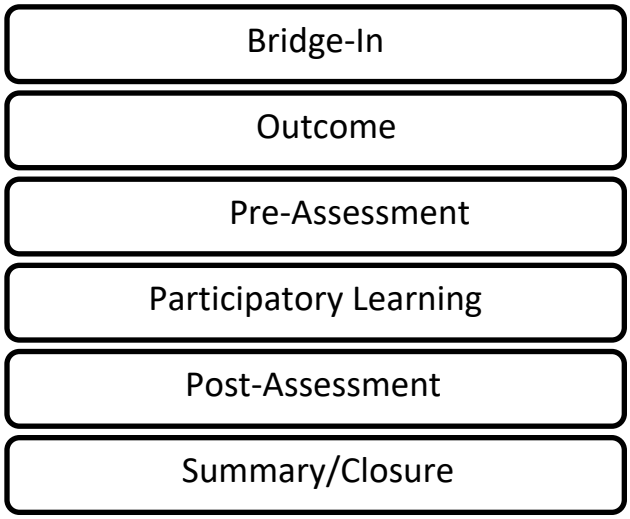
Regardless of what or where you teach, lesson planning can enhance learning.

NOTE: A *lesson* is different than a *class.* A one-hour post-secondary class or workplace learning session, for example, might actually include several smaller lessons on several interrelated topics.

The Core ISW Lesson Elements: An Overview

Many lesson planning models exist. The ISW lesson is built on six core elements. They fit with what we know about how people learn and are included because they each have an important role in the learning process, while also offering guidance to the instructor. These six elements are relevant regardless of the content and the setting.

In the ISW program, you will be asked to address these six elements in your lessons. This model for lesson organization creates a shared vocabulary that will enhance the workshop experience for everyone. The six elements will also provide an analytic structure that will be the focus of the feedback sessions, especially early on.



Core ISW Lesson Elements[3]		
Beginning	**Bridge-In (Why)**	Begins the learning cycle by gaining learner attention, building motivation, and explaining why the lesson outcome is important.
	Outcome (What)	Outlines the learning intention by clarifying what the learner should be able to know, think, value, or do by the end of the lesson.
	Pre-Assessment	Formally or informally answers the question: "What does the learner already know about the subject and outcome of the lesson?"[4]
Middle	**Participatory Learning (How)**	Involves the learners actively in the learning process. This intentional sequence of activities or learning events helps the learners achieve the desired learning outcome.[5]
Closing	**Post-Assessment**	Formally or informally demonstrates whether the learner has indeed learned enough to meet the outcome outlined above.
	Summary/Closure	Provides an opportunity for the learners to reflect briefly and integrate the learning as the lesson cycle comes to an end. In some situations, this section may include the development of an action plan for application of learning outside the workshop and/or reference to the next lesson.[6]

Notice that this lesson plan model is built around the outcome. All parts of the lesson refer to or align with the lesson outcome. When building a lesson, it can be extremely helpful to start by clarifying the ending. In other words, begin by identifying the outcome.

[3] Some people use the acronym BOPPPS to help them remember the six elements.
[4] The first three elements are presented here in a particular order. After trying it out in that order first, some participants may choose to experiment with the order or combine some elements.
[5] Although the middle section is called "participatory", it is important to build participation and engagement into the entire lesson.
[6] The summary section in an ISW lesson is usually short, but it may be longer elsewhere, depending on its purpose (synthesis of the lesson or preview of upcoming material).

What about Timing?

There is no simple rule for deciding how much time each part of the lesson will take. And in the ISW, you may choose to take more time than you would normally allot in order to learn more about a particular element. However, as a general guideline, some ISW facilitators suggest the participatory learning section should take approximately 60% of the lesson time.

The Core Elements

The six core elements of the lesson are introduced fairly briefly in this section. Sections A to D in Part Two (the workbook) go into more detail, including examples, checklists, exercises, and further references.

Bridge-In

Responsibility for learning rests primarily with the learners. At the same time, the instructor has a responsibility to create conditions that motivate learners. The bridge-in is meant to gain attention and establish relevance for the lesson. Sometimes known as the "motivational statement" or "hook," the bridge-in helps the learners prepare for what is about to happen.

An effective bridge-in enhances the motivation to learn by connecting learners to the content of the lesson in an interesting and/or relevant way. This segment of the lesson is usually quite short.
However, in lessons where the motivation may be less than optimal, the bridge-in is particularly important. Unenthusiastic learners may be "hooked" if the bridge-in provides answers to questions like:

"What's in it for me?" "Why does this matter?" "Why should I learn this?"

Strategies for Building Motivation During the Bridge-In

Strategies that build motivation early in a lesson within the ISW setting:

- Provide reasons for learning this topic, explaining why the topic is important and how it may be useful in other situations, or demonstrating that it is a transferable skill.
- Tell a short and engaging story in connection with the topic.
- Show a brief animation or comic.
- Refer to something in the learners' own experiences*.
- Pose a **provocative question** linked to a current event or the learners' personal lives.
- Show a live stream of a related event to set the scene.
- Offer a startling statistic or unusual fact that prompts curiosity.
- Link the topic to material already discussed.

* NOTE: Personal stories, anecdotes, and examples can be very effective. In a multi-cultural or diverse setting, however, it is important to consider learners' life experiences and backgrounds. If a learner is not aware of current trends in popular culture or wasn't alive when rotary telephones were used, for example, a given story that is meant to *bridge* might be mystifying or, if everyone else laughs at the joke, could even make the learner feel excluded.

Please go to section A of Part Two (the workbook) for further information and exercises.

Outcomes

Learning Outcomes

Learning outcomes are statements that articulate what a learner should know or be able to do by the end of a lesson. In the ISW, outcomes are typically stated near the beginning of the lesson to help learners focus their attention on what is most important in the lesson. Outcomes can refer to what the learner should know, do, or feel/believe by the end of the lesson. Incorporating outcomes into your lesson helps learners to direct their learning and monitor their own progress, signals what is important and valued in the lesson, and helps the instructor to select the content and activities that will best allow the learner to achieve the outcomes in the time allowed. They can also be used to help keep the lesson focused.

Learning outcomes may be pre-determined by the instructor when designing the lesson, but there is also an opportunity to involve learners in the development of their own goals and outcomes for the lesson. Although outcomes are introduced at the beginning of the lesson, they are often referenced either directly or indirectly at the end of it as well. The post-assessment, for example, is one way that the instructor can encourage learners to reflect upon their experience, as well as to determine whether or not the outcomes for the lesson were met by the learners.

Expressive Outcomes

As an alternative to a learning outcome, an expressive outcome states the ability a learner will possess at the end of a learning process which often focuses on creative or evocative or unpredictable learning and in which learners express themselves in some way. Expressive outcomes are found in the liberal arts, social sciences, fine arts, and other academic areas. They are often used in learning related to working with people, including medicine, conflict resolution, counseling, team building, and so on.

The expressive outcome is a way of referring to learning in situations where there may be several appropriate responses, answers, or solutions. Evaluation of learning can encompass reflection by the learner on the learning event, activity, or experience, as well as feedback from the instructor (and/or peers) on the learner's performance. The process described by an expressive outcome is characterized by a balance of action and reflection.

Strategies for Writing Effective Learning and Expressive Outcomes

In the ISW, participants use learning and/or expressive outcomes to help them plan their lesson content. Keep the following strategies in mind when writing outcomes:

- Use language that learners will understand.
- Start by deciding on the verb.
- Make sure the learning is achievable during the time frame of the lesson.
- Make sure the outcome reflects what is most important in the lesson.

Please go to section B of Part Two (the workbook) for further information and exercises.

Research, Scholarship, and Resources (Outcomes)

Biggs, J. B., & Tang, C. (2011). *Teaching for quality learning at university: What the student does* (4th ed.). Open University Press, McGraw-Hill Education.

Carriveau, R. S. (2016). *Connecting the dots: Developing student learning outcomes and outcomes-based assessment* (2nd ed.). Stylus Publishing.

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses* (2nd ed.). Jossey-Bass.

More references on outcomes appear in Section B of Part Two (the workbook).

Pre-Assessment

The pre-assessment answers one or more of these questions: What do the learners already know? What can they already do? How do they already feel? What are their present attitudes?

Within a 10-minute lesson, the pre-assessment is likely to be quite short. It should match the outcome as closely as possible. For example, if the lesson is an introduction to terminology, a pre-assessment may ask questions that help identify terms learners already use. If the lesson focuses on the development of a skill, the pre-assessment might involve asking learners to identify if, where, and when they have performed that skill before. (And some learners might even actually perform it.) Pre-assessments for expressive outcomes may include questions that identify the learners' previous experience with the topic.

The Value of the Pre-Assessment

The pre-assessment can:

- reveal learners' interests,
- identify learners who can be resources within the class,
- allow learners to express their need for review or clarification,
- focus attention and signal the purpose of the lesson,
- help the instructor adjust the lesson for depth and pace to better fit a particular group of learners, and
- enable the instructor to respond to individual strengths, interests, and weaknesses.

Please go to section C of Part Two (the workbook) for further information and exercises.

Research, Scholarship, and Resources (Assessment)

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for faculty* (2nd ed.). National Center for Research to Improve Postsecondary Teaching and Learning.

Fenwick, T. J. & Parsons, J. (2009). *The art of evaluation: A resource for educators and trainers* (2nd ed.). Thompson Educational Publishing.

Knight, P., & Yorke, M. (2003). *Assessment, learning and employability*. McGraw-Hill Education.

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). Jossey-Bass.

Walvoord, B. E., & Anderson, V. J. (2011). *Effective grading: A tool for learning and assessment in college*. (2nd ed.). Jossey-Bass.

Participatory (Active) Learning

> "Active learning simply means getting involved with the information presented — really thinking about it (analyzing, synthesizing, evaluating) rather than just passively receiving it and memorizing it. Active learning usually results in the generation of something new, such as a cause-effect relationship between two ideas, an inference, or an elaboration, and it always leads to deeper understanding."[7]

Learning is an active process. Only by engaging with the material or task can most students experience learning that lasts. A number of educational theorists propose that learners personally construct their own knowing.[8] This suggests that the most effective learning may occur when, through personal interaction with the content or materials, learners actively create their own set of knowledge, skills, and values.

Learners understand and remember concepts by testing, exploring, and mentally manipulating ideas. This is often accomplished through discussion, debate, and dialogue. Physical and problem-solving skills improve with repeated practice and feedback. Changes in individual beliefs and attitudes are difficult to measure as they are often modified gradually as the learners are exposed to various viewpoints and experiences. Over time, this exposure leads to integration and synthesis of new information and perspectives.

All of this may create challenges for the instructor whose subject and/or approach has

[7] King, A. (1993). From sage on the stage to guide on the side. *College Teaching, 41*(1), 31.

[8] Bouton, C., & Garth, R.Y. (1983). Students in learning groups: Active learning through conversation. In C. Bouton, & R.Y. Garth, *Learning in groups* (pp. 73-81). New directions in teaching and learning: 14. Jossey-Bass.

traditionally depended on the transmission of information from instructor to learner exclusively through uninterrupted lectures. The use of the traditional uninterrupted lecture to provide information does little to create learning that lasts. For a variety of reasons, many people are not primarily **auditory learners**. So learning-by-listening is not an effective strategy for everyone. It is helpful to think about how you can maintain and enhance learners' active **engagement**.

Active learning is often measured by the level of learner participation which is a particularly difficult concept to define precisely. There are at least four main kinds: a) interaction between the instructor and the learners; b) interaction among learners themselves with the instructor facilitating; c) action by the learner individually while completing a task; and d) reflection by the learner individually while thinking, writing, or doing a task.

Learners' comfort and facility with participation depend on a variety of learning preferences, cultural traditions, and previous learning experiences. (In some settings, for example, instruction may have been carried out in a formal atmosphere where an instructor makes an uninterrupted presentation, followed by questions. In other settings, participation might have been measured by attendance alone.) What's more, learners may already possess information or abilities related to the topic. In this case, you may choose to share the teaching responsibilities with the learners.

The strategy you select for participatory or active learning may also depend on how well the learners have "learned to learn." If the learners are skilled and experienced in the process of learning, an instructor might be able to plunge them into a **discovery learning** situation with little guidance. On the other hand, if they lack confidence and/or competence as learners, a more structured approach may be more effective.

Another important factor is the physical setting, including access to digital resources and instructional technologies. Some factors you might consider:

- The instructional technologies you use or involve your learners in using will depend on your knowledge, access, and familiarity with various options and the potential for learning (related to the outcome) that they offer.
- Fixed seating in a large classroom may make small group discussion difficult.
- If your learners have assistive learning devices or visual or hearing issues, you may want to pay particular attention to how you arrange the learning space.

Decisions about how best to facilitate participatory learning, then, will be affected by:

- the comfort level of the instructor,
- teaching/learning considerations,
- the knowledge, skills, and attitudes of the learners, and
- other practical and logistical issues.

NOTE: Although the name of this element includes the word *participatory*, it is important to build participation and engagement into the entire lesson.

Strategies for Engaging the Learners

In the ISW, instructors are encouraged to build active learner engagement into their lessons. Strategies that encourage active participation within this setting could include:

- small group discussion about a specific question or problem arising from the course material,
- pauses in presenting for student reflection through writing, discussion, or question development,
- short application tasks like solving an equation or a small problem,
- prediction or forecasting of answers to questions (often at the beginning of the lesson),
- students working on a problem and then evaluating each other's work,
- role plays, case studies, scenarios, or simulations, and
- posing a "thought" question—one that is not answered until later in the lesson.

Please go to section D of Part Two (the workbook) for further information and exercises.

Research, Scholarship, and Resources (Participatory Learning)

"Although the results vary in strength, this study has found support for all forms of active learning examined" and concluded that "there is broad support for the elements of active learning most commonly discussed in the educational literature…." (Prince, 2004, p. 229)

Bean, J. C. (2011). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom.* Jossey-Bass.

Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching: Tools and techniques for democratic classrooms* (2nd ed.). Jossey-Bass.

King, A. (1993). From sage on the stage to guide on the side. *College Teaching, 41*(1), 30-35.

Michael, J. (2006). Where's the evidence that active learning works? *Advances in Physiology Education*, 30(4), 159-167.

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education*, 93(3), 223-231.

Ritchhart, R., Church, M., & Morrison, K. (2011). *Making thinking visible: How to promote engagement, understanding, and independence for all learners*. Jossey-Bass.

More references on participatory learning appear in Section D of Part Two (the workbook).

Post-Assessment

The post-assessment answers two questions: What did the learners learn? Were the desired outcomes accomplished? A post-assessment that is conducted within a 10-minute lesson must be short. It should match the desired learning established at the beginning of the lesson. For example, if the lesson is an introduction to terminology, an appropriate post-assessment might be a matching or sentence completion exercise. If the lesson focused on learning a skill, the post-assessment might require the performance (perhaps partial or simulated) of that skill.

Expressive outcomes are assessed mainly by reflection on the experience, often by the learners themselves. This might involve writing about "the relevance of the lesson for me" or discussing the possibilities or limitations of an idea that was explored.

In some situations, the post-assessment may be critically important. In a workplace training setting, a practicum course, or an apprenticeship program, for example, the instructor or facilitator of learning may need to consider very seriously what will happen if a learner cannot demonstrate that learning has occurred, especially if there are implications for safety or service delivery.

Please go to section C of Part Two (the workbook) for further information and exercises.

Research, Scholarship, and Resources (Assessment)

Angelo, T. A., & Cross, K. P. (1993). *Classroom assessment techniques: A handbook for faculty* (2nd ed.). National Center for Research to Improve Postsecondary Teaching and Learning.

Fenwick, T. J. & Parsons, J. (2009). *The art of evaluation: A resource for educators and trainers* (2nd ed.). Thompson Educational Publishing.

Knight, P., & Yorke, M. (2003). *Assessment, learning and employability*. McGraw-Hill Education.

Suskie, L. (2009). *Assessing student learning: A common sense guide* (2nd ed.). Jossey-Bass.

Walvoord, B. E., & Anderson, V. J. (2011). *Effective grading: A tool for learning and assessment in college*. (2nd ed.). Jossey-Bass.

Summary/Closure

Just as the Bridge-In segment introduces a lesson, the Summary/Closure segment wraps up the learning experience, creating a sense of completion. It may also help the learners reflect on and integrate their learning. Finally, the instructor's summary may also prepare learners for future lessons (e.g., "Now that we have done this, later we will try …").

For some learners, revisiting the original outcome(s) of a lesson is an important opportunity for personal reflection. For others, it is an opportunity to celebrate achievements. And for some, it completes the learning contract by answering the question, "Did we do what we said we would do?" If the learners identified their own goals at the beginning of the lesson, it would be important to revisit these in some way. The instructor might ask them to reflect back and comment briefly on the extent to which they met their goals in order to "close the circle" or synthesize the learning.

Whatever strategy is used, this section of the lesson is usually brief.

Strategies for Closing

In your ISW lesson, the summary/closure might include:

- a brief content review in which the instructor or learners recap main points,
- group process reflections (time for learners to discuss the group process),
- acknowledgement and recognition of effort and achievement,
- individual insights offered during a quick roundtable for each person to have a "last word", and
- suggestions for application. This may include the exploration of ideas about how to further their learning, noting how to use it later and/or creating a personal action plan. In workplace training, participation may be related to a personal development or a performance improvement plan. An action plan may outline how the participant will transfer learning back to the workplace.

Lesson Plans: An Overview

A lesson plan functions as both a planning tool and a ready reference during the lesson itself. As you consider how to organize your lesson, you will want to think about who your learners are, factoring in any requirements or accommodations that might be needed. This might include considering how fast learners may be able to read during a silent reading segment or taking mobility issues into account when moving yourself or asking participants to move.

A lesson plan does not describe every moment of the lesson, nor does it try to capture every possibility that may arise. It does outline the activities the instructor plans to introduce. The plan may be written in great detail or it may simply capture the highlights in outline form. Depending on the instructor's preferences, it might include points of action and reflection, including ways to generate learner involvement and enthusiasm. It may also include logistical items like proposed timing and which instructional resources to bring. Some people prefer more detailed plans; however, with increasing experience, instructors often create shorter, more concise plans.

A lesson plan is generally subject to revision and improvisation during the lesson itself. Rehearsing a lesson or simply walking through it in your mind is a good idea. However, the actual lesson usually takes more time than a simple run-through rehearsal. Learners need time to clarify points, take notes, and verify instructions. Instructors need time to move around, manage transitions from one phase to another, and respond to questions. The more participatory the activities, the less precise you can be about the timeframe.

What About the Teachable Moment?

A lesson plan is simply a *plan*. Sometimes a moment arises unexpectedly when an important point or linkage to other material can and should be made even if it is out of the sequence that the instructor had decided to follow. Such opportunities are sometimes referred to as "teachable moments" or "learning instants." Effective instructors are able to move between working with the material as they had planned and taking advantage of teachable moments that emerge spontaneously, often prompted by the learners themselves. Organization and flexibility are complementary factors in planning for and facilitating learning.

Please go to section E of Part Two (the workbook) for further information and exercises.

F. Feedback

Overview

> "Feedback is information provided by an agent (e.g., teacher, peer, book, parent, experience) regarding aspects of one's performance or understanding. It occurs typically after instruction that seeks to provide knowledge and skills or to develop particular attitudes."

The exploration and experience of feedback is helpful in part because giving feedback plays such an important role in the work of many instructors and trainers. Feedback can help instructors and learners to:

- identify what they are doing well,
- increase their confidence,
- identify how they could improve, and
- reflect on possible future action.

During the ISW lesson cycles, you will have many opportunities to give and receive feedback. For example, when you are giving the lesson, you may offer feedback to learners on how well they are learning. At the same time, you will be receiving feedback (perhaps both verbal and non-verbal) from the learners about how they are experiencing the lesson. Afterward you will have a further opportunity to hear directly and immediately from the learners through written and verbal feedback about your lesson. And you may review sections of the video that help clarify or expand the learners' feedback.

Clear and specific feedback can be a valuable tool for the **reflective practitioner**. Unfortunately, many of us tend to associate feedback with criticism. Feedback is most helpful when it occurs in an open and respectful environment where there is an atmosphere of trust and where participants feel safe. This is why the workshop generally begins with **ice breaker** exercises.

In the ISW, the group will be encouraged to create an open and caring environment in which learners feel comfortable enough to offer honest feedback, motivated by the instructor's willingness to receive it. A useful guideline for ISW participants is to assume that all participants are making an honest effort to provide useful feedback.

Note also that it is not the role of the facilitator to provide feedback on the lesson, but rather to manage the process of eliciting helpful feedback from the learners.

Characteristics of Constructive Feedback

Specific (rather than general)	Specific feedback helps the receiver reflect on instructional choices and/or behaviour. General feedback may confuse or lack impact.
Descriptive (rather than evaluative)	The giver describes behaviour and impact, while avoiding using judgmental terms such as *good* or *bad*.
Behavioural (rather than inferential)	The feedback addresses what the person did, rather than suggesting possible reasons for those actions.
Balanced	Balanced feedback provides information about what worked, as well as suggestions for development.
Manageable	The receiver is given enough information, without feeling overloaded.
Practical	The feedback is directed toward behaviours the receiver can change.
Solicited (rather than imposed)	Feedback can be particularly effective when the learners are answering a question that the receiver had.
Timely	Feedback is often most helpful if it is delivered when the lesson is fresh in the minds of all those involved.
Checked (for understanding)	The giver and/or receiver and/or facilitator check to see if the feedback was understood.

Written Feedback

During the Instructor Reflection Time & Written Feedback in the ISW lesson cycle, the learners take some time to reflect before sharing their responses with the group. The written feedback can help learners organize their thoughts, while also providing the instructor with useful recorded information. This part of the workshop offers the opportunity to practice skills in providing constructive feedback in writing.

Completing Feedback Forms

During several lesson cycles, you will use a variety of forms that help you, as a learner, offer specific, helpful information to the instructor. Questions to keep in mind when completing the feedback forms:

- Is my comment focused on what the instructor actually said or did during the lesson?
- Do my comments contain "I" statements that address what I as the learner actually saw, thought, heard, or felt?
- Have I identified/described what the instructor did that facilitated my learning? Does it identify/describe what interfered with my learning?
- Have I offered specific suggestions or ideas that might be considered for next time?

A form offers guidance to help you focus your response. You are asked to respond to as many items as are appropriate to the lesson. Some questions or prompts may not be relevant to a particular lesson, and there may be comments that you wish to make that are not addressed by the form. It is okay to write down "Not Applicable" and/or to make additional comments, perhaps on the back of the sheet.

Verbal Feedback

During the Verbal Feedback section of the ISW lesson cycle, a workshop facilitator leads a session in which learners talk with the instructor about their learning experience. The facilitator may pose questions to guide the feedback. Rather than reporting their answers to the facilitator, the learners will give their feedback directly to the instructor. (For example, "Pat, that powerful story you told at the beginning helped me understand how important you thought the topic was. So I think I paid more attention to what you were saying.")

Each learner brings different knowledge, life experiences, and learning preferences into a lesson, and so it may be experienced in very different ways by the various learners. Instructors are encouraged to prepare for and be open to a diverse range of feedback. Even if a learner's feedback does not appear to directly relate to your experience of your own lesson, listening to each learner provides an open forum where all voices are heard.

What If We Disagree?

There may very well be times when feedback providers do not agree. You may want to check to find out more about this (e.g., "Is this one person's experience or did others see that too?"). Some points that are raised in the feedback session may not be perceived as equally significant or having the same impact. This insight can result in lively and useful conversations.

Guidelines for Giving Verbal Feedback

- Focus first on something that went well, perhaps something that served or enhanced your learning.
- Refer to what the person did, rather than to personal characteristics.
- Refer to what you observed or felt, not why you think it happened that way.
- Describe behaviour as *more* or *less*, not in judgmental terms such as *good* or *bad*.
- Think about the value the feedback will have for the person receiving it, not on the degree of "release" it gives you to express it.
- Address the process and impact of the lesson, rather than talking about the content.
- Address the instructor's concerns (including the daily posted goals if they are available).
- And as a reminder: Although the verbal feedback session is usually guided by the workshop facilitator, your comments should be directed to the instructor as the feedback is for him/her, not the facilitator.

Tips on Giving Verbal Feedback

Whenever possible, frame comments in the form of an assertion or statement (e.g., "I found your handouts helpful in keeping track of the dates." or "To me, your handouts contained more information than necessary to achieve the outcome. I started to get confused."). However, if you are uncertain about your comment, you might frame it as a question (e.g., "How did you want us to use the handout during the lesson?").

Guidelines for Receiving Verbal Feedback

- Respond honestly and consider all of the comments that are offered.
- **Paraphrase** or ask for specifics if you're unsure about what is being said.
- Give honest, experiential responses.
- Remember that you are the one who will ultimately determine what you do with the feedback. After reflecting on it, you can try it out in future to see if it works or you can choose not to act on it.
- Separate your feelings from the content of the feedback.
- Avoid attempting to re-teach the lesson as a response to the feedback. (If you do, the facilitator may very well intervene to refocus the conversation.)
-

Tips on Receiving Verbal Feedback

- If, at first, you disagree with the feedback, avoid defending your choice until you have had time to reflect on it.
- Take advantage of the opportunity to receive the feedback of your colleagues; use the time to listen or to ask clarifying questions rather than arguing.
- It is often useful to accept all feedback initially. Then you can clarify the meaning, identify the implications, and decide on the importance of what you heard.

Video Feedback

Your lesson will be recorded and shared with you. Watching the recording of your lesson may help you see how you appear to others. (People generally look and sound very different than they expected.) Reviewing the recording can provide extremely useful information. Ideally, you will do this as soon as possible after the lesson (preferably the same day) in conjunction with examining the written feedback. During your time together, your facilitator may share sections of the video to illustrate a point or review a behaviour or action. This can help to reinforce the learners' feedback, while also clarifying any questions you may have.

Tips for Reviewing the Feedback

- Remember that what *you* find *distracting* or *annoying* when watching yourself could be of little or no concern to your learners. If you are unsure about this, ask them for specific feedback about what you noticed.
- Try reviewing the recording on fast-forward as well as on normal speed. This can help you identify mannerisms that may be distracting. It can also provide insights about whether you move around a lot or a little.
- You could also view the video with the sound off, so you can better see your body language.

Research, Scholarship, and Resources (Feedback)

"Formative feedback has been shown in numerous studies to improve students' learning and enhance teachers' teaching to the extent that the learners are receptive and the feedback is on target (valid), objective, focused, and clear." (Shute, 2008, p. 182)

Boud, D., Keough, R., & Walker, D. (Eds.). (1985). *Reflection: Turning experience into learning*. Kogan Page.

Hattie, J., & Timperley, H. (2007). The power of feedback. *Review of Educational Research*, *77*(1), 81-112.

Nicol, D. J., & Macfarlane-Dick, D. (2006). Formative assessment and self-regulated learning: A model and seven principles of good feedback practice. *Studies in Higher Education*, *31*(2), 199-218.

Shute, V. J. (2008). Focus on formative feedback. *Review of Educational Research*, *78*(1), 153-189.

Wiggins, G. (2012). Feedback for learning: 7 keys to effective feedback. *Journal of Educational Leadership, 7*(1), 10-16.

G. Finally

The Instructional Skills Workshop is designed to be engaging in and of itself. However, it is also meant to act as a prompt for ongoing reflection and professional development. In order to get the most from the workshop experience, it is helpful to stop regularly (even for a short time) to document the process and record your impressions so that you can go back later to reflect at greater leisure.

Reflection Tools

The workbook (Part 2) contains a wide variety of tools for reflection:

- The exercises in Part 2F were designed to be used during the workshop – sometimes at the beginning or end of the day, sometimes as part of your reflections during the time between sessions. The section includes space to list goals and lesson topics, collect learning as you go, and much more.

- The questions in Part 2G were designed to encourage synthesis at the end of the workshop as you consider what you are taking away and what you plan to do as a result of this learning experience.

Many of these reflection tools can be used or adapted for other settings as well.

There are more resources here and online than you will have time to read during the workshop. This handbook, including the material in Part 3, is a resource that allows you to expand your learning back in your own setting.

We wish you well as you embark on this ongoing professional adventure.

H. Glossary of Teaching & Learning Terminology

A Word about Words

Although ISW was developed initially for post-secondary education instructors, ISW is now used in a variety of other settings. The following words may share many (but not all) characteristics, depending on the terminology used in your setting:

instructor-trainer-facilitator-professor-tutor-teacher • lesson plan-training plan
class-workshop-learning session-training session
classroom-learning environment • teaching-learning transfer

This section lists and provides brief definitions for some key terms related to teaching and learning that may come up in the workshop and/or that appear in this handbook. Most words have multiple meanings. This glossary clarifies the meaning of words as they relate to the ISW.[9]

Affective domain — learning based on emotions, such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. (One of the three Learning Domains associated with Bloom's Taxonomy)

Active learning — learner activity and engagement in the learning process.

Auditory learners — a learning preference associated with people who believe they learn most effectively through listening. An auditory learner depends on hearing and speaking as a main way of learning.

Assessment — different ways to monitor or measure learning (Assessment may take place formally or informally before, during, or after the learning process. It may be done by the facilitator of learning or the learner.)

Blended learning — generally refers to the blending or combining of online and in-person learning within a course, often replacing or enhancing in-class learning with online activities. (Also referred to as hybrid, flexible, or mixed-mode learning.)

Casual observer — someone who is present at an event but takes no active part.

Cognitive domain — learning based on mental and intellectual skills (thinking). (One of the three Learning Domains associated with Bloom's Taxonomy.)

[9] For more definitions of words used in the educational world, go to *The Glossary of Education Reform* (http://edglossary.org/)

Community colleges — In Canada, these are post-secondary institutions that offer academic, technical, applied arts, or applied science programs, as well as adult basic education and/or continuing education. They grant certificates, diplomas, and advanced diplomas.

Consolidate (consolidation) — to combine a number of things into a single more effective or more coherent whole.

Cooperative learning — requires learners to work together to achieve shared goals that are beneficial to individuals and the group.

Culture — shared beliefs, values, norms, symbols (and more) of a group or organization.

Discovery learning theory — inquiry-based learning that takes place in problem solving situations. The learner draws on his or her own past experience and existing knowledge to discover new facts and relationships.

Engagement — a state of being interested and involved.

Experimentation — the process of trying out methods, strategies, tools, and activities to discover how they affect learning.

Expressive outcomes — higher-order learning that requires learners to express, think, interpret, and create to achieve the stated standard.

Experiential learning — learning through the process of practice and reflection.

Facilitate — to make (something) easier; to help cause (something); to help (something) run more smoothly and effectively.

Facilitator — a person who guides and assists learners in learning for themselves.

Facilitator of learning — an individual who assists others in a learning process, acting as a guide during individual or group learning activities.

Icebreaker — a get-acquainted activity, game, or event that is used to welcome and warm up the conversation among participants.

Inquiry-based learning — a teaching approach in which groups of peers are involved in questioning, developing ideas, making observations, sharing their ideas, and supporting/ defending them. It often involves data collection and analysis, problem-solving, evidence-based reasoning, and the construction of hypotheses or models to explain what is being learned.

Instructional approach — an individual's overall way of teaching (such as instructional strategies and techniques, assessment, classroom management, and use of technology).

Instructional strategy — the plan used to achieve the overall learning outcome.

Instructional technique — a tool, device, or approach used to achieve a learning outcome.

Integration of learning — the demonstrated ability to link various skills and knowledge learned in a variety of contexts.

ISW lesson cycle — a workshop teaching/learning activity that includes the set-up and offering of a 10-minute lesson, followed by some reflection time and feedback to the instructor.

Learning-centred instruction — what happens in a learning environment when the focus shifts from "what the teacher is teaching" to the learners and the learning.

Learning contract — a written agreement negotiated between a learner(s) and an educator to clearly state the outcomes, the process, and evidence of accomplishment.

Learning culture — values, conventions, processes, and practices that encourage individuals to increase knowledge, competence, and performance.

Paraphrase — to say something that someone else has said or written using different words.

Participatory lessons — lessons involving the learner actively in the learning process.

Peer-based approach — learners learning with/from one another.

Problem-based learning — a teaching approach in which students learn about a subject through the solution of open-ended, complex, authentic problems that may not have a single solution (or any solution).

Professional reflection — improving professional skills through critically thinking about (or perhaps revisiting) a professional experience.

Provocative question — a question that leads to deeper thought, discussion, or creative thinking.

Psychomotor domain — learning based on thinking and motor skills (doing). (One of the three Learning Domains associated with Bloom's Taxonomy.)

Reflection — critically thinking about an idea or experience.

Reflective practitioner — an individual who routinely revisits practical experiences for the purpose of improving professional practice.

Strength-based — an approach that builds on strengths now and opens new possibilities for the future.

Teachable moment — an unplanned opportunity to facilitate learning. (Also called a “learning instant.”)

Trainers — individuals who provide instruction and practice so that other individuals can develop skills, attitudes, and behaviours (often outside of a post-secondary education setting). In the ISW Program, we use the word ‘trainer’ for someone who can lead the Facilitator Development Workshop (FDW).

Transmission of information — passing on facts or concepts to the learner.

Video-recording — recording an event to relive or assess the experience.

I. General Reference List

Part One contains many shorter lists of references and resources for particular topics. The following are additional key texts that you may wish to explore at some point:

Ambrose, S., Bridges, M. W., Lovett, M. C., DiPietro, M., & Norman, M. K. (2010). *How learning works: 7 research-based principles for smart teaching.* Jossey-Bass.

Bain, K. (2012). *What the best college teachers do*. Harvard University Press.

Bransford, J. D., Brown, A. L., & Cocking, R. R. (2000). *How people learn: Brain, mind, experience, and school.* Expanded ed. National Academies Press.

Butler, D. L., & Winne, P. H. (1995). Feedback and self-regulated learning: A theoretical synthesis. *Review of Educational Research, 65*(3)*,* 245-281.

Chickering, A. W., & Gamson, Z. F. (1987). Seven principles of good practice in undergraduate education. *AAHE Bulletin, 39*(7)*,* 3-7. https://files.eric.ed.gov/fulltext/ED282491.pdf

Howell, C., Harris, M. S., & Zakrajsek, T. (2016). *Teaching for learning: 101 intentionally designed activities to put students on the path to success.* Routledge.

Kerr, D. (2014). *The instructional skills program: A peer-based forum for improving teaching and learning.* Reciprocity Publishing.

Knight, P. (2002). *Being a teacher in higher education*. McGraw-Hill Education.

Lave, J., & Wenger, E. (1993). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

MacKeracher, D. (2004). *Making sense of adult learning* (2nd ed.). University of Toronto Press.

Pacansky-Brock, M. (2013). *Best practices for teaching with emerging technologies* (2nd ed.). Routledge.

Palmer, P. J. (2017). *The courage to teach: Exploring the inner landscape of a teacher's life (20th anniversary ed.).* Jossey-Bass.

Ramsden, P. (2003). *Learning to teach in higher education* (2nd ed.). Routledge.

Reiff, M., & Ballin, A. (2016). Adult graduate student voices: Good and bad learning experiences. *Adult Learning, 27*(2), 76-83. doi: 10.1177/1045159516629927

Schatzki, T. (2001). Practice theory. In T. Schatzki, K. Knorr-Cetina, & E. von Savigny (Eds.), *The practice turn in contemporary theory* (pp. 1-14). Routledge.

Shulman, L. S., & Wilson, S. M. (2004). *The wisdom of practice: Essays on teaching, learning, and learning to teach*. Jossey-Bass.

Tagg, J. (2003). *The learning paradigm college.* Anker.

J. Preview of Parts Two and Three

Part Two

Part Two is a workbook with lots of space for you to write if you choose.

Sections A to E: These sections will likely be used during the first part of the workshop as your facilitators introduce you to the core elements of a lesson and the basics of lesson planning. The sections go into more detail about the core elements, and contain exercises that you may be asked to complete during the workshop. This information can also be used as a reference when you prepare your own lessons.

Sections F and G: These sections contain exercises and questions that will assist you to reflect on your learning during and after the workshop.

Part 2A:	The Bridge-In
Examples, exercises, and resources to help extend your learning about the bridge-in.	
Part 2B:	Outcomes
Examples, exercises, and resources to help extend your learning about outcomes.	
Part 2C:	Pre- and Post-Assessments
Examples, exercises, and resources to help extend your learning about pre- and post-assessments.	
Part 2D:	Participatory Learning
Examples, exercises, and resources to help extend your learning about participatory learning.	
Part 2E:	Lesson Planning Templates and Samples
Samples, examples, and templates to assist you in lesson planning.	
Part 2F:	Workshop Reflections
Tools to help you reflect on your learning in the ISW and beyond.	
Part 2G:	Lessons Learned: Translating ISW into your Context
Reflection tools for helping you decide how you will take your ISW learning back into your own setting.	

Part Three

Part Three contains further information about topics that often arise during ISWs. Some material may be used during the workshop, while you may only get to some after the workshop ends.

Part 3A:	Responsive and Inclusive Teaching and Training
Information about addressing many of the forms of diversity you may encounter.	
Part 3B:	Further Information for Reflective Practitioners
Information about topics that often come up in ISWs. This information may be used within the workshop and/or may be of interest as you reflect on teaching and learning generally.	

The Instructional Skills Workshop (ISW) Handbook

Part Two: Workbook

April 2021

ISBN: [coming soon…]

Parts One, Two, and Three of this Handbook accompany the Instructional Skills Workshop Program and are not meant to be used as "stand alone" texts. ISW facilitators and trainers may use excerpts of the Handbook in their own teaching and learning contexts.

The ISW Executive Team requires that ISW facilitators or trainers request permission to translate the ISW Handbook into a language other than English.

Citation for the ISW Handbook:

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For further information visit:

https://www.iswnetwork.ca/

Table of Contents: Part Two

Reference Lists in Part Two

Research, Scholarship, and Resources

A Note About the Exercises in Part Two

Many exercises appear in the workbook, including one ongoing set of exercises that appears at some point in Sections A, C, D, and E. On the first day of the workshop as you learn about the core ISW lesson elements, you may be asked to build a lesson using these exercises as a prompt. Your facilitators may ask you to address one of the topics listed in the workbook or you may choose to work with your own topic and outcome.

A: The Bridge-In

In the ISW, we believe…

- in the strong connection between motivation and learning. Increased motivation leads to enhanced learning.
- in communicating "what's in it for the learners" as this can help them make good choices and take responsibility for their own learning.

Brief Introduction

The Bridge-In begins the learning cycle by gaining learner attention, building motivation, and explaining why the lesson is important.

Motivation is built when learners know that the topic and learning outcomes are important to them. At the beginning of the lesson, the bridge-in gains the learners' attention, encouraging them to connect in some way with the material. This part of the lesson may include one or more of the following:

- rationales that encourage listening and learning,
- a brief hands-on or other activity that helps learners identify how they will use the learning ("What's in it for me?"),
- information that relates to learners' previously expressed interests,
- a humorous and motivating account of a cautionary tale ("what not to do"),
- several surprising (and perhaps sobering) statistics,
- a short, powerful video or audio clip,
- the introduction of a provocative picture or prop that prompts interest or discussion,
- connection(s) to earlier lessons,
- a short, compelling story,
- thoughtful and challenging questions (rhetorical or answered),
- a short quiz about the subject that relates to the learners' interests.

Examples

Lesson Topic: **Basic Grammar in French Conversation for Beginners**

Learning Outcome: Create simple commands using common verbs.

Bridge-In:

"A review of some basic French grammar makes it possible to construct sentences rather than simply memorizing phrases. Not only will you be able to write more effectively, but you will also find conversation easier." (rationale plus reference to transferable skills)

Lesson Topic: **The Phenomenon of *déjà vu* in Introductory Psychology**

Learning Outcomes:
1. Explain the phenomenon of *déjà vu*.
2. Summarize three main scientific theories that have been offered to explain it.

Bridge-In:

"How many times have you found yourself in a situation thinking that you have experienced it — or something exactly like it — before? Let's find out more about what that's all about and why it may occur." (common realm of experience)

Lesson Topic: **Load-Bearing Walls in Carpentry**

Learning Outcome: Explain the difference between a load-bearing and non load-bearing wall.

Bridge-In:

"Yesterday in my first ISW lesson, you learned about framing and constructing walls. Today we are going to explore the differences between load-bearing and non load-bearing walls. Knowing the difference between these two walls can literally determine whether you will have a roof over your head or if it all will come crashing down!" (connection to previous material, rationale, and humour).

Lesson Topic: **Basic Knots in Sailing**

Learning Outcome: Without reference to a diagram, tie a secure bowline knot.

Bridge-In:

"Knowing how to tie the appropriate knot could mean the difference between finding your boat where you tied it up the next day— or NOT!" (rationale, possible prompt for a story, humour)

Ongoing Exercise

Identify two or three different ways to begin or bridge in to a lesson with one of these learning outcomes:

a) Explain the main similarities and differences between two kinds of food (e.g., red and green peppers, two kinds of rice, etc.)

b) List in order and explain the six steps to take when repairing a flat tire on a bicycle.

c) Explain what "universal design for learning" is and identify how it may relate to your role as a facilitator of learning.[1]

d) Demonstrate how to use an online loan or mortgage calculator to calculate the total cost of a loan or mortgage.

e) Identify and discuss the value of using story-telling to enhance learning.

f) Or feel free to choose your own topic and create an outcome for it.

[1] See https://www.washington.edu/doit/programs/center-universal-design-education/applications-universal-design-postsecondary-education

B: Outcomes

In the ISW, we believe…

- that clarifying our expectations respects our learners and can lead to greater learner independence and autonomy.
- that clarifying in our own minds what is important helps us with the planning and facilitation of the lesson.

Identification of outcomes is at the heart of the ISW lesson.[2] As a result, we have chosen to provide some context:

The Big Picture

In everyday language, terms such as aim, purpose, outcome, and goal are often used interchangeably. In a learning setting, these words have more specific meanings which will be different within various institutions and learning settings.

Overall Program Aim/Purpose

Often *aim* and *purpose* describe the most general intentions of a program or course—which can usually be stated in one or two sentences. For example:

- "This program prepares students for employment in the hospitality industry."

↓

General Outcome Statements

General outcome statements outline the learning achieved in several interrelated areas by the end of a program or course. These statements describe what a learner may get from a program or course. For example:

- "This program provides learners with opportunities to develop the knowledge, skills, and attitudes related to preparing the variety of desserts required in fine dining restaurants and in major hotels and convention centres."

↓

Overall Course Goals

A *goal* is somewhat more specific. For example, one goal statement (of several) in a dessert-making course might be:

- "By the end of this course, learners will prepare several different common types of pie."

[2] Significant parts of this section were created by Sally Heath and Bob Sproule. With their permission, we have used and/or adapted much of a piece of writing they did in 2016.

Learning or Expressive Outcomes

A *learning outcome* is a statement that specifies in some observable and/or measurable way what a learner will know or do or demonstrate by the end of a lesson or a series of lessons. An *expressive outcome* states the ability a learner will possess at the end of a learning process which often focuses on creative or evocative or unpredictable learning and in which learners express themselves in some way.

Outcomes are created when planning individual lessons and generally relate to a larger goal. For example, if a course goal is to prepare several different common types of pie, more specific learning outcomes might be to:

- bake an apple rhubarb pie (longer lesson) or
- describe the process for making pie pastry (shorter lesson).

More specific expressive outcomes might be that the learners will:

- consider which pies might taste best at the end of several different kinds of meals (longer lesson) or
- explore personal preferences related to whether pies should be accompanied by anything such as cheese or ice cream (shorter lesson).

Overall, some topics are more suited to specific performance-oriented *learning outcomes*, while others may be best suited to more process-oriented *expressive outcomes*.

Learning Outcomes

A learning outcome describes the learning intention by clarifying what the learner should be able to know, think, value, or do by the end of the lesson.

Benefits of Learning Outcomes

There are benefits to both the lesson designer/instructor and the learners in reflecting on and identifying the learning outcomes. This process:

- gives learners clear information for directing their learning efforts and monitoring their progress,
- signals what is important in the learning experience,
- provides a framework for selecting lesson content, activities, and assessments, and
- allows the instructor to reflect on the effectiveness of the lesson plan and design.

Limitations of Learning Outcomes

There is some debate, in the literature and among instructors, over the merit and limitations of the use of learning outcomes. Some argue that outcomes attempt to define the undefinable: the transformation or change that takes place in a learner as a result of exposure to new information or different ways of thinking about something. However, defining and articulating learning outcomes can help instructors to design lessons and learners to understand more clearly what they should be getting out of them.

In many instructional situations, the most powerful and enduring learning that takes place may not be articulated in the learning outcomes. And yet learning outcomes do not need to limit or restrict the learning that will take place; rather, they seek to define *some* of the identifiable changes in knowledge, skills, and attitudes that the instructor thinks are particularly important.

Elements of a Learning Outcome

The key to writing useful learning outcomes is to specify the desired learning accurately enough that recognition of learning is evident to both learner and instructor. Well-defined learning outcomes are concise, precise, and contain the following elements:

Audience – who is learning?

> Generally expressed as “the learner”, “the learners”, or “you.”

Behaviour – what do you want the learners to do?

> Specifies *what* the learner will have accomplished, and/or what the learner will do to demonstrate learning. This part must contain an action verb (e.g., “explain the circulatory system” rather than “understand the circulatory system”).

Conditions – under what conditions will learners be assessed?

> Identifies and sets parameters for the performance, that is, how it is evaluated (e.g., “freehand with tracing paper” or “working with a partner” or “given the necessary tools”).

The outcome may also include:

Degree – what level of performance is expected?

> Sets the expectations for mastery, that is, how well it is measured (e.g., “with no more than three errors,” “with 80% accuracy,” or “chewy, three-inch diameter, golden-brown, no burns or scorches”).

Examples of Learning Outcome Statements

Example 1: By the end of Unit 2, you will be able to list the eight parts of speech.

Audience: you (the learner)
Behaviour: list parts of speech
Conditions: By the end of Unit 2
Degree: all eight

Example 2: Without reference to the chart, you will be able use a ten-step process to put on a pair of sterile gloves so that they fit properly and are not contaminated.

Audience: you (the learner)
Behaviour: use a ten-step process to put on a pair of sterile gloves
Conditions: without reference to the chart
Degree: fit properly and are not contaminated

Example 3: On an end-of-unit quiz, the learner will explain at least six major effects of World War II on the political, economic, and social life in Great Britain (two effects in each area).

Audience: you (the learner)
Behaviour: explain major effects of World War II on the political, economic, and social life of Great Britain
Conditions: on a quiz
Degree: at least two effects in each area – social, economic, political

The SMART Principle[3]

Although it is not applicable to every situation, the SMART Principle can be used to provide some guidance on the construction and evaluation of learning outcomes. SMART learning outcomes are specific, measureable (or observable), attainable, relevant, and time-bound.

Specific: The language used in learning outcomes should be specific, clear and direct, generally with one verb. Avoid listing several verbs in one outcome (e.g., "*Recognize*, *differentiate*, *explain*, and *evaluate* the results of the experiment.")

Measureable (or Observable): In most cases, outcomes should be measurable in that an observable behaviour on the part of the learner demonstrates that the outcome has been achieved. Although there are exceptions, most resources on learning outcomes will suggest avoiding verbs or phrases such as *understand*, *know*, *be aware of*, *learn*, *be familiar with*, or *grasp.* Outcomes using these verbs are often unclear and difficult to measure or observe.

Attainable: Learning outcomes should be achievable by the learners given their previous knowledge and experience and the time frame of the lesson. For instance, an appropriate outcome for some learners would be to *locate* credible journal articles from within their

[3] The origin of "SMART" has been variously attributed and has come to mean different things depending on how it is being used, including goal-setting, feedback giving, project management, and more.

discipline, while after further learning, they might be expected to *critically evaluate* journal articles from within the discipline.

Relevant: Learning outcomes should reflect what is most important or valued in the lesson.

Time-bound: In some versions of the SMART Principle, the "T" also stands for time-focused or timely; but in all cases, this means that the learning outcomes should be achievable by learners by the time the lesson is complete (although further assessment may follow in some situations).

Not all of the SMART principles will apply to every learning outcome, but these criteria can be useful to keep in mind when assessing outcomes you have written. In addition, keep in mind that striving for alignment between outcomes, activities, and assessments is a continuous process. Identifying a well-worded outcome, the specific activities that will best lead to the assessment, and the assessment that most correctly demonstrates what has been learned will not be achieved in one iteration.

Expressive Outcomes

An expressive outcome describes higher order learning in which student expression, thinking, interpretation, creativity, and so on are primary concerns.

Expressive outcomes describe situations in which anticipated student learning is not as prescriptive or predictable as are the situations described by more traditional performance or learning outcomes (e.g., situations where an outcome describes the attitude a person needs to develop related to effective customer service or safety or dental chair-side manner). Expressive outcomes are often found in the liberal arts, social sciences, fine arts, and other academic areas. And they are often used in learning related to working with people, including medicine, conflict resolution, counseling, team building, and so on.

Examples of Expressive Outcome Statements

- Advocate and support your views on how to address learning preferences effectively.
- Develop a policy statement for dealing with late arrivals and absences at work.
- Use monochromatic watercolour paints to evoke a mood of joy.
- Describe changes in your values regarding learning during your life.
- Design a device that will close and seal envelopes.
- Use the criteria from Chapter 8 of the text to assess the important messages in an advertising brochure for a new social media tool.
- Intervene effectively with an angry customer.
- Review and critique Chapter 10.
- Describe your feelings as evoked by the poem on page 12 of your text.

NOTE: Expressive outcomes may not be measurable in the same way that learning outcomes are. But these outcomes are still about "what" is to be learned, not how the learning will

happen. They should include observable action verbs or verbs that convey information about expectations related to the learning.

A Checklist for Developing Outcomes

Consider the following questions when reviewing a learning or expressive outcome:

- Does it contain an *action verb* that conveys important information to the learner?
- Is it written *concisely*?
- Does it use language that will be *understandable* and *meaningful* to learners?
- Is it *realistic* given the length and scope of the instructional sequence?
- Is it *attainable* based on your learners' previous knowledge and experience?
- Is it important that the outcome is *measurable* or *observable*? If so, is it?

Exercise

From the following topics, select one that is suited to a lesson using an expressive outcome and one that is suited to a more performance-oriented learning outcome.

- Selecting a restaurant for a large group travelling together;
- How to make an origami crane;
- Strategies to address the challenge of someone who keeps interrupting in a meeting;
- Direct and indirect causes of famine in African countries in the twenty-first century;
- Safety inspections before entering a vehicle;
- Learner feelings in response to a particular poem;
- Legal and ethical issues related to client confidentiality in the counseling profession;
- The correct use of a fire extinguisher.

Consider what part of the topic might be addressed in a 30-60 minute lesson. How about in a 10-minute lesson? Write clear learning outcomes and expressive outcomes for these topics. Notice changes that you make when you increase or reduce the amount of instructional time.

Topic:

Learning outcome for a longer lesson:

Learning outcome for a shorter lesson:

Topic:

Expressive outcome for a longer lesson:

Expressive outcome for a shorter lesson:

CARD: Elements of a Lesson Using Expressive Outcomes

A lesson with an expressive outcome generally contains four components with the acronym *CARD*. Working with the CARD model reminds us that we need to prepare for reflection as intentionally as we prepare for action.

Context: The first part of the lesson puts the learning event into a particular perspective, focusing learner attention and stating intention. The context may also set the stage, clarify the intention, and set the parameters of the experience. This context will generally be clarified during the Bridge-In, Outcome, and/or Pre-Assessment sections of the lesson.

E.g., The instructor might explain that maps are a visual representation of the landscape. Some cultural stakeholders have been marginalized in the process of standardizing maps.

When developing the *Context*, consider and include the following points, as appropriate:

- What is the expressive outcome?
- What background or introductory information is required? What do learners need to be reminded of? Prepare for?
- What are the parameters? Are there group norms or agreements? Frames of reference?
- Why do we need to do or know this? What aspects of learner motivation need to be considered?
- How will the session unfold? What are the directions, guidelines, processes for the session?
- How does the physical space need to be arranged? How will the appropriate atmosphere/climate for learning be created and sustained?

Activity or Learning Event: The learning activity in this kind of lesson will typically be an exercise or activity which involves judgment and values. The focus here is on how learning occurs rather than what will be learned.

E.g., The instructor might ask the group to discuss conventional maps from the viewpoint of First Nations/Indigenous peoples.

When deciding on the *Activity*, ask yourself:

- What activity will prompt or evoke or facilitate the required reflection related to learning?

Reflection*:* During the post-assessment and summary section of the lesson, a process is introduced which allows learners to reflect on the experience in order to realize, generate, or articulate their insights. This may include journal writing, small group discussion, or some other reflective activity that may result in documentation or the creation of artifacts the learner takes away from the experience.

When developing the *Reflection* section, consider a sequence of questions used to start and facilitate the reflective process:

- What happened?
- What did you think? How did it feel?
- What did you learn?
- What will you now do?

Documentation: In this component, participants and/or instructor summarize the insights and implications gained during the rest of the lesson.

When designing the *Documentation* section, ask yourself:

- What, if anything, will the learners take away from the session?

See *Sample Lesson Plan D* in Section E of Part Two for an example of a lesson plan that uses CARD.

NOTE: You will find more information related to outcomes in the section about taxonomies and domains in Part Three.

And Finally…

The focus of this section (Section B of Part Two) has been on the *instructor* identifying and articulating the intended learning outcomes of an instructional sequence; however, a truly learning-centred approach will provide an opportunity for learners to reflect on and identify their own individual learning needs. Providing space and asking learners to identify their desired outcomes at some point in the lesson:

- demonstrates respect and inclusion for the learner,
- encourages participation and a commitment to learning,
- stimulates self-awareness and metacognition, and
- provides useful information to the instructor about the learners.

Research, Scholarship, and Resources (Outcomes)

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C: Pre- and Post-Assessments

In the ISW, we believe…

- that we make good instructional choices (and perhaps adjust our plans) when we find out what learners already know.
- that we should respect our learners' time by neither boring nor overwhelming them.
- that finding out what learners come away with helps us to decide what's next for the learners and for ourselves.

Pre-Assessment

Overall, the Pre-Assessment formally or informally answers the question: What does the learner already know about the subject of the lesson?

Determining what learners already know or can do in relation to the outcome helps the instructor decide where and how to start with a particular group of learners. Some learners come with considerable prior knowledge, experience, and expertise. Some come with very little. Some may know about one aspect of a course or topic, but not about another.

If learners already know the material well, they may become bored. If the material is too difficult, they are likely to become confused, frustrated, or unable to follow. Even with formal pre-assessments or in courses with clear pre-requisites, the instructor may still discover that the learners are "all over the map" in the knowledge and skill they bring to each topic or unit of instruction.

The pre-assessment answers one or more of these questions that relate to the lesson's learning outcome:

- What do the learners already know?
- What can they already do?
- How do they already feel?
- What are their present attitudes?

In a short lesson, it is tempting to ask a simple question that addresses the topic very generally (e.g., "Have you all used a knife when preparing a meal?"). However, ideally a pre-assessment will go further and establish prior learning that relates specifically to the outcome (e.g., "Who here has used a utility knife to cube an onion? What were some of the challenges?").

Although the pre-assessment may sometimes lead to "surprises" about learners' levels of readiness for the lesson, it is better to be surprised at the beginning of a lesson, when adjustments can still be made.

Designing Pre-Assessments

Depending on the outcome, it is often useful to design a pre-assessment that includes open-ended questions that cannot be answered with a simple *yes* or *no*. For example, if the outcome is about identifying a variety of sailing vessels, "What kinds of vessels have you sailed in?" is a more useful pre-assessment question than "Have you ever sailed before?" which may lead to a simple yes or no response. Open-ended questions allow learners to add their experiences to the lesson, while enhancing participation and learner engagement.

The pre-assessment may be an informal question and answer process. Or it might be a more formal test or task given to all students. Pre-assessment strategies might include:

- A trial attempt prior to instruction for psychomotor skills, or concept-specific terms, details, and formulae (e.g., "Demonstrate the correct grip on a golf club." "Write the formula for sulphuric acid.")
- A gathering of the collective knowledge of the group around the lesson topic (e.g., "What do you know already about the political situation in Kosovo?" "What does anyone here remember about Newton's first law?" "What comes to mind when you hear the word "arthritis"?" "When people are experiencing high levels of stress, what are some possible coping strategies?")
- A quick online survey that assesses learners' present knowledge.
- Brainstorming (e.g., "What are the things you'd need to consider in setting up a daycare?" "What problems might a small business run into if it doesn't manage its accounting well?" "How might a facilitator use the arts or arts-based tools when building community in small groups?")

Post-Assessment

Overall, the Post-Assessment formally or informally demonstrates whether the learner has learned enough to meet the outcome outlined earlier in the lesson.

The post-assessment matches the level and kind of desired learning established at the beginning of the lesson. For example, if the lesson is an introduction to terminology, an appropriate post-assessment could be a matching or sentence completion exercise. If the lesson focused on doing something, the post-assessment is generally directly related to a performance (sometimes a partial performance or a simulated one). Expressive outcomes are assessed mainly by reflection on the experience, often by the learners themselves. This could include writing a paragraph on the relevance of the lesson for me or discussing the possibilities or limitations of a novel approach or point of view.

The post-assessment may provide a great deal of information, but it is generally designed to answer two questions: What did the learners learn? Were the outcomes met?

The post-assessment may be an informal question and answer process. Or it might be a more formal test or task given to all students. Post-assessment strategies might include:

- A demonstration of learning for instruction in psychomotor skills or concept-specific terms, details, and formulae (e.g., Please show me the correct grip for a golf club. or Please use the formula for sulphuric acid to work through the material on this page.).
- An quick online survey that assesses their knowledge at the end of the lesson.
- A gathering of the current collective knowledge of the group about the outcome (e.g., What do you now know about the political situation in Kosovo that you didn't know before? or Tell me everything you now know about Newton's first law? or Please tell me the six most common types of *arthritis*? or Which coping strategies do you think you will find most useful? Which are less appealing and why?).

Pre- and Post-Assessment Options

There are many ways to assess learning before and after the lesson[4], including:

Basic knowledge and thinking (knowledge recall and comprehension)
• Multiple choice or true/false quizzes • Matching exercises • Completion exercises • Short written answer questions • Short verbal answer (if testing through oral or interview format)
Higher level thinking (application, analysis, evaluation, and creation)
• Problem solving tasks • Essays, critiques • Analysis of a scenario • Role plays and simulations
Skills (doing)
• Performance or demonstration • Checklists • Rating scales • Products or examples of production using the skill(s) • Role plays and simulations
Attitudes and values
• Completing attitude scales • Performing a task • Writing essays, journals, and other personal reflection pieces • Presenting artifacts

[4] Some pre- or post-assessments may be done using technology, while others will be "low-tech."

Examples

Lesson Topic: **Basic Grammar in French Conversation for Beginners**

Lesson Outcome: Create simple commands using several common verbs.

Pre-assessment:

Do you know how to say the following in French? If so, please say: “Sing me a song!” “Open the window!“

Post-assessment:

Let’s take the list of commands in this handout and see how you all do. Each learner is asked to translate one into French. An English/French dictionary of words has already been provided.

Lesson Topic: **The Phenomenon of *déjà vu* in Introductory Psychology**

Lesson Outcomes:
1. Describe the phenomenon of *déjà vu*.
2. Summarize three main scientific theories that have been offered to explain it.

Pre-assessment:

Have you heard of *déjà vu*? What do you think it means? Can you think of an example of *déjà vu*? Do you know what the scientific community has to say about this phenomenon?

Post-assessment:

Based on what we have discussed, imagine you have been asked to explain the three theories that have been proposed to explain *déjà vu*. The explanation for each theory is limited to a 280 character tweet in a Twitter post. What would you say in each of your three tweets?

Lesson Topic: **Load-Bearing Walls in Carpentry**

Lesson Outcome: Explain the difference between a load-bearing and non load-bearing wall.

Pre-assessment:

What do you already know about load-bearing walls? Do you know the difference between them and non load-bearing walls? What are some of the differences?

Post-assessment:

This chart [partially filled in] compares the two types of walls. In pairs, please fill it in now using the ideas we discussed…. How did you do? What questions do you have?

Lesson Topic: **Basic Knots in Sailing**

Learning Outcomes: Without reference to a diagram, tie a secure bowline knot.

Pre-assessment:

Have you ever tied a bowline knot? Do you think you could today? Have you heard its nickname?

Post-assessment:

Let's have you tie a bowline without looking at the diagrams and see how you do.

Ongoing Exercise

Identify at least two different ways to do a ***pre**-assessment* for one of the following outcomes.

Identify at least two different ways to do a ***post**-assessment* for one of the following outcomes.

a) Explain the main similarities and differences between two kinds of food (e.g., red and green peppers, two kinds of rice, etc.)

b) List in order and explain the six steps to take when repairing a flat tire on a bicycle.

c) Explain what *universal design for learning* is and identify how it may relate to your role as a facilitator of learning.[5]

d) Demonstrate how to use an online loan or mortgage calculator to calculate the total cost of a loan or mortgage.

e) Identify and discuss the value of using story-telling to enhance learning.

f) Or feel free to choose your own topic and outcome.

[5] See https://www.washington.edu/doit/programs/center-universal-design-education/applications-universal-design-postsecondary-education

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D: Participatory Learning

In the ISW, we believe…

- that engagement enhances motivation and learning.
- that people learn from each another, not just from the instructor.

Brief Introduction

Participatory Learning involves the learners actively in the learning process. This intentional sequence of activities or learning events helps the learners achieve the desired learning outcome.

Learners understand and remember concepts by testing, exploring, and mentally manipulating them. A number of educational theorists propose that each learner personally constructs his or her own knowing. This suggests that the most effective learning may occur when, through personal interaction with the content or materials, each person actively creates his or her own set of knowledge, skills, and values. Only by engaging with the material or task can most students experience learning that lasts.

Some formal learning approaches are inherently participatory, including cooperative learning, inquiry-based learning, and problem-based learning. Other approaches incorporate participation in more informal ways. For many, phrases like *active learning* and *participatory learning* imply movement, noise, and busyness. However, while learner activities like thinking and writing can both be highly active and participatory, they may also be relatively still and quiet. Thus, at any given moment in a lesson, participatory learning may sound noisy to silent, and look physically active to completely still.

In any case, some learners will not have had much experience with it. So when using participatory strategies, instructors will want to consider how to introduce activities with care, while offering explanations for the use of this approach that fit with learners' values.

Examples

Lesson Topic: **Basic Grammar in French Conversation for Beginners**

Learning Outcome: Create simple commands using common verbs.

Participatory Learning:

Demonstrate how to make a verb into a command. The group then works to combine two command verbs with two objects (e.g., "Pass the bowl." "Eat the apple."). Then offer each learner an item from each of two *salad bowls*. One bowl contains verbs. The other contains objects. Pairs combine the *salad* items they received.

Lesson Topic: **The Phenomenon of *déjà vu* in Introductory Psychology**

Learning Outcomes:
1. Explain the phenomenon of *déjà vu*.
2. Summarize three main scientific theories that have been offered to explain it.

Participatory Learning:

The instructor introduces the phenomenon and explains how it is experienced. Each of three pairs then receives a handout outlining one of the theories. They become "experts" in that theory, asking questions if needed. The pairs split up and join one of two groups of three. Each group now has one expert on each theory. The experts explain the theories to the others. Finally, the instructor makes sure that all learners have all three handouts.

Lesson Topic: **Load-Bearing Walls in Carpentry**

Learning Outcome: Explain the difference between a load-bearing and non load-bearing wall.

Participatory Learning:

The learners watch as the instructor uses a small "model" home to show the differences between the two types of walls. The instructor then asks the learners to identify both types of walls in a new model. As they point out the various walls, they must explain whether that wall is load-bearing or not and why.

Lesson Topic: **Basic Knots in Sailing**

Learning Outcomes: Without reference to a diagram, tie a secure bowline knot.

Participatory Learning:

The instructor demonstrates how to tie a bowline using a memory aid acronym. The learners then practise tying the knot using a piece of rope while the instructor does it at the same time. Finally, each learner is given a small plastic boat with a rope. They must tie it with a bowline knot to a wharf that emerges from a bucket of water. The instructor tries to pull the boats from the wharf. If the knot holds, the learner gets to keep the boat.

Search Strategies: Participatory Learning

The following search terms may be helpful:

- student engagement
- active learning
- participatory learning
- collaborative learning
- cooperative learning

You may wish to combine one or more of these terms with the term “teaching and learning” or “teaching and learning centre (or center).”

The information available on this topic is potentially overwhelming. During the workshop your facilitator may offer you a list of activities or point you to a favourite site on the web. Before reviewing lists of active learning strategies, consider the criteria you want to use to assess the options. This might include activities suitable for:

- large classes
- rooms with fixed furniture
- online learning settings
- both introverts and extraverts, etc.

These criteria might become a part of the search strategy and could also be used to narrow down the options you find.

Ongoing Exercise

Identify at least two different ways to encourage participatory learning in lessons with one of these learning outcomes:

a) Explain the main similarities and differences between two kinds of food (e.g., red and green peppers, two kinds of rice, etc.)

b) List in order and explain the six steps to take when repairing a flat tire on a bicycle.

c) Explain what "universal design for learning" is and identify how it may relate to your role as a facilitator of learning.[6]

d) Demonstrate how to use an online loan or mortgage calculator to calculate the total cost of a loan or mortgage.

e) Identify and discuss the value of using story-telling to enhance learning.

f) Or feel free to choose your own topic and outcome.

[6] See https://www.washington.edu/doit/programs/center-universal-design-education/applications-universal-design-postsecondary-education

Research, Scholarship, and Resources (Participatory Learning)

"There IS evidence that active learning, student-centered approaches to teaching physiology work, and they work better than more passive approaches." (Michael, 2006, p. 165)

Bean, J. C. (2011). *Engaging ideas: The professor's guide to integrating writing, critical thinking, and active learning in the classroom.* Jossey-Bass.

Brookfield, S. D., & Preskill, S. (1999). *Discussion as a way of teaching: Tools and techniques for democratic classrooms* (2nd ed.). Jossey-Bass.

King, A. (1993). From sage on the stage to guide on the side. *College Teaching, 41*(1), 30-35.

Michael, J. (2006). Where's the evidence that active learning works? *Advances in Physiology Education, 30*(4), 159-167.

Michaelsen, L. K., Knight, A. B., & Fink, L. D. (Eds.). (2002). *Team-based learning: A transformative use of small groups*. Stylus Publishing.

Prince, M. (2004). Does active learning work? A review of the research. *Journal of Engineering Education, 93*(3), 223-231.

Ritchhart, R., Church, M., & Morrison, K. (2011). *Making thinking visible: How to promote engagement, understanding, and independence for all learners*. Jossey-Bass.

Strobel, J., & van Barneveld, A. (2009). When is PBL more effective? A meta-synthesis of meta-analyses comparing PBL to conventional classrooms. *Interdisciplinary Journal of Problem-Based Learning, 3*(1), 44-58. Retrieved from https://doi.org/10.7771/1541-5015.1046

Weimer, M. (2013). Responding to resistance. In *Learner-centered teaching: Five key changes to practice* (2nd ed., pp. 199-217). Jossey-Bass.

E: Lesson Planning

In the ISW, we believe…

- in the connection between planning and instructor confidence/competence.
- that we respect ourselves and others by doing what we can to build our confidence/ competence.
- that the practice of documenting our plans and the reality of what we did helps us to reflect and adapt.

Brief Introduction

After examining the core elements of a lesson, it's time to put them together into an overall lesson plan which helps you prepare, but can also be used as guidance while you offer the lesson.

There is no universally accepted template for lesson plans, nor is there a standard list of lesson plan elements. However, in order to capitalize on the power of having a shared vocabulary, ISW facilitators ask participants who are addressing a learning outcome to include the six ISW lesson components in their lesson plans during the workshop: bridge-in, outcome, pre-assessment, participatory learning, post-assessment, and summary/closure. They will encourage participants who are working with expressive outcomes to try the CARD method of lesson planning.

You choose what else will appear on your lesson planning sheet. This might include resources to bring, timing, questions and prompts, and so on.

There will almost certainly be more detail within the participatory learning section of your plan, often including at least the order in which material will be introduced. Depending on the topic and the focus of your lesson, each of the following sequence patterns could be effective:

- simple to complex,
- more known to less known,
- abstract to concrete (or the reverse),
- chronological,
- global to specific (or the reverse),
- random (determined by learner input or answers),
- other…

Questions to Help Guide Your Lesson Planning

- What is the topic or title of the lesson?
- What is the purpose of the lesson? By the end of this lesson, what will participants be able to know, do/demonstrate, or value?
- Why should participants learn this? What will you do to support motivation for learning?
- How does this lesson connect to what has been learned before? How will you determine what participants already know, or can do, or value? What pre-assessment may be required?
- How will you introduce and outline what will happen in the lesson? How will the material be presented? What techniques are best suited to achieve the outcome?
- What would you expect to see the participants doing during the lesson? What will you be doing?
- What sequence of learning activities makes sense?
- What instructional media, equipment, and/or other resources do you need?
- How do you plan to use the time? How much time does each part of the lesson require?
- What will you do to find out what participants have learned or to provide feedback on their performance and participation?
- How will you end the lesson?

Some instructors bring paper copies of their lesson plans into the teaching environment (and your facilitators may ask you to do so). Others avoid printing/paper costs by using a computer or smaller device during both the planning and the delivery of the lesson. The samples on the following pages are designed with the ISW experience in mind. Two are short lessons, while two are included to demonstrate how lesson plans can be used for longer lessons.

A Note About Alignment

There should be a clear, specific, and explicit connection among all the lesson elements and the outcome. When developing a lesson plan, it can be helpful to identify the outcome first. Then you can pay particular attention to aligning the bridge, assessments, and learning strategies with the learning or expressive outcome.

Sample 10-Minute Lesson Plan (using Template A)

Course:	Sailing 101
Lesson Topic:	Basic Knots in Sailing – the bowline
Resources/Materials to Bring:	6-8 lengths of rope, handout, and PowerPoint

Bridge-in: **Bridge-In** (.5 min)

"Knowing how to tie the appropriate knot could mean the difference between finding your boat where you tied it up the next day – or NOT!" [Show photo of an empty boat floating in the middle of a body of water.] "That seems like a good idea, right?" [Response.]

Learning Outcome (.5 min)

By the end of this lesson, you will be able to tie a secure bowline without reference to a diagram.

Pre-Assessment (1-2 mins)

"Who has tied a bowline knot before?" If yes, ask them to demonstrate. If successful, ask them to be the experts who will partner with someone who hasn't tied a bowline knot before.

Participatory Learning (4-5 mins)

Instructor Activity	Learner Activity	Time*
Demonstrate, highlighting the important steps.	Learners watch.	1 m
Pass out handout with simple instructions (which are also projected in a PowerPoint slide). Ask learners to tie the knot at the same time as the instructor. Ask the experts to observe and support others.	Learners tie knots. Experts work with new learners.	1-2 m
Ask learners to do it on their own. Instructor circulates to observe and offer assistance. Encourage them to try at least once without looking	Learners tie the knot several times.	2 m

Post-Assessment (1-3 mins)

"Do you think you can do it now on your own without using the diagram?" If yes, learners are invited to try it on their own. If no, they are given time for further practice or encouraged to follow up after the lesson. Instructor watches and only intervenes if necessary.

Summary/Closure (1 min)

Now you can secure your boat. What a relief!
Next up: several other knots that you will need as you begin your sailing adventures.

* The times for individual parts of this lesson add up to 8 to 12 minutes. Depending on what happens, adjustments may need to be made to fit into the 10-minute time frame.

Sample 10-Minute Lesson Plan (using Template B)

<table>
<tr><td colspan="2">Lesson Title: Senior-Friendly Text Design</td><td>Resources

PowerPoint,
handout</td><td>Time

10</td></tr>
<tr><td colspan="3">Bridge-In: Briefly mention some of the physical changes that can pose challenges for some senior readers. “Addressing these in your print materials will reduce frustration, while making your materials easier to understand and remember.”</td><td>1</td></tr>
<tr><td colspan="3">Pre-Assessment: “What do you think are some key considerations when making decisions about how to deal with text in print materials that seniors will be reading?” List responses on a whiteboard or flip chart.</td><td>1</td></tr>
<tr><td colspan="2">Learning Outcome: You will be able to explain at least six important considerations to keep in mind for seniors when making decisions about how to deal with text in print materials.</td><td>PowerPoint
Slide #1</td><td>.25</td></tr>
<tr><td colspan="4">Participatory Learning:</td></tr>
<tr><td>Instructor Activities</td><td>Learner Activities</td><td colspan="2"></td></tr>
<tr><td>Identify the six considerations (colour, contrast, line length, typeface, font size, white space). Go back to pre-assessment list to identify some. Reveal the others on PowerPoint (PPT). Acknowledge others that have come up which aren’t on the list of six.</td><td>Reflect on the two lists.</td><td>PowerPoint
Slide #2</td><td>1</td></tr>
<tr><td>Use PPT to introduce each consideration. Ask learners to predict what they think is likely appropriate (e.g., “What size font do you think would be ideal?”).</td><td>Answer questions about predictions.</td><td>PowerPoint
Slides #3-8</td><td>2</td></tr>
<tr><td>Give learners some text on a page and ask them to identify strengths and weaknesses in relation to seniors’ needs.</td><td>In dyads or triads, discuss strengths and weaknesses.</td><td>Handout</td><td>2</td></tr>
<tr><td>Review answers. “How did you do?”</td><td>Groups report on their success.</td><td></td><td>1</td></tr>
<tr><td>Post-Assessment: Ask group to close books/papers. Ask for volunteers to explain each of the six considerations.</td><td>Volunteers explain.</td><td></td><td>1.5</td></tr>
<tr><td colspan="3">Summary/Closure: This is good design for seniors. But remind them that as with all good design, it can be helpful for others too.</td><td>.25</td></tr>
</table>

Sample 50-Minute Lesson Plan (using Template C)

<table>
<tr><td colspan="3">Lesson Title: Psychology 101: Neurons, Glia, and the Blood-Brain Barrier[7]</td><td>Time: 50 mins
Date:</td></tr>
<tr><td colspan="4">Outcomes: Students will correctly differentiate between neurons and glial cells and be able to describe the types and functions of glia. In addition, the students will be able to describe the structure, function, and role of the blood-brain barrier.</td></tr>
<tr><th>Time</th><th>Instructor Activities</th><th>Learning Activities</th><th>Resources</th></tr>
<tr><td>2 m</td><td>Explain overall rationale for learning this and the outcome.</td><td>Listen.</td><td></td></tr>
<tr><td>5 m</td><td>Review parts of neuron from last lecture. Ask them to identify differences between neurons and glia.</td><td>Discuss differences between neurons and glia.</td><td>Handout #4 - Glial Functions (Text: Biological Psych)</td></tr>
<tr><td>1 m</td><td>Distribute handouts. Ask if learners can describe the types and functions of glia.</td><td>Review diagram types of glia.</td><td>pp. 24-38. Brooks/Cole</td></tr>
<tr><td>2 m</td><td>Explain importance of knowing about different types of brain cells and blood-brain barrier.</td><td>Listen.</td><td></td></tr>
<tr><td>15 m</td><td>Explain the differences between neurons and glia using PowerPoint slides and diagrams in handouts.</td><td rowspan="2">Discuss roles of glial types within the nervous system.</td><td rowspan="2">PowerPoint slides # 17, 18, 19 of neurons and glial cells</td></tr>
<tr><td>15 m</td><td>Discuss roles of different types of glia in the nervous system.</td></tr>
<tr><td>5 m</td><td>Lecture - blood-brain barrier. Use PowerPoint to explain the function and structure. Using the diagrams, illustrate the structure of the blood-brain barrier and describe its function.</td><td>Listen.</td><td>PowerPoint slides # 20, 21 of blood-brain barrier</td></tr>
<tr><td rowspan="2">5 m</td><td>Use think-pair-share to review the lecture.</td><td rowspan="2">Think, talk, report.</td><td rowspan="2"></td></tr>
<tr><td>Assign homework - read pages 39-54.</td></tr>
<tr><td colspan="4">Comments: Don't forget to bring the article I mentioned about glial cells and multiple sclerosis.</td></tr>
</table>

[7] Adapted and reprinted from Provincial Instructor Diploma Program Course 102A.

Sample 50-Minute Lesson Plan (Expressive – Using CARD)[8]

Lesson Title: Reflective Practice in the Learning Community

Context: Instructor presentation (10 - 15 minutes)

Expressive outcome: Describe how reflective practice helps us respond to changes in the learning community.

Highlight personal and participant examples of several contemporary issues and concerns that seem to be in the forefront of current teaching and learning activities: e.g., outcomes and authentic assessment, brain-based learning, online learning, diversity and inclusion, construction of knowledge, troubled and troublesome learners, collaborative learning, PLAR (Prior Learning Assessment and Recognition), and so on.

Note the paradox: In educational environments characterized by a focus on learning and on the diversity and individuality of learners, the educational organization is increasingly facing the need to respond to learners and learning from an integrated perspective; i.e., in order to respond to individual learners, the educational organization must respond as an integrated *learning community*. For example: To meet the challenges for "just in time" online learning, the educational organization must respond in increasingly integrated ways – registrars, instructors, course developers, counsellors, instructional technology service providers, administrators, etc must have their act together.

And so, what are implications for teaching and for teachers? Can concepts of reflective practice provide a way to respond effectively in the midst of changing educational environments?

Activity: Small group discussion (20 minutes)

In a small group, clarify terms used in learning models like the ISW Lesson Core Elements. (Ask if they have come across other learning models.) Provide examples illustrating application of learning models.

Offer these questions:

- Do these models adequately reflect shifts you have seen in learners and the learning process?
- What changes are implied for those who teach or train?

[8] This lesson plan is adapted from Tickner, D. (2002). *Working with an expressive outcome using the CARD method (Context/Act/Reflect/Document)*. Unpublished paper, Vancouver Community College, Vancouver, Canada.

Reflect: Sequence of "starter" questions/anticipated discussion flow (20 minutes)

Debriefing questions:

- What are one or two highlights that each small group would report from their discussion?
- On what topics or issues did people get most interested, energetic, stimulated?
- Why? What was the issue? Did other groups experience this? Any comments?
- How would you begin to talk about teachers and teaching in the context of a "learning community"? What characteristics/essential abilities of effective teachers are highlighted; e.g., abilities to reflect?
- What are some implications for you personally? What do you see yourself paying more attention to in your work with students?

Document: (2 minutes)

Each participant will summarize the insights and implications gained during the presentation and discussion.

NOTES

Ongoing Exercise

You will find a variety of lesson plan templates on the pages that follow. Review the work that you did in the exercises in Sections A, C, and D in this workbook. Then fill out one of the templates (or create your own) to develop a lesson plan for one of the following outcomes. (Your facilitator will talk with you about how long the lesson is to be.)

a) Explain the main similarities and differences between two kinds of food (e.g., red and green peppers, two kinds of rice, etc.)

b) List in order and explain the six steps to take when repairing a flat tire on a bicycle.

c) Explain what "universal design for learning" is and identify how it may relate to your role as a facilitator of learning.[9]

d) Demonstrate how to use an online loan or mortgage calculator to calculate the total cost of a loan or mortgage.

e) Identify and discuss the value of using story-telling to enhance learning.

f) Or feel free to choose your own topic and outcome.

[9] See https://www.washington.edu/doit/programs/center-universal-design-education/applications-universal-design-postsecondary-education

Lesson Plan Template A

Course: **Title:**	**Date:**
Bridge-in:	
Learning Outcome:	
Pre-Assessment:	**Materials:**

Participatory Learning:

Time	Instructor Activities	Learner Activities	Resources

Post-Assessment:
Summary/Closure:
Notes for Next Time:

Lesson Plan Template B

Lesson Title:		**Resources**	**Time** (mins)
Bridge-In (motivation)			
Pre-Assessment			
Learning Outcome			
Participatory Learning			
Instructor Activities	**Learner Activities**		
Summary/Closure			

Lesson Plan Template C

Lesson Title:			
Learning Outcome(s):			**Time:** **Date:**
Time	**Instructor Activities**	**Learning Activities**	**Resources**
Comments:			

Sample Lesson Plan D*

(using CARD)

Lesson Title:		
CARD Component	**Activity**	**Resources**
Context	(including— but not limited to— the Bridge-In, Outcome, and Pre-Assessment)	**Time:**
Activity		**Time:**
Reflection		**Time:**
Documenting		**Time:**
Notes to Self:		

* This plan may be particularly useful for lessons in the higher order thinking, affective, and spiritual domains.

F: Reflections on the Workshop

In the ISW, we believe…

- in the importance of reflection as a tool for professional growth and development.
- that reflection can help individuals set goals.

Introduction to Reflective Practice

Donald Schön[10], Stephen Brookfield[11], and Parker J. Palmer[12] all maintain that effective instructors reflect on their practice regularly in order to improve, renew, and grow – both personally and professionally.

The Instructional Skills Workshop is a "laboratory" approach to developing instructional skills because it provides an environment in which participants can experiment with their teaching. This experimentation might address issues related to lesson design, instructional techniques, media, and so on. Rather than repeating previous successes, participants are encouraged to use this opportunity to take "safe risks" that will help them to enhance their practice.

During the workshop you will be engaged in a variety of activities. The workshop requires considerable time for individual preparation as well as participation in all ISW lesson cycles. Thus, it is often challenging to find the time to pause and reflect on your learning. In order to gain the most from this experience, you may wish to use the following worksheets which were designed to guide your thinking. Your facilitators may suggest that you work with parts of this material. Feel free to enhance your learning during the workshop and in the months to come by reviewing and expanding on your reflections.

Many instructors report that the ISW launches them on an ongoing journey of reflective practice. In fact, participants often arrange informally to visit one another's classes and to continue exchanging feedback. One of the reasons to reflect regularly is to model what we hope our learners will also do. Ideally, then, all participants in the learning process – learners and instructors – will become reflective practitioners.

[10] Schön, D. A. (1983). *The reflective practitioner*. New York: Basic Books; Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* Jossey-Bass.
[11] Brookfield, S. D. (2017). *Becoming a critically reflective teacher* (2nd ed.) Jossey-Bass.
[12] Palmer, P. J. (1993). Good talk about good teaching: Improving teaching through conversation. *Change, 25*(6), 8-13.; Palmer, P. J. (2017). *The courage to teach: Exploring the inner landscape of a teacher's life* (20th anniversary ed.) Jossey-Bass.

Starting the Reflective Process: Looking Forward

In order to get the most from this workshop, you will be encouraged to set learning goals. At the first session, your goals may be quite specific (e.g., I want to learn how to write learning outcomes in the affective domain.). Or they might be rather general (e.g., I want to pick up ideas about making my teaching more interesting.). As the workshop continues, you will be asked to discuss with the other participants your specific goals so that all participants can help you meet them.

Goal setting can be done informally while thinking or speaking with others. However, many individuals find it very useful to write down specific goals.

Goals at the Beginning of the Workshop

As an instructor or trainer, what strengths are you bringing to this workshop?

Briefly describe your overall goal(s). Describe what you hope to learn during this workshop:

List any specific goals you have in mind:

The ISW Lesson Record

Simply keeping a record of others' ISW lessons will also help you consolidate your learning as a participant in the workshop.

Lesson One

Instructor	Topic	Reflections/Thoughts/Items of Note

Lesson Two

Instructor	Topic	Reflections/Thoughts/Items of Note

Lesson Three

Instructor	Topic	Reflections/Thoughts/Items of Note

Continuing the Reflective Process: Learning from Your Lessons

My Lessons

Lesson #1:

Topic #1:

Outcome #1:

Lesson #2:

Topic #2:

Outcome #2:

Lesson #3:

Topic #3:

Outcome #3:

My Experience

Overall, did the lesson go according to plan? Did the learners meet the outcome you set? Why and/or why not?

Lesson #1:

Lesson #2:

Lesson #3:

What would you keep in the lesson next time? What might you do differently?

Lesson #1:

Lesson #2:

Lesson #3:

The Learners' Experience of My Lesson

Based on what the learners said, what was the most important feedback about the strengths of your lesson? About things you might do differently?

Lesson #1:

Lesson #2:

Lesson #3:

The Recording

What did you learn from reviewing the recording? (You might consider pacing, enthusiasm, clarity, engagement, questions, mannerisms, explanations, learner support, learner challenge, learner interest, and so on.) What are the implications for your next ISW lesson? What are the implications for your regular teaching?

Lesson #1

Lesson #2

Lesson #3

Final Question

Overall when I think about my lessons, what was the biggest surprise?

Identifying the Learning: Reflecting on the Core Elements

Now that you have experienced many lessons, you should have a clearer and deeper understanding of the core elements. Take some time to think about what you learned about these elements.

Bridge-In:

Outcome:

Pre-Assessment:

Participatory Learning:

Post-Assessment:

Summary/Closure:

Which of the elements, if any, are making the most sense to you? Why?

Which of the elements, if any, continue to challenge you? Why?

What were some of the topics/themes about the core elements that came up often in the feedback sessions? What might you choose to do about that?

Identifying the Learning: Reflecting on Expressive Outcomes/CARD

Aside from the core ISW lesson elements, you will likely have a clearer understanding of expressive outcomes and how the CARD model can be used to organize a lesson. Take some time to think about what you learned about this.

Context:

Activities:

Reflection:

Documenting:

Which of these, if any, are making the most sense to you? Why?

Which of these, if any, continue to challenge you? Why?

What were some of the topics/themes about expressive outcomes and CARD that came up in the feedback sessions? What might you choose to do about that?

Identifying the Learning: Reflecting on Your Feedback

Reread the feedback sheets from your three lessons. Then take some time to think through what you want to do as a result of receiving this information.

1. What were the most treasured pieces of feedback about your strengths as an instructor/trainer? Why?

2. How might you build on these and other strengths?

3. What were the most treasured suggestions that you heard/saw/read? Why?

4. What feedback still feels rather challenging or puzzling to you? Can you think of comparable situations that might provide insight into this issue?

Identifying the Learning: Reflecting on the Group Process

This workshop depends on effective group process. Most instructors and trainers work with groups of learners. Thus, you might find it useful to reflect on how the group worked together and what implications there might be for your own practice.

1. What facilitated the effective functioning of the group?

2. What interfered with the group's work?

3. What have you learned about yourself as a group member? As a group leader/facilitator?

4. Given your group's experience, what might you wish to incorporate into your own practice?

Identifying the Learning: A Self-Development Plan for the Future

Affirmations of My Strengths as an Instructor

What I Believe I Do Well:

Development Areas as an Instructor

What I Choose to Work On:	How I Will Develop These Areas:

Research, Scholarship, and Resources (Reflective Practice)

Brookfield, S. D. (2017). *Becoming a critically reflective teacher* (2nd ed.). John Wiley & Sons.

Larrivee, B. (2000). Transforming teaching practice: Becoming the critically reflective teacher. *Reflective Practice, 1*(3), 293-308.

Palmer, P. J. (2017). *The courage to teach: Exploring the inner landscape of a teacher's life (20th anniversary ed.).* Jossey-Bass.

Palmer, P. J. (1993). Good talk about good teaching: Improving teaching through conversation, *Change 25*(6), 8-13.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions.* Jossey-Bass.

Schön, D. (1983). *The reflective practitioner: How professionals think in action.* Basic Books.

G: Lessons Learned: Translating ISW into your Context

In the ISW, we believe…

- that important connections can be made between what happens in a 10-minute ISW lesson with a few learners and what happens elsewhere with other time frames and other participant numbers.
- it is important to take the time to synthesize what we have learned in the workshop setting and then reflect on how this could affect and change our practice elsewhere.

At some point during or after the ISW, you will want to consider how your workshop experiences and insights translate into your regular instructional or training context. This section includes some prompts to help you make that translation, including a number of questions for your consideration. This is a natural extension of the reflections you may have been making when working with the material in Section F. However, this section is meant to focus your attention particularly on the concrete "take-aways," the things you plan to do in your own setting in the not-too-distant future.

The Core Elements

The six core elements in an ISW lesson may look different in a 10-minute time frame, but they can all be used in other settings.

- Which of the core elements have you already been using?

- Which are new or relatively unfamiliar?

- How do you plan to incorporate your learning about the core elements into your own teaching and/or training?

Assessment

In the ISW lesson, the pre- and post-assessments happen within the lesson itself. In other settings, what comes before and after a lesson may also be a part of an ongoing assessment experience. So, for example, an assigned reading before a lesson may help clarify present understanding of language and ensure that the group has a common vocabulary that will help individuals understand the lesson. An essay or exam may form a part of the post-assessment that tests learners' understanding. And a skill that is demonstrated back in the workplace with a supervisor may ensure that mastery of a tool or technique has been achieved.

- When and how do you do most of your assessment?

- During the ISW lessons and conversations, what ideas about assessment did you come across that you might choose to take forward? How would that look?

Participatory Learning

It is one thing to invite active participation and engagement in a small group of peer learners within a workshop setting. It may be quite another to do this with a large group or with a group in which some are not used to this form of instruction or training.

- What do you do now to invite active, engaged participation?

- What have you learned in the workshop that could enhance what you do?

Community Building

Your facilitators took time to build the community within your ISW group – at the beginning and throughout the workshop. Consider which parts might make sense within your own setting. For example, your group may have come to some agreements about how you wanted to work together. Many instructors and trainers do this too. How might you incorporate or adapt this idea in your setting?

- What did the facilitators do to build community?

- Which parts might make sense in your setting? How might that look?

- What adaptations do you want to make?

Feedback

Whether formally or informally, most instructors and trainers offer and facilitate feedback regularly.

- What did you learn from giving feedback that you want to remember and take forward?

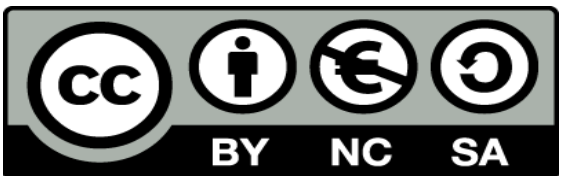
- What did you learn from receiving feedback that you want to remember and take forward?

- If you facilitate feedback in your own classes or workshops, what did you observe about facilitating feedback that you want to use or adapt?

The Instructional Skills Workshop (ISW) Handbook

Part Three:
Further Information & Resources

April 2021



This Handbook (Parts One, Two and Three) is the compilation of work by many people in the ISW Community. To the best of our knowledge the contents of the Handbook comply with Canadian educational copyright standards. Please advise us if, in your view, any part of this Handbook infringes on the rights of any individual.

ISBN: [coming soon…]

Parts One, Two, and Three of this Handbook accompany the Instructional Skills Workshop Program and are not meant to be used as "stand alone" texts. ISW facilitators and trainers may use excerpts of the Handbook in their own teaching and learning contexts.

The ISW Executive Team requires that ISW facilitators or trainers request permission to translate the ISW Handbook into a language other than English.

Citation for the ISW Handbook:

> Instructional Skills Workshop Network Executive. (April 2021). The Instructional Skills Workshop (ISW) Handbook Part One: Workshop Overview, Part Two: Workbook, and Part Three: Further Information & Resources.
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For further information visit:

https://www.iswnetwork.ca/

Table of Contents: Part Three

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Reference Lists in Part Three

Research, Scholarship, and Resources

A: Responsive and Inclusive Teaching and Training

In the ISW, we believe…

- that respecting all learners means making instructional decisions with individual differences in mind.
- that being consciously inclusive benefits everyone.

Brief Introduction

As effective and reflective instructors and trainers, we work with learners who represent incredible diversity. Considering who our learners are allows us to recognize the strengths and challenges they bring to their learning. We are then able to use teaching practices to provide a learning environment that is inclusive, respectful, and responsive to learner needs.

Some of the ways that learners are diverse include (but are not limited to):

- academic and educational backgrounds, beliefs, and experiences,
- cultural backgrounds, beliefs, practices, and world views,
- skills and abilities (including cognitive, physical, and emotional),
- experiences of physical barriers to accessibility,
- gender identity,
- sexual orientation,
- learning needs, preferences, and styles (including multiple intelligences),
- personal backgrounds and attributes, including lived experiences,
- tolerance for risk-taking,
- classroom behaviours (initiative, independence, etc.), and
- workplace and career backgrounds (culture, experiences, and values).

It may be helpful to begin by reflecting on your own past experiences: What types of diversity in learners have you experienced in your practice? How did or does this affect the way you teach or train, how they learn, and the learning environment overall?

While the following material does not cover every type of diversity, it does address the following:

1) Diversity in Learning: Culturally Responsive Teaching Practices
2) Diversity in Learning: Learning Preferences and Multiple Intelligences
3) Diversity in Learning: Accessibility
4) Indigenization and Reconciliation (A Canadian Perspective)

A1: Diversity in Learning: Culturally Responsive Teaching Practices

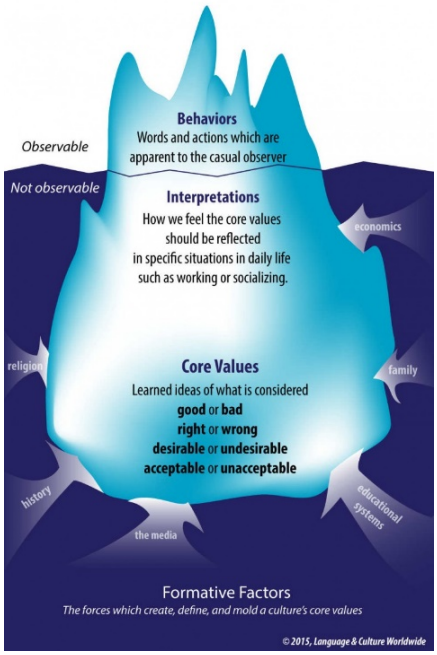
"The classroom environment is an especially important space for diversity to thrive and can potentially affect all dimensions of campus climate. Research has demonstrated the positive impact that a classroom engaged with diversity has on student outcomes, particularly when faculty, course content, and pedagogy are considered in conjunction with the compositional diversity of the students."[1]

Many educators in the ISW community and beyond are seeing increased cultural diversity across their learners. Learners from a variety of cultures bring a great deal of richness to the learning environment. And these learners may behave in ways that are unexpected to some instructors or trainers.

When they enter a different educational system than the one they are used to, learners are influenced by underlying beliefs, attitudes, values, and assumptions that they bring from their home culture. This will almost certainly influence their understanding and expectations of education and their roles as learners.

The Cultural Iceberg

The following iceberg metaphor can be helpful in understanding cultural differences.



From Language and Culture Worldwide 2015[2]

[1] Milem, J., Chang, M., & Antonio, A. (2005). *Making diversity work on campus: A research-based perspective*, 24-25. Retrieved from https://www.aacu.org/sites/default/files/files/mei/milem_et_al.pdf

[2] Permission is given to use this image on https://languageandculture.com/iceberg-or-beacon-how-the-cultural-iceberg-guide-us-toward-greater-inclusion/

In this iceberg image, *culture* includes two broad aspects: observable culture (10%) and deeper non-observable culture (90%). The iceberg is further divided into 3 layers:

- Behaviors
- Interpretations
- Core Values

Observable culture is the part of culture that is visible. This refers to behaviors (what we do) and how we appear to others. It includes what we wear, symbols we wear or wave (such as flags), what we eat, how we speak, what we celebrate, and how we worship.

The interpretations layer, in the middle, represents that which is not immediately apparent. It represents the parts of our behaviors or actions that reflect our emotional attachments and are not directly observable. For example, emotions often underlie a symbol we wear, the food we choose to eat, or the way we greet one another. These conventions contain high levels of emotion, but may not be as intensely values-driven as aspects of the hidden, lower layer of the iceberg where core values reside.

The core values, the deepest part of the iceberg image, are the values for which we will stand fast. This lower layer of the iceberg image is where the emotional or affective quality of the unseen values deepens, determining our underlying values about aspects of clothing, attitudes to food, the importance of festivals, concepts of self and society, notions of power and decision-making, moral values, sexual mores, ideas about gender identify, societal laws, and understandings of justice.

Culture and the Learning Environment

Our students' underlying cultural beliefs or practices have the potential to affect a great deal in the learning environment. For example:

Language

Depending on how learners are placed into courses and programs, instructors may see varying degrees of language ability and proficiency. Some who are new to the language of instruction may need language support or upgrading.

When writing for academic purposes, cultural thought patterns may influence how learners organize their writing. Some learners may write in a very indirect, non-linear way, while others may write in a more linear manner, with ideas organized sequentially.

Educational experience and expectations

Learning

In some cultures, learning is demonstrated by memorizing content provided by the instructor. "What" is learned is most important. In other cultures, the process of learning, critical thinking, problem-solving, and the ability to continue to learn are also valued. "How" one learns is of importance in addition to "what" is learned.

The role of the instructor

In some cultures, the instructor is expected to be an expert on what is being taught. Primary contact with the instructor is in the classroom or learning environment and not beyond. Office hours where learners may consult with the instructor may not be a familiar concept. In other cultures, instructors are facilitators of learning, who create and enhance the learning environment. Learners and instructors have more contact in and outside of the classroom. Learners are encouraged to see the instructor during office hours for guidance with course work.

Learner behaviour

In a culture where the instructor is considered an expert, learners may primarily focus on memorizing what is taught in order to perform well on exams. In the classroom or learning environment, these learners typically listen to lectures and take notes, while engagement between instructor and learners may not be common. In other cultures, interaction between instructor and learners is the norm. Learners engage in and are comfortable with a variety of learning activities, working in groups or teams and asking questions during a lecture.

Academic honesty and plagiarism

Learners from some cultures may not fully understand the concept of plagiarism and academic honesty, even if the idea has been addressed in a course outline or class. In some cultures, for example, copying another person's work is a way of honouring that work. Some learners may also lack confidence for a variety of reasons and/or feel pressure from others to perform well. A coping strategy may be to turn to using others' words to demonstrate learning. The connection between this practice and "dishonesty" may not be immediately apparent to the learner.

Conclusion

ISW represents a cultural orientation that values experiential, participatory teaching and learning. It can be very helpful to acknowledge this orientation towards teaching and learning, and to discuss other cultural orientations. This allows you to model curiosity about and openness to other models of teaching, learning, and ways of viewing the world.

Dr. Darla Deardorff, an intercultural educator, has developed a clear and concise model for the Development of Intercultural Competence. Her co-edited publication, *Building Cultural Competence*, includes a useful series of reflective questions which can help instructors consider their

current intercultural competence skills. The questions can also be helpful in the instructor's reflective practice.[3]

You are encouraged to explore resources on learner diversity that are appropriate for your teaching or training context. Many educational institutions have teaching and learning centres or student support centres that collect and disseminate relevant resources. Training departments or human resource departments in other larger organizations may have some of these resources as well.

NOTE**:** In Part Three of the ISW handbook, Section 4A ("Indigenization and Reconciliation") focuses on learning and Canadian Indigenous peoples.

Search Strategies: Diversity in Teaching/Learning

The following search terms may be helpful:

- Inclusive education
- Diverse learners/diverse students
- Diversity and adult learning
- Teaching adults and disabilities
- Culturally responsive teaching
- Cultural differences education

[3] Berardo, K., & Deardorff, D. K. (Eds.). (2012). *Building cultural competence: Innovative activities and models*. Stylus Publishing.

Research and Scholarship (Culturally Responsive Teaching)

Berardo, K., & Deardorff, D. K. (Eds.). (2012). *Building cultural competence: Innovative activities and models*. Stylus Publishing.

Chavez, A. F., & Longerbeam, S. D. (2016). *Teaching across cultural strengths: A guide to balancing integrated and individuated cultural frameworks in college teaching*. Stylus Publishing.

Lawrie, G., Marquis, E., Fuller, E., Newman, T., Qiu, M., Nomikoudis, M., Roelofs, F., & van Dam, L. (2017). Moving towards inclusive learning and teaching: A synthesis of recent literature. *Teaching & Learning Inquiry, 5*(1), 1-13. Originally retrieved from http://dx.doi.org/10.20343/5.1.3. Available from: https://files.eric.ed.gov/fulltext/EJ1148444.pdf

Lee, A. (2012). *Engaging diversity in undergraduate classrooms: A pedagogy for developing intercultural competence*. Wiley Periodicals, Jossey-Bass.

Milem, J., Chang, M., & Antonio, A. (2005). *Making diversity work on campus: A research-based perspective*, 24-25. Retrieved from www.aacu.org/sites/default/files/files/mei/milem_et_al.pdf

Wlodkowski, R. J., & Ginsberg, M. B. (1995). *Diversity and motivation: Culturally responsive teaching.* Jossey-Bass.

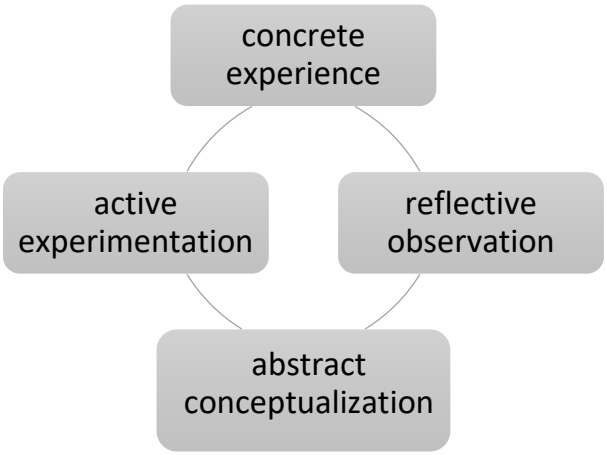
NOTES

A2: Diversity in Learning: Learning Preferences and Multiple Intelligences

It is important to consider individual learning preferences in order to engage your learners more fully. It is also useful to be aware of your own learning preferences as we often tend to teach in the ways we prefer to learn.

The Work of David Kolb

In the early 1980s, David Kolb, a developmental psychologist in the business school at Case Western University, developed a learning style inventory as part of a research project. He identified a complete learning cycle as including four specific ways of learning: concrete experience, reflective observation, abstract conceptualization, and active experimentation.[4]



Specific ways of learning are shown in the figure above as two pairs of opposites, which together form a cycle of learning. The vertical continuum describes how knowledge is assimilated or "taken in." At one pole is a preference for learning by concrete experience, by means of personal involvement and case-by-case judgments; at the other is learning by applying abstract concepts, in a rational-analytic manner. The horizontal continuum describes how knowledge is processed, i.e., how the person accommodates the acquisition of the new knowledge. At one pole is a preference for careful reflective observation of conditions as they are; at the other is learning through active experimentation by changing conditions, investigating possibilities and "doing."

All four of these ways of learning are necessary for the development of intellectual maturity, but none of them is sufficient. Activities that support these ways of learning can be incorporated into many learning contexts. The partial list of classroom activities below illustrates the overlap between the learning processes.

[4] Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Activities Supporting Different Ways of Learning (adapted from Svinicki & Dixon, 1987)			
Concrete Experience	**Reflective Observation**	**Abstract Conceptualization**	**Active Experimentation**
laboratories observations primary text reading simulations/games field work trigger films problem sets ex-	logs/journals discussions brainstorming thought questions rhetorical questions	lectures writing papers model building projects analogies	simulations case studies laboratories field work projects homework

Each of us prefers some of these ways of learning over others. Learning preferences are highly situational and influenced by a wide variety of factors. The point of examining learning styles and preferences is *not* to "pigeonhole" or label people (e.g., "I can only teach or learn using lectures." or "I only learn when I have a concrete experience.") On the contrary, this examination allows us to appreciate diversity and recognize the importance of variety in teaching techniques. It encourages instructors to reflect on and expand the choices they make when deciding on activities in the classroom and beyond.

The ISW experience includes all four ways of learning. Consider where you have seen each one:

Concrete Experience:

Reflective Observation:

Abstract Conceptualization:

Active Experimentation:

Research, Scholarship, and Resources (Kolb)

Kolb, D. (1984). *Experiential learning: Experience as the source of learning and development*. Prentice-Hall.

Schenck, J., & Cruickshank, J. (2015). Evolving Kolb: Experiential education in the age of neuroscience. *Journal of Experiential Education, 38*(1), 73-95.

Svinicki, M. D., & Dixon, N. M. (1987). The Kolb model modified for classroom activities. *College Teaching, 35*(4), 141-146.

NOTES

Multiple Intelligences

This concept was developed in the 1980s by a team of developmental psychologists at Harvard University led by Howard Gardner.[5] The multiple intelligence concept began as a critique of the notion of Intelligence Quotient (IQ) and proposed that intelligence is more than cognitive knowledge.

The original seven competencies that made up the classification are: verbal-linguistic, logical-mathematic, spatial, bodily-kinesthetic, musical, interpersonal, and intrapersonal. The naturalist category was added later. The following are brief descriptions of eight "intelligences":

Verbal-linguistic – competencies include sensitivity to the order among words, capacity to follow the rules of grammar and syntax, sensitivity to sounds, rhythms, inflections of word sequences, the potential to convince, stimulate and convey information verbally or in writing.

Logical-mathematical – competencies include skill in ordering and re-ordering objects and processes, analysis and synthesis, using abstract symbols, numerical and computational operations, sensitivity to logical fallacies, and to the links among propositions.

Spatial – competencies include accurate perception of the visual world, abstract perception, orientation in a landscape, skill at mapping, design of objects and spaces, sense of direction.

Bodily-kinesthetic – competencies include hand-eye coordination, agility, muscular power and flexibility, balance, skill at rhythmic and graceful whole body movements.

Musical – competencies include sensitivity to pitch, rhythm, tone, reading scores, tuning instruments, capacity to follow the rules of composition.

Interpersonal – competencies include the ability to notice and differentiate among individuals, sensitivity to mood, temperament, motivations and intentions of others, non-verbal communication, capacity to motivate, persuade, lead and manage.

Intrapersonal – competencies include access to one's own "feeling life," sensitivity to one's own mood and motivations, affective resilience and the capacity to reflect on experience.

Naturalist – competencies include the ability to discriminate among living things (plants, animals), as well as sensitivity to other features of the natural world (clouds, rock configurations). The kind of pattern recognition valued in certain of the sciences may also draw upon naturalist intelligence.

When designing lessons or workshops, some instructors use this list to help them consider possibilities that would move them outside their own learning preferences. This can result in a set of more diverse and inclusive learning activities.

[5] Gardner, H. (1983). *Frames of mind: The theory of multiple intelligences*. Basic Books.

Research, Scholarship, and Resources (Multiple Intelligences)

Armstrong, T. (2017). *Multiple intelligences in the classroom* (4th ed.). Association for Supervision and Curriculum Development.

Gardner, H. (2006). *Multiple intelligences: New horizons in theory and practice* (2nd ed.). Basic Books.

Gardner, H. (2011). *Frames of mind: The theory of multiple intelligences* (3rd ed.) Basic Books.

NOTES

A3: Diversity in Learning: Accessibility

Canadian institutions may refer to and be guided by internal documents related to accessibility, as well as the Canadian Charter of Rights and Freedoms and provincial legislation on human rights. Instructors at educational institutions may find it helpful to ask student services staff about what is available for students and instructors. As an example, see the document posted by Camosun College's Centre for Accessible Learning.[6]

In order to give all individuals equal opportunities to learn, the National Center on Universal Design for Learning[7] suggests that there are three primary principles (based on neuroscience research) that should guide curriculum development. These principles may also be used as you consider the design of individual lessons:

- Provide multiple means of representation.
- Provide multiple means of action and expression.
- Provide multiple means of engagement.

Research, Scholarship, and Resources (Accessibility)

Camosun College. Centre for Accessible Learning. (n.d.). *Supporting your learning experience.* Retrieved from http://camosun.ca/services/accessible-learning/

National Center on Universal Design for Learning. (2012). Home page. Retrieved from http://www.udlcenter.org/

NOTES

[6] Camosun College. Centre for Accessible Learning. (n.d.). Supporting your learning experience. Retrieved from http://camosun.ca/services/accessible-learning/

[7] National Center on Universal Design for Learning. (2012). Home page. Retrieved from http://www.udlcenter.org/

A4: Diversity in Learning: Indigenization and Reconciliation (A Canadian Perspective)

Indigenization is the incorporation of Indigenous ways of doing, being, knowing, and relating into educational institutions. Support for Indigenization in post-secondary education can be attributed to the Province of British Columbia's 1990 *Green Report*, which carried numerous recommendations on ways to support Indigenous student success. Many of these recommendations are still being enacted today, such as exploring ways to include holistic learning and approaches to teaching, inclusion of Indigenous values within the institution, and training non-Indigenous teachers to incorporate and integrate Indigenous knowledge into curriculae.

In 2015, the Truth and Reconciliation Commission of Canada published its Calls to Action[8] to redress the legacy of the residential schools and to begin the process of Canadian reconciliation in areas such as education, child welfare, health care, legal systems, and church organizations among others.

There are specific Calls to Action regarding Education for Reconciliation that call on Canadian educational institutions to not only incorporate Indigenous ways of doing, being, and knowing to support Indigenous students, but also call for the inclusion of the historical and contemporary contexts for the contributions of Indigenous peoples to Canada.

Individually, educational institutions are determining responses to the Calls to Action. You are encouraged to consult your institution and/or the resources below for more information.

Some ways to begin thinking about Indigenization of teaching and learning follow:

Acknowledgement of place, honouring original peoples and oneself

- In place-based education, instructors and trainers can build the skills of acknowledging the traditional First Nation territory that their institution is located within. Many institutions have built this awareness at the event level; instructors and trainers can bring this awareness to the class level. See, for examples, the CAUT (Canadian Association of University Teachers) Guide to Acknowledging Traditional Territory.[9]

- Acknowledge personal background and privilege in the Canadian cultural landscape. The social justice writings of Paulette Regan[10] and Susan Dion[11] encourage non-Indigenous Canadians to recognize and reconcile unawareness of Indigenous history and influence in Canadian society.

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[8] Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to action.* Winnipeg, MB: The Author. Retrieved from http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf

[9] CAUT. (n.d.). CAUT guide to acknowledging traditional territory. Retrieved from https://www.caut.ca/docs/default-source/professional-advice/list---territorial-acknowledgement-by-province.pdf?sfvrsn=12

[10] Regan, P. (2010). *Unsettling the settler within: Indian residential schools, truth telling, and reconciliation in Canada*. UBC Press.

[11] Dion, S. D. (2009). *Braiding histories: Learning from Aboriginal peoples' experiences and perspectives*. UBC Press.

Indigenous learner strengths

- Engagement and retention of Indigenous learners may require instructors to incorporate different ways of learning and assessment into their practice. Indigenous scholars emphasize that Indigenous ways of learning are interconnected. Instructors may seek ways to bring in holistic approaches (actions, feelings, thought, and belief) to engage and assess learners at different levels.

Culturally responsive teaching practice

- To engage in respectful communication with Indigenous learners, instructors may need to build their own awareness of the foreignness of western education in an Indigenous worldview.
- Instructors may introduce Indigenous practices such as talking circles and place-based learning with Indigenous elders and experts.

Search Strategies: Indigenization and Reconciliation

The following search terms may be helpful:

- Indigenization
- Decolonization
- Indigenous knowledge
- Indigenous resurgence
- Land-based education

Research, Scholarship, and Resources (Indigenization & Reconciliation)

Canadian Association of University Teachers. (2017). CAUT guide to acknowledging First Peoples & traditional territory. Retrieved from https://www.caut.ca/content/guide-acknowledging-first-peoples-traditional-territory

Dion, S. D. (2009). *Braiding histories: Learning from Aboriginal peoples' experiences and perspectives.* UBC Press.

Kanu, Y. (2011). *Integrating Aboriginal perspectives into the school curriculum: Purposes, possibilities and challenges*. University of Toronto Press.

Manitoba. Education and Training. (n.d.). *Circle of courage* [Poster]. Retrieved from https://www.edu.gov.mb.ca/k12/cur/cardev/gr9_found/courage_poster.pdf

National Centre for Truth and Reconciliation. (n.d.). Retrieved from http://nctr.ca/map.php

Regan, P. (2010). *Unsettling the settler within: Indian residential schools, truth telling, and reconciliation in Canada*. UBC Press.

Sefa Dei, G. J., Hall, B. L., & Rosenberg, D. (Eds). (2000). *Indigenous knowledges in global contexts: Multiple readings of our world.* OISE/UT book published in association with University of Toronto Press.

Truth and Reconciliation Commission of Canada. (n.d.). *What is reconciliation* [Video file]. Retrieved from https://vimeo.com/25389165

Truth and Reconciliation Commission of Canada. (2015). *Truth and Reconciliation Commission of Canada: Calls to action*. The Author. Retrieved from: http://trc.ca/assets/pdf/Calls_to_Action_English2.pdf

Unreserved. (2016, June 21). What's in a name? From redskin to Indigenous: The evolution of Indigenous terminology in Canada [Radio broadcast]. Canadian Broadcasting Corporation. Retrieved from http://www.cbc.ca/player/play/709875267537/

B: Further Information for Reflective Practitioners

In the ISW, we believe…

- that motivated and engaged learners will want to keep on learning.

This section offers further information about some of the material that may be introduced in an ISW.

Contents

B1: Three General Principles of Adult Learning

Many attempts have been made to identify general principles of learning that are independent of particular learning contexts. All have been incomplete, including the list below. However, it is becoming clear that there is overlap among the various theories. Theory and empirical evidence are converging and are reflected in the following three general principles of learning and associated statements. Respect for the learners and attention to these three principles will allow you to create more effective instruction and training.

1. **Learning is an active, effortful process engaging the whole, multi-sensory being.**

    a. Motivation and emotion are within the learners' control and learners pay attention to what they value.

    b. Learning takes time, interacts with prior knowledge (which may help or hinder the learning), and necessarily connects new learning to what is already known.

    c. Learning is holistic, crossing all domains of learning (cognitive, affective, psychomotor, spiritual) and engages, and impacts, all parts of the brain.

2. **People learn in various ways, at different rates, alone, or in social contexts.**

    a. Individual differences in experience, learning preferences, and expectations influence what is, or can be, learned and how it will be expressed.

    b. Socially constructed meaning benefits many learners, in some contexts, but not all.

3. **Practice and relevant feedback promote deeper learning and are essential for successful application of the learning.**

    a. Appropriate assessment of learning provides feedback, stimulates deeper learning, and supports learning transfer to other contexts.

    b. Learners become more self-directed when they use reflective practice to generate self-relevant feedback and when they recognize the "how" and "why" of their learning.

Application

One way of using the General Principles is to question whether or not you have attended to each principle or associated statement when designing your lessons:

Example: Assessment

- Have I pre-assessed to see what my learners already know? (1b)
- Have I allowed enough time for the pre-assessment? (1b & 2a)
- Have I found inaccuracies in learner knowledge that will impact learning? (1b)
- Will my pre-assessment generate interest and a desire to learn more? (1a)
- Have I post-assessed in a variety of ways to see what my diverse learners know now that they did not know before? (2b & 3a)
- Have I allowed learners to self-assess? (3b)
- Have I used post-assessment to reinforce application of learning? (3a)

Example: Structure and Sequence

- Have I designed the learning to benefit all learners? (1a & 1b)
- Have I designed a flexible structure and sequence of learning activities that will benefit different learners? (2a & 2b)
- Have I designed assessments reflective of the flexible structure? (2a & 3a)
- Have I made the structure and sequence transparent to learners? (3b)

Research, Scholarship, and Resources (General Principles of Adult Learning)

Ambrose, S., Bridges, M. W., Lovett, M. C., DiPietro, M., & Norman, M. K. (2010). *How learning works: 7 research-based principles for smart teaching.* Jossey-Bass.

Brookfield, S. D. (1986). *Understanding and facilitating adult learning*. Jossey-Bass.

Chickering, A., & Gamson, Z. (1987). Seven principles of good practice in undergraduate education. *AAHE Bulletin, 39*(7), 3-7. (Available online as an ERIC document: https://files.eric.ed.gov/fulltext/ED282491.pdf)

Goswami, U. (2008). Principles of learning, implications for teaching: A cognitive neuroscience perspective. *Journal of Philosophy of Education, 43*(3-4), 381-399.

Tagg, J. (2003). *The learning paradigm college.* Anker.

B2: Principles for Good Practice in Undergraduate Education

There is no one recipe for effective teaching. The material in this handbook provides a range of alternatives. However you will need to consider what will work best for you and a particular group of students in a given situation.

The body of research on effective teaching and learning in the classroom is extensive. At one time, the focus was primarily on helping teachers organize the content of their lessons efficiently. It is now generally recognized that teaching is a much more complex set of practices that is highly interactive with learning. The two are really inseparable, and so we use the expression "teaching and learning" to emphasize the intertwined nature of the process.

Over the years, many learners have been asked for their perceptions about the qualities of effective teachers they remember. Four major classifications of responses have been identified:

Content expertise – having knowledge of the subject area, clear goals and objectives, effective selection and organization of course content, enthusiasm about the course.

Communication skills – providing flexibility and willingness to experiment with different techniques, encouraging independent thinking, using a variety of media.

Fair examinations and grading practices – avoiding harsh comments, giving learners opportunities to practice before grading performance, returning feedback in a reasonable time.

Other motivational factors – showing respect for learners as individual persons, providing encouragement, building lessons from the learners' experience, encouraging diversity in the classroom.

Effective teaching blends many elements: content knowledge and "people" knowledge; course planning and management; communication skills, creativity, and problem-solving skills. Effective teaching balances structure (through class routines, lesson plans, learning goals, etc.) and openness (through variety, choices, inclusion of diverse people and points of view, and seizing the "teachable moment").

Good teaching rests on knowledge, skill, and wisdom acquired through experience. But great teaching goes beyond technique. Ultimately, effective teaching rests on care and connection. Effective teachers possess a capacity for connectedness. They are able to weave a complex web of connections among themselves, their subjects, and their learners so learners can learn to weave a world for themselves. The methods used by these weavers vary widely: lectures, Socratic dialogues, laboratory experiments, collaborative problem solving, and creative chaos. The connections made by effective teachers are held not in their methods but in their hearts—meaning heart in the ancient sense, as the place where the "intellect and emotion and spirit and will converge in the human self."[12]

[12] Palmer, P. J. (2017). *The courage to teach: Exploring the inner landscape of a teacher's life*. (20th anniversary ed.) Jossey-Bass. p. 11.

Seven Principles of Good Practice in Undergraduate Education

In 1987, Arthur W. Chickering and Zelda F. Gamson[13] used decades of research on undergraduate education to identify the following principles of good practice in undergraduate education. While their focus was on undergraduate education, the principles are relevant to a variety of settings:

1. Good Practice Encourages Student-Faculty Contact

Frequent student-faculty contact in and out of classes is the most important factor in student motivation and involvement. Faculty concern helps students get through rough times and keep on working. Knowing a few faculty members well enhances students' intellectual commitment and encourages them to think about their own values and future plans.

2. Good Practice Encourages Cooperation Among Students

Learning is enhanced when it is more like a team effort than a solo race. Good learning, like good work, is collaborative and social, not competitive and isolated. Working with others often increases involvement in learning. Sharing one's own ideas and responding to others' reactions improves thinking and deepens understanding.

3. Good Practice Encourages Active Learning

Learning is not a spectator sport. Students do not learn much just sitting in classes listening to teachers, memorizing pre-packaged assignments, and spitting out answers. They must talk about what they are learning, write about it, relate it to past experiences, and apply it in their daily lives. They must make what they learn part of themselves.

4. Good Practice Gives Prompt Feedback

Knowing what you know and don't know focuses learning. Students need appropriate feedback on performance to benefit from courses. In getting started, students need help in assessing existing knowledge and competence. In classes, students need frequent opportunities to perform and receive suggestions for improvement. At various points during college, and at the end, students need chances to reflect on what they have learned, what they still need to know, and how to assess themselves.

5. Good Practice Emphasizes Time on Task

Time plus energy equals learning. There is no substitute for time on task. Learning to use one's time well is critical for students and professionals alike. Students need help in learning effective time management. Allocating realistic amounts of time means effective learning for students and effective teaching for faculty. How an institution defines time expectations for students, faculty, administrators, and other professional staff can establish the basis for high performance for all.

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[13] Chickering, A., & Gamson, Z. (1987). Seven principles for good practice in undergraduate education. *AAHE Bulletin, 39*(7), 3-7. (Available online as an ERIC document: https://files.eric.ed.gov/fulltext/ED282491.pdf)

6. Good Practice Communicates High Expectations

Expect more and you'll get it. High expectations are important for everyone – for the poorly prepared, for those unwilling to exert themselves, and for the bright and well-motivated. Expecting students to perform well becomes a self-fulfilling prophecy when teachers and institutions hold high expectations of themselves and make extra efforts.

7. Good Practice Respects Diverse Talents and Ways of Learning

There are many roads to learning. People bring different talents and styles of learning to college. Brilliant students in the seminar room may be all thumbs in the lab or art studio. Students rich in hands-on experience may not do so well with theory. Students need the opportunity to show their talents and learn in ways that work for them. Then they can be pushed to learning in new ways that do not come so easily.

NOTE: These seven principles have been used to consider effective online learning as well. To find out more, go to Section B4 of Part 3.

B3: Taxonomies and Domains

Bloom's Taxonomy

A taxonomy is a way of grouping things. First introduced in 1956, the taxonomy of educational objectives proposed by Benjamin Bloom and his colleagues focused on *cognitive* learning.

It included six categories organized in ascending order from simple (bottom) to most complex (top).

evaluation
synthesis
analysis
application
comprehension
knowledge (subject matter)

Bloom's initial taxonomy was revised by Lorin Anderson and David Krathwohl (Bloom's colleagues) in 2001. The revisions addressed, among other things, the fundamental difference between the "knowledge" category, and the other five levels. In the revised taxonomy, the knowledge dimension consists of four main categories— factual, conceptual, procedural, and metacognitive knowledge. (The authors describe metacognition as "knowledge about cognition in general as well as awareness of knowledge about one's own cognition."[14]) The revisions[15] also changed a number of category names and the order of some categories:

Dimensions of Knowledge ↓	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual						
Conceptual						
Procedural						
Metacognitive						

[14] Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.

[15] For a more detailed explanation (and models) of the updated taxonomy, see Iowa State University's Revised Bloom's Taxonomy page (http://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy/revised-blooms-taxonomy-flash-version)

Other Domains

Over time, educators and theorists focused on other concepts of learning and two domains were added. Krathwohl (1964) described the *affective* domain as learning that involved personal and interpersonal attitudes, values, beliefs, and/or emotions. Five stages of affective domain were also described including receiving, responding, valuing, organization, and characterization.[16] Various considerations of psychomotor learning were published in the late 1960s to early 1970s.[17] The *psychomotor* domain was concerned with physical outcomes including the development of new physical skills, performances, or the creation of product.

More recently, some educators have proposed a fourth domain, the *spiritual*. Inspired and informed by her interest in Indigenous ways of knowing, Marcella LaFever, for example, considers "the spirit in post-secondary education" and suggests that the learning environment address the spiritual domain. She proposes outcomes related to honouring ("conscious or aware of learning that is not based in material or physical things, and transcends narrow self-interest"); valuing ("building relationships that honour the importance, worth, or usefulness of qualities that are related to the welfare of the human spirit"); empowerment ("provide support and feel supported by an environment that encourages strength and confidence, especially in controlling one's life and claiming one's rights"), and self-actualization ("ability as a unique entity in the group to become what one is meant to be").[18]

LaFever notes that the affective domain may include at least some of the outcomes related to the spiritual. However, she suggests that the affective domain does not fully reflect all of what is included in this fourth domain.[19] Of particular significance: this domain is inspired by and recognizes a world view that is different from that of Bloom and many current western approaches to learning.

Applying Learning Outcomes

Well-written learning outcomes statements can be powerful aids to creating meaningful learning activities and assignments. Many resources provide suggestions about assignments or activities that students can create to demonstrate their learning at each level and type of knowledge. Various educators have also published collections of ideas about how to apply the updated Bloom's Taxonomy using digital tools and digital products to allow students to demonstrate their learning in other ways.

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[16] Krathwohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives: Handbook II: Affective domain*. David McKay.

[17] Huitt, W. (2003). The psychomotor domain. *Educational psychology interactive*. Retrieved from http://www.edpsycinteractive.org/topics/behavior/psymtr.html

[18] LaFever, M. (2016). Switching from Bloom to the medicine wheel: Creating learning outcomes that support Indigenous ways of knowing in post-secondary education. *Intercultural Education, 27*(5), 409-424.

[19] LaFever, M. (2016). p. 416.

Search Strategies: Using Learning Outcomes and Bloom's Taxonomies

Decide what you want first. Do you want examples of questions that you can pose to determine students' learning levels? Are you looking for ideas for activities or products that students could do or create? Do you want to see what could be done using digital tools?

The following search terms may be helpful:

- "Bloom's taxonomy applied" or "Bloom's" and a descriptive term such as "assignments" or "writing learning outcomes" or "tasks."
- "Digital Bloom's" or "pedagogy wheel" (for engaging students in Bloom's level activities or assignments that integrate technology or mobile devices).

Writing Learning Outcomes Using Taxonomies

Many resources exist to help instructors write learning outcomes. Selecting the right verb is the key. It ensures that the outcome is written from the learners' perspective and helps clarify for the learners what they are expected to demonstrate.

Cognitive Domain

The first table contains a definition of each level of the cognitive domain of Bloom's Taxonomy, while the second table lists examples of action verbs that correspond to each level.

Level	Definition
Remember (Knowledge)	Learner recalls or recognizes information, ideas, and principles in the approximate form in which they were learned.
Understand (Comprehension)	Learner translates, comprehends, or interprets information based on prior learning.
Apply	Learner selects, transfers, and uses data and principles to complete a problem or task with a minimum of direction.
Analyze	Learer distinguishes, classifies, and relates the assumptions, hypotheses, evidence, or structure of a statement or question.

Evaluate	Learner appraises, assesses, or critiques on a basis of specific standards and criteria.
Create (Synthesis)	Learner originates, integrates, and combines ideas into a product, plan, or proposal that is new to him or her.

Level	**Action Verbs**
Remember (Knowledge)	recall, remember, match, select, identify, choose, order, outline, count, define, describe, find, label, list, name, quote, recite, sequence, tell, write
Understand (Comprehension)	plot, define, summarize, classify, describe, present, explain, conclude, demonstrate, discuss, generalize, illustrate, interpret, paraphrase, predict, report, restate, review
Apply	propose, audit, edit, predict, construct, use, show, solve, compute, apply, change, choose, interview, prepare, produce, select, transfer
Analyze	distinguish, differentiate, investigate, consider, question, characterize, classify, compare, contrast, debate, deduce, diagram, discriminate, examine, outline, relate, research, separate
Evaluate	appraise, assess, judge, critique, comment, examine, interrogate, argue, choose, conclude, decide, evaluate, justify, predict, prioritize, prove, rank, rate, select
Create (Synthesis)	develop, design, devise, generate, propose, build, form, assemble, compare, construct, integrate, invent, make, organize, perform, plan, produce, rewrite

Affective Domain

The first table contains a definition of each level of the affective domain of Bloom's Taxonomy, while the second table lists examples of action verbs that correspond to each level.

Level	Definition
Receive	Learner passively pays attention.
Respond	Learner actively participates in the learning process, based on a stimulus and reacts in some way.
Value	Learner associates a value/values to knowledge they have acquired.
Organize	Learner puts together different values, information, and ideas; comparing, relating, and elaborating on what they learned.
Characterize	Learner builds abstract knowledge.

Level	Action Verbs
Receive	ask, choose, follow, give, hold, select, show interest
Respond	accept responsibility, answer, assist, comply, conform, enjoy, greet, help, obey, perform, practice, present, report, select, tell
Value	associate with, assume responsibility, believe in, be convinced, complete, describe, differentiate, have faith in, initiate, invite, join, justify, participate, propose, select, share, subscribe to, work
Organize	adhere to, arrange, classify, combine, defend, establish, form judgements, identify with, integrate, organize, weigh alternatives
Characterize	act, change behaviour, develop code of behaviour, develop philosophy, influence, judge problems/issues, listen, propose, qualify, question, serve, show mature attitude, solve, verify

Psychomotor Domain

The first table contains a definition of each level of the psychomotor domain of Bloom's Taxonomy, while the second table lists examples of action verbs that correspond to each level.

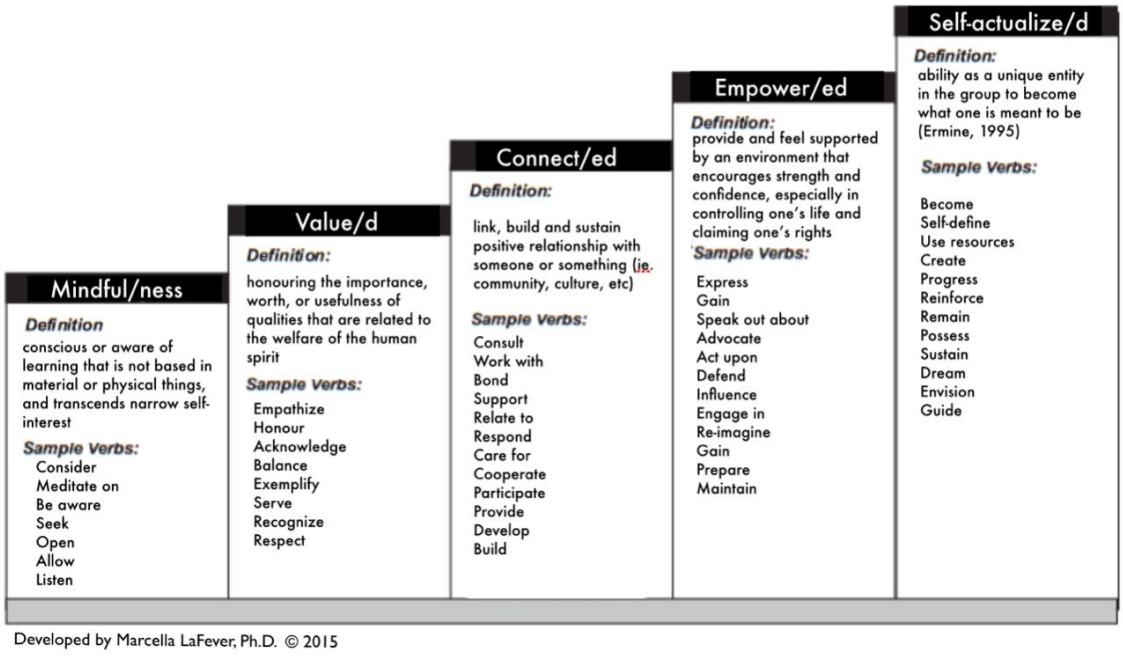
Level	Definition
Imitation	Learner repeats an act that has been demonstrated or explained.
Manipulation	Learner practices an act until it becomes habitual and can be performed with some confidence and proficiency.
Precision	Learner demonstrates proficiency through quick, accurate performance.
Articulation	Learner demonstrates the ability to modify actions to fit special requirements or a unique situation.
Naturalization	Learner automatically experiments, creating a new approach.

Level	Action Verbs
Imitation	adhere, assemble, attempt, carry out, copy, construct, dissect, duplicate, follow, mimic, move, practice, repeat, replicate, reproduce, start, try
Manipulation	build, complete, conduct, execute, grasp, implement, improve, manipulate, perform skillfully, progress, re-create, use
Precision	achieve, accomplish, advance, demonstrate, exceed, master, perfect, reach, show, succeed, surpass
Articulation	adapt, alter, change, combine, coordinate, develop, formulate, integrate, master, modify, rearrange, reorganize, revise, solve
Naturalization	arrange, compose, construct, create, design, invent, originate, refine

The Spiritual Domain

Many instructors, including Marcella LaFever, advocate for addressing the spiritual domain. LaFever writes about "the spirit in post-secondary education" and offers thoughts about how educators may choose to consider spirituality within that context. She provides the following sample verbs for the development of outcomes.[20]

Figure 2: Spiritual domain progression and sample outcome verbs



Note: LaFever references Ermine (1995) under "Self-actualized".[21]

[20] LaFever, M. (2016). Switching from Bloom to the medicine wheel: Creating learning outcomes that support Indigenous ways of knowing in post-secondary education *Intercultural Education*, *27*(5), 409-424. This table is reprinted from page 418 with permission. However, in order to understand this material fully, appreciate how spirituality is defined, and reflect on the implications for outcome assessment, it is important to read the full 2016 article.

[21] Ermine, W. (1995). Aboriginal epistemology. In J. Bearman, & M. Battiste, eds. *First Nations education in Canada: The circle unfolds* (pp. 101-112). UBC Press.

Alternatives to Bloom

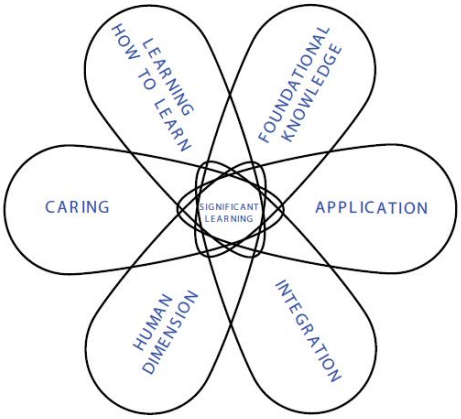
> As we consider taxonomies and concepts of learning, let us remember the advice of George E. P. Box:
>
> "Essentially, all models are wrong, but some are useful."

There are several ways of conceptualizing the different levels of learning that can take place in an instructional sequence. Bloom's Taxonomy is the most widely used framework for the development of learning outcomes. However, several alternatives to Bloom's Taxonomy exist. Some may find these more useful for conceptualizing knowledge and skill development. Two of these popular taxonomies are outlined below.

Regardless of how they are framed and what language is used, taxonomies can be useful tools for understanding the many ways in which learning can be conceived. They help instructors to articulate what they hope learners will gain.

Taxonomy of Significant Learning[22]

Dee Fink's *Taxonomy of Significant Learning* does not present its six categories of learning in a hierarchical format as Bloom's does, but rather in a circle where no type of learning is valued above the others. Fink considers each sub-category to be a type of learning that has value and that can be incorporated into the development of learning outcomes.



Categories in Fink's Taxonomy include:

- **Foundational knowledge**: the ability to understand and know information, ideas, concepts, or perspectives.
- **Application:** using other kinds of learning to engage in a type of thinking (i.e., critical, creative, practical) or action.
- **Integration**: making connections between different things, ideas, or perspectives.
- **Human dimension:** learning something new about self or others, which can allow for more effective interactions and help learners to understand the human significance of what they are learning.

[22] Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses* (2nd ed.). Jossey-Bass.

- **Caring:** developing new feelings, interests, and/or values.
- **Learning how to learn*:*** learning something about the process of learning itself, which can increase the effectiveness of learning in the future.

SOLO Taxonomy[23]

The SOLO Taxonomy was developed by John Biggs and Kevin Collis in 1982 as a framework for classifying learning outcomes as the complexity of learning increases. SOLO stands for *Structure of the Observed Learning Outcome*. Like Bloom's, in the SOLO Taxonomy, learning is conceptualized hierarchically, from pre-structural, where the learner knows nothing about the area, to multi-structural, where several relevant independent aspects of an area are known, to extended abstract, where the learner is able to generalize knowledge into a new domain. Each level is predicated on the idea that students can make the connections assumed in the previous levels. The SOLO taxonomy includes action verbs that can be used to articulate learning outcomes that correspond to the five levels.

SOLO Taxonomy Level	Characteristic	Sample Verbs
Pre-Structural	Students know little about the information/topic; they may acquire information but it doesn't make sense to them.	
Uni-Structural	Simple connections can be made, but meaning and significance may be unclear.	define, identify, name, calculate
Multi-Structural	Students understand several relevant aspects of an idea, and can make some connections, but larger significance may not yet be clear.	classify, describe, list, formulate, characterize
Relational	Students can recognize relationships and ideas and appreciate the significance of the parts in relation to the whole.	analyze, compare, relate, plan, apply, summarize
Extended Abstract	Students can make connections beyond the immediate topic or subject and transfer the ideas or principles to other contexts.	theorize, generalize, predict, evaluate, interpret, assess

[23] Biggs, J. B., & Collis, K. (1982). *Evaluating the quality of learning: The SOLO taxonomy*. Academic Press.

The purpose of any taxonomy is not to be prescriptive, but rather to present a framework for thinking about how learning occurs and how an instructional sequence and its assessment might be designed.

NOTE: This is not an exhaustive list of taxonomies. There are many other taxonomies and frameworks worth exploring, including ICE (Ideas, Connections, Extensions).[24]

[24] Fostaty Young, S., & Wilson, R. J. (2000). *Assessment & learning: The ICE approach*. Peguis.

Research, Scholarship, and Resources (Taxonomies & Domains)

Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.

Biggs, J. B. (1999a). *Teaching for quality learning at university: What the student does*. Buckingham: The Society for Research into Higher Education and Open University Press.

Biggs, J. B. (1999b). What the student does: Teaching for enhanced learning. *Higher Education Research & Development, 18*(1), 57-75.

Biggs, J. B., & Collis, K. (1982). *Evaluating the quality of learning: The SOLO taxonomy*. Academic Press.

Bloom, B. S. (Ed.). (1956). *Taxonomy of educational objectives: The classification of educational goals: Handbook I: Cognitive domain*. McKay.

Dave, R. H. (1970). Psychomotor levels. In R. J. Armstrong (Ed.), *Developing and writing behavioral objectives* (pp. 33-34). Educational Innovators Press.

Eisner, E. (2002). *The educational imagination: On the design and evaluation of school programs* (3rd ed.). Upper Prentice Hall.

Ermine, W. (1995). Aboriginal epistemology. In J. Bearman, & M. Battiste (Eds.), *First Nations education in Canada: The circle unfolds* (pp. 101-112). UBC Press.

Fink, L. D. (2013). *Creating significant learning experiences: An integrated approach to designing college courses* (2nd ed.). Jossey-Bass.

Fostaty Young, S., & Wilson, R. J. (2000). *Assessment & learning: The ICE approach*. Peguis.

Huitt, W. (2003). The psychomotor domain. *Educational psychology interactive*. Valdosta State University. Retrieved from http://www.edpsycinteractive.org/topics/behavior/psymtr.html

Iowa State University. Center for Excellence in Teaching and Learning. (n.d.). *Revised Bloom's taxonomy*. Retrieved from: http://www.celt.iastate.edu/teaching/effective-teaching-practices/revised-blooms-taxonomy

Krathwohl, D. R. (2002). A revision of Bloom's taxonomy: An overview. *Theory and Practice, 41*(4), 212-218.

Krathohl, D. R., Bloom, B. S., & Masia, B. B. (1964). *Taxonomy of educational objectives: The classification of educational goals: Handbook II: Affective domain*. McKay.

LaFever, M. (2016). Switching from Bloom to the medicine wheel: Creating learning outcomes that support Indigenous ways of knowing in post-secondary education. *Intercultural Education, 27*(5), 409-424.

O'Neill, G., & Feargal, M. (2010). *Assessment: Guide to taxonomies of learning*. University College Dublin. Retrieved from https://www.ucd.ie/t4cms/ucdtla0034.pdf

Romiszowski, A. (1999). The development of physical skills: Instruction in the psychomotor domain. In C. M. Reigeluth (Ed.), *Instructional-design theories and models: A new paradigm of instructional theory* (Vol. 2, pp. 457-482). Lawrence Erlbaum Associates.

Seels, B., & Glasgow, Z. (1990). *Exercises in instructional design*. Merrill.

Simpson, E. J. (1972). *The classification of educational objectives in the psychomotor domain: The psychomotor domain* (Vol. 3). Gryphon House.

B4: Classroom2Cloud: Technology-Supported Teaching

In the ISW, we believe…

- that we integrate information and communication technologies (educational technologies) in our teaching practices when we think they will support learning and help make learning more authentic, accessible, and meaningful for diverse learners.

Teachers used to teach using technologies that were physical and immediate, e.g., pencil and pen, chalk and boards, mechanical devices. Learning took place in small groups in gathering places or in work or community settings. As technologies of communication and information processing and the Internet developed, teachers have increasingly explored the possibilities of using educational technologies[25] to resolve teaching challenges and to engage learners in different ways. The scope of possibilities became even broader as "cloud-based" (Internet accessible) storage and tools became available and a growing number of students and teachers owned and used mobile devices (e.g., smartphones, tablets) at school, work, and in their personal lives.

The term "tools" is used here to refer to technologies that range from classroom devices that may be available in higher education institutions to tools that are available through the Internet and that can be used on mobile devices or personal computers.

Consider Why?

Before choosing a tool (or learning how to use a tool in your teaching), focus on the purpose. Review your learning outcomes, consider your learners, while also thinking about your timeframe and learning environment.

Consider What?

In choosing a tool, think about "what it is" and think about "what it is for." There are many ways to categorize educational technologies, or to think about the potential of different tools. One approach, suggested on University of Victoria's Technology Integrated Lab website[26], is to describe the ways tools could be used in learning. You could ask yourself:

[25] "Educational technologies" describes technologies designed to support education and learning.

[26] University of Victoria. Learning and Teaching Centre. (n.d.). *Teaching with technology*. Originally retrieved from https://www.uvic.ca/learningandteaching/ta/resources/instructional/technology/index.php. Available from: https://onlineacademiccommunity.uvic.ca/learnteachtech/

- Do I want to share a resource that students can access, read, and think about from different locations and asynchronously (at different times)? This might involve sharing an article, searching for relevant reading from an online journal, reviewing information from a specific web page, listening/reading an online lecture recording with slides, etc.

- Do I want to provide flexible "channels of communication" or options chosen for a particular purpose or based on student preferences? This might involve email, listserv, instant messaging, phone texting, voice-over-IP options such as Skype, web-based sharing options like open bulletin boards, blogs, wikis, etc.

- Is it important to help students place content or concepts into a simulated situation or as an applied example? This might involve experimental simulations, interactive learning objects on websites, virtual manipulatives.

- Would it help students learn more effectively if the tool offered opportunities to construct something? This might involve model and theory building software.

- How might students visualize new ideas to aid understanding? This might involve learning objects, drawing or animation apps, simulations, games, etc.

- Do I want to provide ways for learners to work together to build knowledge or explore topics – in synchronous and asynchronous ways? This might involve social media sharing services, online voting-debate sites, collaborative meeting spaces that integrate voice, breakout rooms, whiteboards, or virtual reality worlds where they can test applications.

Considerations of Risk

Privacy: In many parts of Canada, use of cloud-based tools in education is guided (and limited) by student privacy considerations (see Freedom of Information and Privacy legislation). This is true elsewhere, although perhaps not universally. However, a growing demand by students and teachers to use social media and other cloud-based services in teaching and learning has changed what institutions allow, encourage, and support. There are ways to integrate cloud-based tools that engage learners without risking their privacy.

Check your institution's policy on the use of cloud-based or social media tools. If you are clear about what you are trying to achieve for your learners, the staff at your institution may be able to help.

Other risks: Think about how much time your exploration of technology will take and the benefits of doing it. Aside from learning the new tool, there are other requirements, including preparing students, supporting the use, and devising a fair assessment of the learning. Sometimes it's best to start with a simple challenge and build to more complex new approaches.

Inspiration/Possibilities

While we suggest that you start from your instructional purpose, sometimes you need to find inspiration or a "spark" to get you started. Try asking students and other instructors about how they learn and teach with technology. Visit the staff at your Teaching and Learning Centre. Or participate in workshops or conferences (face-to-face and online). Sometimes educational institutions host "showcase" days to share exciting new initiatives (which often involve some form of technology) and they can provide ideas to get you started.

Check out the websites of popular learning management systems and tools (e.g., Smartboards or Promethean boards). They will often publish lesson ideas, research about specific projects, stories, and tutorials with an educational focus.

Dive into social media yourself. Sign up for a Twitter account, Slideshare, LinkedIn blogs and groups. Check the profile pages of educators you know and respect; you may find they maintain blogs or websites or publish stories about their teaching with technology. Check out some of the ideas about social learning and social media.[27]

A new way to find ideas about teaching with technology that goes beyond social media is to find institutions that publish stories of "open educational practices" or "open teaching" as these generally involve new technologies used in pursuit of better learning.[28]

Research, Scholarship, and Resources (Classroom2Cloud)

Educause. (2017). 7 things you should know. Retrieved from https://www.educause.edu/research-and-publications/7-things-you-should-know-about

Hart, J. (2017). *Top 200 tools for learning 2017.* Centre for Learning and Performance Technologies. Originally retrieved from c4lpt.co.uk/top100tools [29]

New Media Consortium. (n.d.). Horizon reports. Originally retrieved from https://www.nmc.org/publication-type/horizon-report/

Royal Roads University. (2017). Social media and social learning. Originally retrieved from http://ctet.royalroads.ca/social-media-and-social-learning

University of British Columbia. (n.d.). Teach. Retrieved from http://open.ubc.ca/teach/

University of Victoria. Learning and Teaching Centre. (n.d.). *Teaching with technology*. Retrieved from https://onlineacademiccommunity.uvic.ca/learnteachtech/

[27] Royal Roads University. (2017). Social media and social learning. Originally retrieved from http://ctet.royalroads.ca/social-media-and-social-learning

[28] University of British Columbia. (n.d.). Teach. Retrieved from http://open.ubc.ca/teach/

[29] Learning professionals from 52 countries worldwide voted on the items on this list.

Search Strategies: Teaching with Technologies

Define your topic first. Do you want examples of how other teachers have used technologies in their teaching? Do you want information about how to select a tool, how to use a tool, how to create a lesson that uses a tool? Do you want to find out what research indicates about ways to integrate technologies in teaching to contribute to student success and learning?

The following search terms may be helpful:

- Teaching with technology
- Advanced education
- Higher education

You may wish to try different search terms that relate to the type of technology or the type of teaching/learning approaches you'd like to explore. For example:

- Social media in education
- Teaching in the open
- Active learning with technology
- Collaborative learning tools and technology
- Collaborative learning approaches and technology

Search Strategies: Online Learning and The Seven Principles

The Seven Principles of Good Practice in Undergraduate Education have been used to consider effective online learning. To find out more, go to:

- http://www.tltgroup.org/programs/seven

Or consider using the search term: "chickering and gamson online learning".

Using Technologies in Teaching

Examples

Lesson Topic: **Basic Grammar in French Conversation for Beginners**

Learning Outcome: Create simple commands using common verbs.

Problem/Purpose:

Students have completed some written exercises successfully but seem to find the sentence construction patterns difficult to recall and apply in new situations. You want to make your lesson more participatory to engage the students' interest in practicing their sentence construction.

Potential Scenario:

Your school has installed Smart Boards in various classrooms. Students are curious about them but you've only used them to play videos from the Internet or to share PowerPoint slides of grammar rules and sample sentences. You're curious whether the Smartboard could be used to support group learning and engage the learners in active practice with sentence structures.

You meet with an educational developer who knows the tool and demonstrates how to build a simple storytelling backdrop and collect images and words that students could use to build a story. You spend some time creating a simple story outline about situations that would require the main character to utter simple commands. You create lists of words that students could choose and find some humorous images they could add to the background displayed on the Smart Board. Students can take turns moving the story along by creating new commands. You can set rules and award points to encourage participation, challenge creativity, and make it fun.

Lesson Topic: **The Phenomenon of *déjà vu* in Introductory Psychology**

Learning Outcomes:
1. Explain the phenomenon of *déjà vu*.
2. Summarize three main scientific theories that have been offered to explain it.

Problem/Purpose:

Students seem uninterested in your *déjà vu* lesson. You notice they are often distracted during your lecture and forget what they've learned by the mid-term.

Potential Scenario:

You remember that *Groundhog Day* was a hilarious movie built around a lived experience of *déjà vu*. You check on YouTube and find a recording that contains a preview clip (2:39 minutes long). You find the point in the preview that introduces the concept and set the start time to

play the clip from that point.[30] You use the clip to spark interest and connect a popular movie to a more serious discussion of the theories about what the sense of *déjà vu* might indicate (in terms of health or memory).

Lesson Topic: **Load-Bearing Walls in Carpentry**

Learning Outcome: Explain the difference between a load-bearing and non load-bearing wall.

Problem/Purpose:

You've explained the importance of correctly identifying the load-bearing walls in a frame building. You want learners to engage in some collaborative knowledge building to help them remember the critical elements/steps.

Potential Scenario:

Recognizing that many of your learners struggle with writing, you offer them a variety of options to develop an assignment (to create an explanatory document, video or live teaching event in which they explain the importance and steps of correctly identifying load-bearing walls). You offer them resources to capture images, audio, video clips if they don't have smartphones or tablets. You offer a list of options that include free apps like Canva, Piktochart, or Venngage if they're interested in creating infographics. Student projects will be shared on your course web site.

Lesson Topic: **Basic Knots in Sailing**

Learning Outcome: Without reference to a diagram, tie a secure bowline knot.

Problem/Purpose:

You have a few students who just can't seem to "get it." They watch you tie the knot, and can do it if you slow down to show them each step. But they struggle to do it alone, even with a reference drawing. They need to be able to practice on their own.

Potential Scenario:

You search the Internet for better illustrations or videos. You find a simple animation sequence that plays on the students' phones. They can meet after school and help each other while watching the animation sequence, adjusting the demonstration to the speed they find best.

[30] Before playing clips from the Internet, be sure to check institutional or organizational guidelines and/or policies regarding copyright and the use of multimedia.

B5: Community Building and Cooperative Learning

There are many ways to build community in a learning setting and many factors to consider. And many researchers have developed models to describe how groups form and perform. Bruce Tuckman's theory is outlined below as a theoretical framework for reflecting on how groups (including cohorts or class groups) may develop over time:

Tuckman's Group Development Theory

In 1965, Bruce Tuckman proposed that overall most groups follow a reasonably predictable pattern of development in the areas of both task behaviour and relationship behaviour.[31] The five-stage model of development presented here was inspired by and expands upon Tuckman's initial work. It is intended to provide you with a way of understanding more fully your own behaviour and the behaviour of your ISW group. The material can also be used to understand how groups of learners may develop over time.

Stage 1: Forming

When a group is first established, it will inevitably go through a period of organization and orientation. In the area of task behaviour, this is a period of orientation to the task. In this stage, the group will be concerned with identifying the task at hand and in deciding what information and experience will be relevant to that task. In essence, the forming stage will be devoted to establishing the ground rules under which the work of the group will be conducted.

In the area of relationship or interpersonal behaviour, the forming stage will be concerned with testing and dependence. "Testing" refers to attempts by group members to discover what kind of interpersonal behaviour will be acceptable to other group members and to the formal leader of the group. "Dependence" refers to the tendency of group members in this early stage to rely on the formal or informal leaders of the group to provide structures and guidelines for interpersonal behaviour.

- In the realm of task behaviour, group members in the forming stage attempt to answer the question, "What is the task of this group and how will I be able to contribute to that task?"
- In the realm of interpersonal behaviour, group members in the forming stage attempt to answer the question, "What kind of behaviour is acceptable in this group and how am I to behave in this group?"

[31] Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin, 63*(6), 384-399. Originally retrieved from http://dx.doi.org/10.1037/h0022100

Stage 2: Storming

The second stage of group development is characterized by some degree of emotional response. In the area of task behaviour, the storming stage will be characterized by an emotional response to the demands of the task. To at least some extent, group members will experience some resistance to the demands the task will apparently be placing on them. If the task is relatively easy and if the experience and expertise of the group members seem adequate to the task, this resistance may be relatively minor and may even go unnoticed. If, however, the task appears extremely difficult, or if the members of the group are uncertain of their abilities to accomplish the task successfully, this resistance may be quite intense.

In the area of interpersonal behaviour, the second stage of group development will be characterized by interpersonal conflict. Hostility may be directed by group members toward each other or toward the formal leader of the group, perhaps as a way of expressing individual differences or of resisting the continued imposition of structure on individual behaviour. A sense of unity will not be present and conflict may polarize around certain key issues. Essentially the group will be experiencing a conflict between wishing to remain in the relative security of stage one or moving into the unknown of perhaps closer interpersonal relations that may lie in the future.

- In the realm of task behaviour, group members in the storming stage attempt to answer the question, “Am I emotionally ready to deal with this task?”
- In the realm of interpersonal behaviour, group members in the storming stage attempt to answer the question, “Do I really want to work with these people?”

Stage 3: Norming

The third stage of group development is characterized in both areas by increased openness and communication. In the area of task behaviour, the third stage will be characterized by the open exchange of relevant interpretations. Information, ideas, and opinions relevant to the task will begin to be exchanged by group members as they settle down in earnest to getting the task done. In the area of interpersonal behaviour, the third stage of development is characterized by the development of group cohesion. In this stage, group members accept the group and each other and, as a consequence, develop an important sense of group unity. Group harmony becomes important in this stage, and interpersonal conflict may be avoided to help ensure that harmony.

- In the realm of task behaviour, group members in the norming stage attempt to answer the question, “What relevant ideas and opinions do I have that will help us accomplish this task?”
- In the realm of interpersonal behaviour, group members attempt to answer the question, “How can I help contribute to continuous group unity and harmony?”

Stage 4: Performing

In the fourth stage, emphasis is placed on constructive action directed at the successful completion of the task. In some sense, the distinction between task and interpersonal behaviour fades here, for the energy that was previously invested in interpersonal issues now will be devoted to the task. In the area of task behaviour, the final stage of group development may be identified as the emergence of

solutions. It is at this stage that genuine attempts are made toward the successful completion of the task. In the area of interpersonal behaviour, the fourth stage can be described as functional. Because the subjective issues of interpersonal relationships have been dealt with in the first three stages, group members can now function objectively as instruments of effective problem solving.

- In the realm of task behaviour, group members in the performing stage attempt to answer the question, "How can we successfully complete this task?"
- In the realm of interpersonal behaviour, group members attempt to answer the question, "What can each of us contribute to the successful completion of this task?"

Stage 5: Adjourning[32]

When teams have completed their tasks, they wrap up, and then go on to other teams in other places. It is important for the team to take the time to look at its process one last time: "What went well?" "What could we do better in another situation?" so that the loose ends are wrapped up on the task. The conclusion of the interpersonal behaviours includes a chance to say thank you and good-bye to the team members. This can range from an *imaginary gift* to each person all the way to various celebrations and even plans to meet again at a later date. Even with successful groups, some group members will be distressed by the impending loss of group membership and might intentionally or unconsciously resist task completion. Closure is an essential part of the team process.

In all group endeavours, successful or not, adjourning allows the group and individual members to reflect and learn from their experience.

Conclusion

If groups develop through relatively predictable stages over time as Tuckman's model suggests, three consequences to all group members become apparent. First, a developmental sequence in groups is inevitable, and group leaders and members would be well advised to provide time for that development. A high level of task performance cannot be expected from groups at early stages in their development. Second, leaders can help groups move smoothly from stage to stage. If a conscious effort is made to help group members answer the appropriate questions at each stage of the group's development, the transition to the performance of stage four can be made more quickly and directly. And third, this five-stage model of group development can help leaders and group members diagnose current problems the group may be having as a function of a particular stage of the group's development.

Forming, storming, norming, performing, adjourning – the five stages of group development – can provide powerful insight for instructors and trainers into what is happening and what they can do about it.

[32] The adjourning phase was added later. See Tuckman, B. W., & Jensen, M. C. (1977). Stages of small group development revisited. *Group and Organizational Studies, 2*(4), 419–427.

More on Community Building

There are many other components of community building that may affect an instructor and learners, including:

- cooperative and collaborative learning,
- deciding on logistics related to encouraging and assessing collaborative learning,
- considering how peer learning works,
- developing and supporting communities of practice,
- and so on.

Research, Scholarship, and Resources (Community Building)

Tuckman, B. W. (1965). Developmental sequence in small groups. *Psychological Bulletin, 63*(6), 384-399. Originally retrieved from http://dx.doi.org/10.1037/h0022100

Tuckman, B. W., & Jensen, M. C. (1977). Stages of small group development revisited. *Group and Organizational Studies*, *2*(4), 419–427.

NOTES

INSTRUCTIONAL SKILLS WORKSHOP
(ISW)
HANDBOOK FOR PARTICIPANTS

教学技巧工作坊
学员手册

May 2006

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This Handbook accompanies the Instructional Skills Workshop Program and is not meant to be used as a "stand alone" text.

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目录 页码

前言

二十世纪七十年代随着加拿大卑诗省社区学院, 大学发展得日益成熟, 迫切需要给一些有专业经验与训练, 但却没有教师执照的教师提供协助。由于这方面的需求, Diane Morrison (当时的卑诗省高等教育部专业发展部门专员) 委托Douglas Kerr (当时任职于温哥华社区学院) 研发并实验一套增进教学技巧的课程。这套课程要求时间短, 却能提供高等教育环境所需的基本教学技巧。

因此, ISW (教学技巧讲座) 于 1978/79 年完成 。 虽然 ISW 成立的初衷是提高新教师基本教学技巧, 然而早期的参与者发现他们深深地被这个讲座的过程吸引, 并建议将 ISW 教学技巧讲座同时提供给新教师与经验丰富的教学工作者。教学技巧讲座的设计有足够的弹性容纳来自全省高等教育不同学科, 不同经验水平的教学工作者。

起初 ISW 最主要的倡导者是 Diane Morrison, 它现在已成为加拿大、美国以及其他国家的大学、学院、教育机构中教师培训计划中的一部分。

1992 年 ISW 被引进卑诗省省立大学 (UBC), 作为一套专为教学助理设计的课程。不久后, 它的对象扩及到教师。从此在 UBC 有超过一千多名来自不同专业领域的教职工完成此教学技巧讲座。如今一些加拿大及美国大学提供 ISW 教学技巧讲座。

教学技巧讲座根植于能力培训的成人教育, 教学技巧讲座的训练针对在特定领域中所需要熟练呈现的一套能力。被训练的能力将会清楚地界定, 同时以「设定目标」的形式传达给研习者, 从那时候开始, 高等教育机构以及 ISW网络中的学校便开始采用 「 学习 成果 」 导向的方式, 它强调教育环节中综合表现与基本能力掌握精熟两者并重。

ISW 的核心由一系列迷你教学组成，学员在相互支持的小组中进行迷你教学。 在讲座中, 要求学员实验一套六阶段的教案模型。 当设计短时间的教案时, 为了能更聚焦, 我们通常使用「目标」而非「成果」。对于迷你教学的反馈分别有口头反馈、参与者书面反馈, 以及通过录像回顾的方式。 在ISW 中, 强调学习也强调教学, 而且教学者被视为协助学习的角色, 许多学员表示同行所提供的反馈, 以及亲身作为学生的角度来看待教学让他们获益非浅。通过反思自己的教学过程, 自身专业得到提高。

在 ISW 中没有 「 旁听生 」, 每位参与者都要十分投入, 培训讲师也不例外, 带领进行迷你教学, 并且传授教学讲座主题。教学技巧讲座成功的关键在于每一位学员全程完整的积极参与。

ISW 整体目标在于帮助学员增强教学能力与自信，同时提供资源协助学员成为更具反思能力的教学实践者。

本手册有三个目标:

1. 提供学员在课程前、课程中及完成课程后的学习信息。
2. 协助学员能完全投入 ISW 课程。
3. 为教学反思提供工具。

第一章:「教学技巧讲座」(ISW) 概述

简介

「教学技巧讲座」 (Instructional Skills Workshop, ISW) 以增进教学效果为主旨, 并以多样形式进行 24 至 30 小时的密集性研习课程。 ISW 的设计是以教学者协助教学者成长, 每次由四至六名学员以及一至二名培训讲师 (Facilitator) 组成团队。学员重温教学理念, 检视现行的教学方法, 同时也鼓励在轻松自在的环境下尝试新的教学策略及技巧。此外, ISW 也包含如教学方法、学习需求, 以及其他学习环境中所涉及的相关教学主题。

ISW 是一种注重同行学习、彼此启发的研习活动。即便培训讲师曾接受相关训练, 他们同时也是学员的角色, 所以 ISW 是以培训讲师与学员共同合作为前提, 以主动、体验式的活动为基础, 进行以学习为中心的教学原则训练。 同时, ISW 提高学员不同教学特色意识, 并探索学生如何在多元的教学环境中受益。最后, ISW 培养学员具有有效的教学能力与自信。

目 标

在 ISW 中, 学员可以:

1. 与同行密切合作以提升彼此的教学能力。
2. 练习多样的教学策略与技巧。
3. 提高参与式学习理念意识。
4. 与不同学科领域的同行互动 。
5. 体验现今课堂的多元性。
6. 认识建立积极的学习环境的重要性。
7. 增加作为教学者需要具备的相关知识。

除此之外, 学员还可以练习:

1. 设定清楚明了的学习目标和成果期待。
2. 考虑学生不同的需求。
3. 撰写实用可行的教案。
4. 开展参与式课程活动。
5. 在教学中使用各种提问和有效提问顺序。
6. 充分运用合适的教学资源、多媒体材料。
7. 使用基本的学习评估技巧。
8. 给予和接受建设性的反馈。

研习内容

学员在 ISW 中既是教学者又是学生两种角色。 每位学员需要进行三次十分钟的「迷你教学演练 (mini-lessons)」, 在其进行迷你教学时, 其他学员则当学生。迷你教学一结束, 学生随即由培训讲师引导, 针对此次迷你教学的成效给予 (1) 书面与 (2) 口头反馈。此外, 每次迷你教学都要录像, 在口头反馈时可播放重点片段协助小组讨论, 而每位教学者必须在第二天活动前观看自己迷你教学的全程录像, 作为第三种反馈。在 ISW 进行期间, 要求每位学员以学生角色, 针对教学者的教学练习给予真诚、具体并且可 以改善 的反馈 。

ISW 是少数能让教学者有机会观摩其他人的教学活动, 并鼓励学员尝试不同的教学策略、技巧, 包含经过培训讲师或其他学员从他处得到、改良过的技巧。 ISW 创造了一个教学方法实验的环境, 并提供学员有马上接收建议的机会, 在本手册第三章「反思与反馈」里, 列举了数种练习方法, 以协助学员进行迷你教学演练后的反思活动。

由于学员每一次对于同行的反馈在 ISW 设计中具有极重要的意义 , 所以学员的出席与参与便愈显必要。为了顾及其他学员的权益, ISW 期间请避免任何理由的缺席。此外, 虽然活动进行中气氛是令人愉悦且放松的, 但 ISW 是一次自我挑战且学习密度极高的训练, 因此每个时刻都非常宝贵 。

学员

适合参与 ISW 的人员包含:

1. 新教师 / 有经验的教学工作者 。
2. 各大专院校、机构服务的教育工作者。
3. 私立教育机构服务的教学者。
4. 政府单位、各公司企业, 或其他组织机构中的教育培训人员。
5. 有心投入各专业领域教学工作者。

第二章:迷你教学演练

课程设计

一份教案是为了达到教学目标,其内容环绕教学者与学生需要进行的系列活动之描述,包含整堂课程的流程规划以及所需使用的教学资源清单。值得注意的是,「教案」顾名思义是一份计划方案,在教学过程中它可以临场调整,当然课程结束后也可以为下一次操作而重新修订。

教案就像是一出戏的脚本,交代了所有活动以及团体中彼此的关系。它可以具体详细,面面俱到,也可以仅是一份大纲概要,无论详略,教案必须包含活动的内容及涵意,标明准确的教学活动时间 (或进行讨论的时间),还有列出用来增进学生专注及学习热忱的方法。一份教案从导言开始,需要记录教学者最初的要求与目标,最后则以验收课程效果以及有力的总结收尾。

撰写教案时,需考虑三项基本组成要素:

(一) 绪论:导言、教学目标、前测
(二) 主体:参与式教学活动
(三) 结论:后测、总结收尾

绪论奠定了整堂课的步调与风格,它揭示了课程的大概内容,接下来将会如何进行,以及学习这些内容的重要性。此外,这个环节也需要复习相关知识,或之前的授课内容,这可以靠指定课前准备的作业或提出问题来澄清某些概念。这个阶段有时我们称作导言或热身。

课程的主要内容须展现教学者与学生双方巧妙的平衡;即是教学者呈现教学活动(如授课 、示范、播放影片)也是学生 实作、参与的机会 (如讨论、知识技术演练、角色扮演等活动),这两者需要兼顾。通常在参与式学习的设计里,教与学双方的投入会持续且频繁地交错在一起。

结论须包含对学生学习成果的评估或反思活动、简短有力的总结,以及引入之后的教学内容。

事先演练一堂课是好的想法,然而,实际教学时往往会比演练时花更多时间。因为学生需要时间思考、作笔记,或弄清楚教学者给的讯息。同样,教学者也需要时间环顾四周、了解状况、安排活动与活动间的连接,以及回答问题等。通常一场教学安排越多的参与式活动,就越难准确地掌控时间。

设计课程有许多方式,在 ISW 迷你教学中常用的方法是 BOPPPS 的模式, 它包含: (Bridge-in, B) 导言、 (Objective or outcome, O) 目标、(Pre-assessment, P) 前测、(Participatory learning, P) 参与式学习、(Post-assessment, P) 后测、(Summary, S) 总结。

这六项内容被认为是所有有效教学的基本元素,每一项的详细内容请参考「设计迷你教学演练」。

帮助构思教案的几个问题:

1. 这堂课的主题或名称是什么?
2. 这堂课的学习目标是什么? 课程结束时,学习者将会学到什么或具备什么能力?
3. 为何学习者需要学这些内容? 你如何提高他们的学习动机和兴趣?
4. 课程目标与之前所学知识有什么关联? 你如何判断学生已经具备了哪些能力或知识? 什么样的前测是必须的?
5. 你将会如何介绍、概述课程内容? 你打算如何呈现教学活动? 什么样的方式最适合你的教学目标?
6. 你最希望看到学习者在课程中做什么活动? 你如何展开教学? 先后次序是什么?
7. 你会用到哪些教学媒体或其他的资源?
8. 你打算如何运用课堂时间? 每一个环节各需要多少时间?
9. 你如何知道学习者学到了哪些内容? 又如何对于他们的参与、表现给予反馈?
10. 你打算如何结束这堂课?

妥善安排课堂顺序是一份成功教案最主要的地方。可以考虑以下几种模式:

- 由简单到复杂
- 由已知到未知
- 由抽象到具体 (或相反)
- 按时间顺序安排
- 由普遍性到个别性(或相反)

教案只是一份计划方案,有时候课堂中会发生教案规划预期之外的事情,此时可以不按设计好的教案授课而进行其他的教学内容,这种时刻便是所谓的「随机教学」(这种改变常与课堂里学生的参与或反应有关),好教师通常能在按计划教案授课与随机教学之间取得平衡,良好的设计与弹性的调整在一堂有效教学中是相辅相成的。

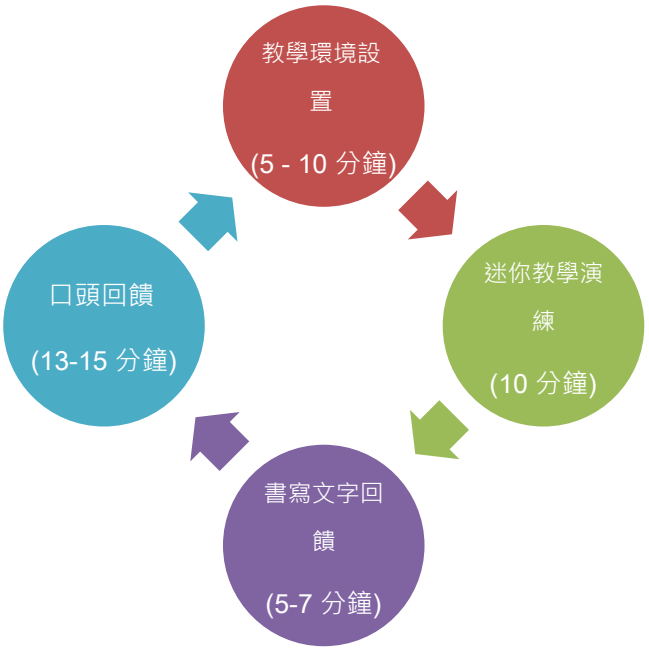
教案的功能是一份参考依据和规划课程的工具,其用处并不在于对每一个课程细节面面俱到的描述,也不是去预测所有可能发生的情况。有的教师偏好非常详细的教案; 然而,越是有经验的教学者,其教案通常会越来越精简扼要。(如果在十分钟的迷你教学里,你需要超过一页的教案,那么你需要思考是否准备了太多的内容。)

简言之, 最有效的教案, 就是对自己最适用的教案。虽然并不存在一份万用的或是标准格式的教案。不过, 前面提过的六项基本要素 (导言、目标、前测、参与式学习、后测、总结) 是非常有用的指南。

设计迷你教学演练

迷你教学循环

迷你教学循环一次约四十分钟



迷你教学演练以四十分钟为一次循环周期, 包含了课前准备、迷你课程、书面反馈、口头反馈。

进行迷你教学演练包含的成员有:

教学者 — 上台操作迷你课程的人

培训讲师 — 安排整场四十分钟的迷你教学演练, 并引导反馈讨论

学习者 — 其他学员

以下介绍迷你教学演练的各个阶段:

1.学习环境, 课前准备 (五至十分钟)

教学者准备接下来的迷你课程操作, 课前准备工作包括移动桌椅以配合教学内容、擦拭黑 (白) 板、准备教具 (如: 简报 Flip chart)

设定投影机等。教学者把要使用的影音资料给培训讲师, 同时也可以和培训讲师一起复习一遍教案, 以及思索适合进行反馈的地方。此时其他学员可以协助课前准备工作, 也可以思考自己的迷你教学, 或者稍作休息。

2.迷你课程演练 (十分钟)

教学者对其他学员（学生）进行教学课程。培训讲师会全程录像, 并写下观察的意见, 为之后的口头反馈做准备, 同时在课前预定的时间点给教学者时间提示。当培训讲师提示「时间到」时, 就算教学内容尚未完全结束, 教学者也需即刻结束课程。

3.撰写反馈意见 (五到七分钟)

这个阶段是让学员学生填写反馈问卷, 同时培训讲师与教学者针对刚才的教学演练进行一对一的对谈。这是为了及时记下任何有关教学演练的看法, 并且整理接下来的口头反馈所需要提出的意见。此时培训讲师也可以回放录像画面(静音或低音量)用以参考。

4.口头反馈 (十三至十五分钟)

每一次的迷你教学循环结束于培训讲师主持的「口头反馈」: 对于刚结束的教学活动而进行的讨论。每位学员就刚才作为学生的经验提供意见, 培训讲师主持讨论, 并确认教学者真正理解学员（学生）所提供的意见, 同时也要注意让每位参与者有机会整理自己的想法, 并适当确切地表达。培训讲师要坚持讨论的重点在教学结构及教学过程中使用的方法, 而非所教的知识内容; 也就是说, 这个阶段并不是要重教一次刚才的内容, 也不是讨论普遍性的教学议题、原理, 而是具体地针对教学者刚才的教学操作提供建设性意见, 让教学者能听取这些反馈, 反复思考并运用在之后的教学活动中。

学员的反馈通常包含以下几点:

1. 培训讲师对照书面教案与实际教学情况, 进而提出意见或发问。
2. 学员以学生角度就参与迷你教学过程所观察到的问题。
3. 前一阶段所写的反馈意见。
4. 影带反馈 (学员在教学技巧讲座结束后须重新看一次录像纪录以对比反馈意见与影带的内容)。
5. 培训讲师归纳大家所说的意见。
6. 及时和多方面的意见 (书面、口头、录像)

7. 和每位学员个人迷你教学经验有所结合或比较的意见

为何限时为十分钟

对一次教学活动而言，十分钟似乎远远不够，大部分的课程时间在四十到五十分钟之间；某些学科在实验室进行的教学活动经常需要更多时间。然而，一堂完整的课程或实验活动可以视为一连串比较短的课程或单元所组成。

十分钟的迷你教学是考虑到教学技巧讲座的「总时数」需保持在合理的范围内，不能过长；而教学实作的内容又足以供大家讨论，不会过短，十分钟迷你教学为两者折衷的结果。此外，短短十分钟能确保学员把重点放在教学的「过程」， 而非教学的知识内容。 同时， 十分钟亦可让学员记得课堂中具体的细节以便给予反馈意见。

对教学者而言，设计十分钟的课程有助于让你的课程更精炼，毕竟，无论你有十分钟或十小时，想要在课堂中教完某一主题的所有内容都是不可能的，所以实际教学时，安排适当、适量的教学内容才是关键！

为何要进行三次迷你教学演练

一次教学技巧讲座设计三次迷你教学演练是希望能引导出三个层次的学习机会，分别是：发掘、尝试、以及内化。教学者在第一次迷你教学中有机会发掘自己已知的教学方法，以及想要学习、改进的地方。而第二次迷你教学则提供了在教学上尝试、冒险以及创新的机会，最后一次则用来整合、内化之前 所学的内 容 。

有些教学者在第一次发掘自我，而第二次则是整合与强化新学到的内容，在第三次他们才从容不迫地突破自己过去的教学模式。藉由三次教学实作及反馈讨论，每位学员可以在短时间之内仔细省视自己的教学过程，三次迷你教学操作也提供机会针对三大学习领域 (认知、技能、情感) 尝试设计不同的课程。

有了三次迷你教学的机会，所有学员都可以在他人的教学活动中，以学生的角度，通过提出反馈意见而获取经验！

反馈

在教学技巧讲座 (ISW) 中，学员给予和接受反馈意见非常重要。完整的迷你教学演练中，你既有机会给予反馈，也会收到反馈 。例如当你是教学者时，你会对学生们说明他们的表现如何。同时，你也会从学生身上得知他们对你所教授内容的相关反馈 (口头上或其他方式)。而迷你教学演练过后，你会直接、及时地得到学生书面及口头的反馈 — 针对他们刚才所体验到的十分钟教学演练。

一般来说，教学者极少有机会听到关于他们教学情况的反馈 — 我们遇到的「学生」通常不会恰好是老师，并且准备好要分享他们的观察与体会。此外，迷你教学会全程录像，因此又提供了另一个视角来观察你的教学效果。透过这些不同的反馈方式，可以帮助你检视自己教学上的强项，和以待加强的地方。

具体清楚的反馈非常有用，不幸的是，大多数人将意见反馈与批评当成同一件事情。实际上，唯有明白我们哪些做得好，哪些需要改进，才可能做到精益求精。这需要一个开明、包容的讨论环境，让你的学生感到轻松自在，愿意提供他们真心的反馈 — 因为他们感觉到你愿意接纳这些意见。还有一点，反馈的内容若是包含了具体的改进建议往往会是交换意见时最重要的信息。 因此，务必谨记我们反馈的是自己所观察到的，而非主观判断的内容。

反馈意见对教学者有以下帮助：

1. 肯定教学效果，增加信心
2. 厘清可以改进的方向
3. 准确反省未来的练习该如何进行

在 ISW 课程中，要激发出每一位学员的反馈，需要众人坦诚且敏锐地投入讨论，且具备一个开明、友善的讨论环境，让人感到安心且能彼此信任，这十分重要，因此在教学技巧讲座的一开始，会安排一些熟悉彼此的活动。

- 提出回馈意见的小秘诀：

ISW 的学员须认识到所有人都努力提供真诚有用的反馈！

口头反馈

反馈在任何教学活动中都应该是有建设性的，它应该能提供实际的「材料」 用来分析、拼凑（设计），接着(如果可能的话)使人「重建」教学活动。

有建设性的反馈很有用，并且通常有以下的特质：

1. 具体而非广泛。准确具体的信息让接收者可以立即反思其行为；空泛的反馈容易产生混淆，而且缺乏深刻的印象。
2. 描述而非评价。避免使用「好」或「坏」等主观判断性字眼。
3. 依据实际行为而非凭靠推论。可以举出对方做了什么，但避免猜测这些行为的原因。(例如：「鲍伯， 你一直拨弄口袋里的零钱。」而不是「鲍伯，你今晚似乎非常紧张」)
4. 秉持公平不偏颇。给予正面反馈再提出发展、改进的建议。
5. 控制反馈的数量在适当的范围，避免过多

6. 可调整或改进的建议。给予的反馈是对方能力所及，可以改善的范围。
7. 引导性、诱发性,而非强加于人。通常最有效的意见是在对方感到疑惑，主动提出问题，而旁人观察后能所给予的响应。
8. 即时性。趁所有人对迷你教学还记忆犹新时给予意见。
9. 时时确认彼此的理解正确,意见交换通顺。

在教学技巧讲座中,无论是给予反馈或接收反馈的人,可以与在场的其他学员确认反馈意见:是个别的印象? 或者大家都这么想? 每个人都可以再次厘清:「是这样吗? 真的如所听到的吗?」 当然,我们也希望某些在反馈过程中已被提及的内容,在以后的讨论中不会被反复提起。

给予反馈时注意事项:

1. 先给予正面肯定的意见。
2. 指出对方做了什么、表现出什么,而非针对个人特质评论。
3. 说出你的观察或感受,而非推测这些现象的成因。
4. 大略区分这些行为的层次或效果,但避免使用优劣判断的字眼,如「好」或「坏」。
5. 给予反馈时取决它对接受者而言具有什么实质意义? 价值为何?

♦ 给予反馈的小秘诀:

尽量用完整明确的陈述来表达你的评论意见,例如:「我觉得你的练习材料对我的帮助很大。」或「我认为以你所设定的学习目标而言,你的练习材料提供内容过多,反倒让我混淆了。」当你对自己的评论还没有很确定时,你可以尝试提出问题 (比如「这堂课你确定的课程目标是什么?」)。

接受反馈时该注意:

建议先接受所有的反馈,在仔细厘清它们的意思,辨别其中的涵义,最后依据其重要性加以整理、分类。如果你不同意某些反馈，请避免急着争辩,应该先从自己过去的经验重新思考这个意见。

听取反馈时可以参考下列原则:

1. 注视正在给你提出建议的人。
2. 先接受所有的反馈。
3. 认真思考你所听到的建议,用自己的方式重新理解一遍。
4. 对不清楚的地方,追问细节。

5. 依据你的教学体验诚实地回应。
6. 注重正面的鼓励意见。
7. 评估不同意见的重要程度。
8. 面对反馈的内容,抽离个人的感受、情绪。
9. 避免在回应时重教课程内容。

♦ 听取口头反馈的小秘诀:

建议在听取反馈时,先保持沉默,这么一来你能节省时间来理解别人给予的反馈。其次真诚地响应这些意见,首先思考整体的反馈,经过整理之后再响应。如果有不同意的地方,避免争论,应将焦点放在与教学有关的讨论上。

书面反馈

写出书面反馈不只是提供教学者有用的意见,更是让观察的人有一段独自思考的时间去整理、和其他学员分享他们的体验。撰写文字意见对教学工作者而言是必备的技能,而这也是训练自己使用文字沟通的能力。

反馈表格:

各式的表格可以帮助学生更准确地撰写反馈。学员需要针对一堂具体的教学活动填写足够的反馈项目。有些项目也许并不一定适用于个别的课程;当然,一定也会有你想提出但没有出现在反馈意见表的项目。

填写反馈表格时可思考下列问题:

1. 这项意见是聚焦在教学者课堂中所呈现的行为吗 ?
2. 这项意见是以第一人称来陈述的吗? 如:我所看到、想到、听到或感觉到等等。
3. 它有没有说明教学者的哪些教学方式比较有效? 哪些比较没有效?
4. 提供哪些下次可以尝试改进的具体建议?

♦ 填写书面反馈的小秘诀:

表格上的项目是用来协助你思考评估这堂教学活动的。对于某些项目你觉得不适用,可以不回答,也可以加上你认为合适的补充意见。

录像反馈

教学技巧讲座中每一场迷你教学演练都会录像。影片的纪录会再现你所展示的教学—也许看起来、听起来与你自己所预期的很不一样。用影片保存课堂的细节可以作为一份永久的纪录, 对学员非常有帮助。

- 看录像反馈的小秘诀:

建议你在迷你教学结束后越快观看影片越好 (例如当天就看), 并连同书面反馈一起参考, 它会强化你对自己优缺点的认识, 同时也厘清许多你可能想到的问题。可以试试快放, 或者用一般速度播放, 这样一来, 假使你有让人分心的小习惯, 或者你总是寸步不移, 在画面上都会变得很明显。不过, 这些你感到分心或干扰的动作对学生来说可能根本不痛不痒—请学员们就此给予更详细的反馈吧!你也可用静音播放影片, 这样, 你能更容易注意到自己的肢体语言—这可是人际沟通中相当重要的一项信息!

基本原理: 有效教学结构模式

设计课程有各种不同的模式方法, 在教学技巧讲座 (ISW) 中, 我们使用的有效教学结构其基本的原理包含六项要素, 我们用开头字母缩写代称为:BOPPPS。

1. B 导言 (Bridge-in): 开启一次学习周期, 引起学生注意, 增加学习兴趣动机, 并解释课程的重要性。
2. O 目标与预期效果 (Objective or Outcome):具体清楚说明这堂课的学习目标, 包含学生在什么情况下, 课堂教学结束前应该理解、思考、判断或操作哪些内容, 达到哪种程度。这些需要明确地界定清楚。
3. P 前测 (Pre-Assessment):解答这个问题:关于这次教学的主题, 学生已经知道多少?
4. P 参与式学习活动 (Participatory learning): 这是整堂教学活动的主要内容, 学生尽可能地主动参与在其中, 利用一系列经过设计的小活动或学习项目以帮助学生达到先前订立的目标或预期效果。此活动也包含多媒体素材的运用。
5. P 后测 (Post-assessment):正式或非正式地证明学生是否已经确实掌握教学内容, 并藉此直接检测原先的教学目标是否有达到 。
6. S 总结 (Summary/Closure): 在结束教学的最后阶段, 让学生有机会简短地回顾教学内容, 并再次归纳总结。

一堂迷你教学课必须有完整的架构。在主题的选定上唯一的规定是要让参加讲座的学员能有所学习和收获。建议教学者不要从一场大的教学中撷取一小段来做迷你教学 (例如:一开场便说:「这是我教三年级学生的一堂课，讲的是护理人员的人际沟通。」、「这个主题通常要用一小时才够。」)，也避免要求学员假想一个他们未曾经历过的身分 (例如说:「想象你自己是一个物理系大四的学生。」)

- 选择迷你教学主题的小秘诀:

  许多参加讲座的学员发现用「个人经验」或者「兴趣」为题材, 比「专业知识」更能让其他人着眼在「教学过程」而非「教学内容」上面。

接下来将更详细地介绍基础原理:BOPPPS 模式。

基本原理描述

1. 导言 (Bridge-in)

学习的责任主要在学生,但同时教学者亦有责任创造有利于学生学习的情境。「导言」的功能即是在教学活动中提高学生注意力以及突显课程内容与学生之间关联。导言有时也称作「动机说明」,或俗称「钩子」,它能帮助学生专注在接下来的课程中。

一段有效的导言是透过寓教于乐的方式,连结教学内容与学生,来增加学生的学习动机和兴趣,尤其在学习热情不高的课堂上,导言特别重要。若在这个阶段能解答下列问题,即便是兴趣不高的学生也会「上钩」:「这堂课上些什么?」、「为什么它重要?」、「为何我需要学它?」

导言引入通常很简短,以下是一些简单的思考方针:提供学习这些内容的理由;解释为何它们是重要的,并且在不同情况下这些课程内容如何有用;描述如何让课堂内容成为可运用的技能。

- 讲一个与课程主题有关的故事
- 连结学生有过的经验
- 抛出一个与时事结合或与学生平日生活相关的问题作为刺激
- 提出令人意想不到的说法,或不寻常的事情
- 把课堂主题和已学过的内容或未来将学到的知识衔接

举例:

主题 A:初级法语会话文法

导言 A:复习基本的法语文法才能组织完整的句子,而不是仅死背词组,因此,你们不只会增进写作能力,更会让口语会话流利 。(阐释原理,延伸知识额外运用)

主题 B:心理学导论中「记忆幻觉」的现象,如:似曾相似的感觉)

导言 B:你有过几次经历发现自己在某些特定情境下感觉曾经经历过,或者过去有过很雷同的感觉?(使用生活经验)

主题 C: 土木工程中的 「负重墙」

导言 C:昨天我们已经学会了如何建造墙壁,今天我们要继续讨论「负重墙」 与 「不负重墙」 之间的差异。 明白了这两者的差别才能正确地判断你能否继续在上面加盖屋顶,还是会全部塌下来!
(链接先前知识,解说并且运用幽默感)

主题 D: 航海基础知识: 打绳结

导言 D :学会如何打一个正确的绳结关乎你隔天醒来能否找到你的船,没学好的话 ..... 就有得找了!
(阐释原理,这里可以发展出一个故事来作引导。)

2. 学习目标与表达性成果

在平常用语中,宗旨 (aim)、 用意 (purpose)、 成果 (outcome)、目的 (goal) 与目标 (objective) 等字经常混用, 然而在教育词汇中这些字分别具有更细致的涵义。

宗旨和用意通常用来描述一套课程或一堂课最表层宽泛的意图, 它们经常只用到一两句话,例如某堂烘烤课的用意可能是:「这套课程是为了将来在餐旅服务业工作的学生而开设。」

目的通常会将一堂课的意图描述得更仔细一些,但仍然属于原则性的说明,例如一堂关于制作甜点的课,其目的可能是: 「课程结束时,学生能够准备几种常见的派。」

学习成果 (learning outcome) 通常是描述在一套课程或一堂课完成时,学生所达到的具体目的或目标。它说明了学生能从课堂上 「带走」 的内容, 例如这套烘焙课程 的学习成果可能是:「此课程让学生有机会掌握制作各式甜点所需要的知识、技巧与态度,能达到高级餐厅、饭店和正式会议厅所要求的水平。」

至于学习目标 (learning objectives) 和表达性成果 (expressive outcomes)以下将会详细介绍。

学习目标

学习目标会叙述得比目的更精确。例如目的如果是「准备几种常见的派」,学习目标则可能会加上「烤出苹果派」。

针对十分钟的迷你教学所写的目标必须相当精确,例如:「能叙述制作糕点的流程」。

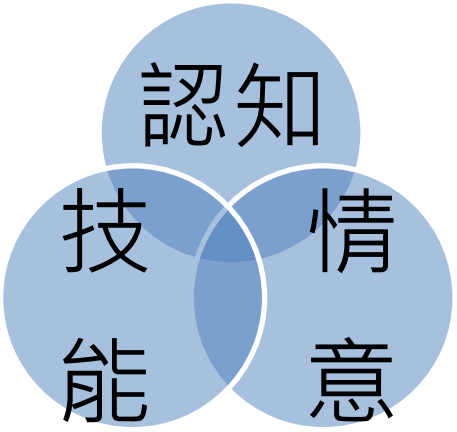
设立目标通常适用于以下这些主题和情况:

- 完成某件事情正确的步骤和方法
- 能通过操作评量某些标准
- 预期教学结果

虽然一套课程可能有几个大方向的目的, 还有几点预期的学习成果, 但个别的每堂课通常会着重一、两个明确而具体的学习目标。才能达到那些大的方向或成果。一次迷你教学正常来说要聚焦在单一的目标上。

一般来说, 学习可以概略地分成三个方面: 认知 (cognitive)、技能(psychomotor)、 情感 (affective)。这三个学习方面经常会重迭, 而且学习过程中的许多活动也会落在重迭的区域, 然而即便如此, 一堂迷你教学的主题常会着重其中的一个方面。

- 认知: 知性上的成果, 包含理论、概念、 因素、 条件。
- 技能: 新的技术, 表现或事物的创造
- 情感（意）: 态度, 价值观, 信念, 情绪



一份教学、学习或表现的目标应说明在一堂课或一套课程完成时, 学生将会知道或掌握哪些内容, 并且提供一些可观察和可检验的方法。关于「情感」层面的学习, 虽然较不容易检验, 但通常可以透过观察而知。例如, 虽然情感学习并不容易描述具体的检验内容 (如 「展现安全至上的态度」), 但是如果表达出 「脚穿着安全工具靴」, 则足以描述学生呈现出一种具有安全意识的行为, 即使这还不能称作具备安全至上的态度。

好的目标通常界定简洁、精确, 并包含以下的项目:

A. 具体内容: 明确指出学生将会掌握的「内容」 , 以及如何证明学习成效, 撰写这部分目标时必须使用表示「动作」的动词 (例如「解释」这个循环系统, 而非「了解」这个循环系统)。

B. **条件/情境:**清楚地设定和学习与内容有关的各项条件、 因素， 和如何评估学习成果 (例如 「徒手使用 描 图纸」、[与一名同伴合作」 或 「配给必要的工具」

C. **衡量标准:**为学习成果设定预期的熟练程度, 也就是如何衡量表现得多好。 (例如: 「少于三次失误」 、 「百分之八十 正确 」 或 「 有嚼劲、 直径三英寸, 外表呈现金黄色， 没有烤焦」)

总而言之, 要写出有效的学习目标关键在于先准精地认定想要达到的教学效果, 进而朝着能明显辨识出学习内容的方向思考。通常学习目标的句子会包含:

A. 人:通常是学习者或学生, 不过要写出完整的句子界定
B. 将做 / 完成什么
C. 在何种条件之下
D. 做到什么程度 (衡量标准)

例子一:学生在无法查找参考资料的口头测验中, 能正确地说出 Bloom 认知领域六项要素的顺序。

- 将完成:列出 Bloom 的认知领域分类要素
- 条件是: 口头测验; 无参考数据
- 衡量标准:六项都答对, 并且列出正确顺序

例子二:学生在测验中能解释第二次世界大战对英国至少造成的六项重大影响, 分别从政治、经济与社会生活层面论述 (每个层面各需写两项)

- 人:学生
- 将完成:解释第二次世界大战对英国政治、经济与社会生活所造成的主要影响
- 条件是:一场考试
- 衡量标准:政治、经济与社会生活至少都写出两项影响

支持 / 反对运用学习目标的看法:

关于学习目标, 曾有明确运用与否的争议, 下表收录了以往 ISW 学员认为的好处及疑虑。

支持	不支持
学习目标强调了学生要学到/会做的事物。	一些重要的学习内容无法归纳为可观察的行为，强调学习目标会使我们忽视这类内容。
学习目标使教学者的注意力更加集中，教学内容更加突出。	集中焦点在细节的学习目标上，会过度窄化（限制）教学过程中的可能性，和自动自发的学习。
分别教授系列（小单元），再积累成复杂的知识内容的教学过程可运用在很多的教学中。	分别教授系列（小单元），再积累成复杂的知识内容的教学过程不总是适用实际教学，一般人学习是一次学习整体，而非局部。另外，若要分割，则可能有太多的细节(小单元)需要列出和分别讲授。
写出教学目标同时让教学者和学生的责任更明确。	列出学习目标使得教学者把教学简单化，因为写出平易简单的目标比写出批判思维的目标容易许多。

表达性成果（Expressive Outcomes）

背景与定义

表达性成果陈述了学生在教学过程完成时会掌握的能力, 尤其着重在创造、情意感发或难以预期的学习类型。让学生用某些方法表现出自己所学的知识, 大多数表达性成果会出现在人文学科、社会科学、艺术等领域。

表达性成果是将课程的目标及各种情况书写下来, 它们也许有好几种合适的方法、答案或结果。在评估学习时, 包含了学生对学习活动或经历的反思, 以及教学者 (或同行) 对学生的反馈。 以表达性成果所叙述的教学过程需要兼顾「行动」 与 「反思」 的平衡。

成果 (outcome) 比起目标 (objective) 意味着更广泛而非狭窄的教学目的。表达性成果描述了更高层次的学习，更重视学生的陈述、思考、诠释与创造。它常被使用于学生面对特殊或不可预料的真实生活情境，而学生必须运用以前掌握的知识或技能来解决。我们通常使用表达性成果来结合过往所学知识，以达到更高阶段的专业 / 一般性技能。因此，表达性成果需要同时具有学习成效的表述，以及确实有效的评估，两者结合才会有效。

举例来说，表达性成果适用的范围有情感、艺术、学术研究、生活技能、咨询，以及人际关系等。可以是以下情境，教学者可能说：「你遇到了某种工作上的状况，在这些情况下，运用你过去所学知识技能，你会如何做?为什么会这样做?」

在表达性成果的叙述情境中，学生的反应是不受常规约束且不可预测的，有别于传统的表现及学习目标 (例如某些情境中学习目标设立在学生掌握有效的顾客服务，或对牙科病患的病理解说)。表达性成果可以完成更高阶的学习，学生能够针对情况提出一种合适但却不同于教学者的意见或感受。

陈述表达性成果的例子：

A. 提出并支持自己关于「X」的观点
B. 发展一套关于「X」的方针
C. 使用单色水彩唤起「X」的情绪
D. 描述关于「X」，你价值上的转变
E. 设计并制成一种「X」的设施
F. 为「X」 设计广告文宣
G. 接待，劝解一位生气的顾客
H. 审阅并评论第十章
I. 描 述自 己被 「X」 所激起的感受

具备表达性成果的课程会含有三项内容：

A. **脉络：**将学习内容放在某特定的观点之中 (例如：地图是一种关于地貌的视觉再现，有些文化上的重要相关地标或建筑物会在地图标准化的过程中被边缘化)，内容也会设定不同阶段、 厘清意图并说明经验特征。
B. **学习活动：**通常是一个具有判断及评价的练习或活动 (例如；以原住民的角度讨论传统地图)。

C. 反思：此阶段学生由自己经历中反思，继而了解、产生或勾勒出他们的见解 (例如：撰写学习札记或小组讨论)。可使用一些文书表格或手工创作的形式，让学生能在学习后有材料记录。

关于进一步设计具备表达性成果目标的学习活动，请参考教学设计表格中的教案 D。

小结

清楚定义学习目标或表达性成果有助于：

- 提供选择设计教学法，材料，活动技能的基础
- 建立评估学习状况的标准
- 协助学生与教学者聚焦在课堂的目标上
- 协助确认课堂上学生应该预期了解什么，以及何时可视为学习完成

设计学习目标和表达性成果教学

简言之，学习目标通常包含三个要点 (学习表现具体内容、条件、衡量标准)，一份教案运用学习目标配合上 BOPPPS 模式，这堂课会重点突出而达到预期 的学习目标 。

表达性成果是以一个短小的叙述，说明学习的结果。使用表达性成果的课程，包含脉络、学习活动及反思。脉络方面有导言、设定表达性成果，也许有前测。学习活动则是参与式学习。反思部分则包含评估量化、回顾、总结。这类课程着重学生对此主题的表达或诠释。

设计学习目标和表达性成果的过程是一种 「递归」 (recursive)，亦即无法尝试一次就产生一个「成品」。这种现象也适用于更进阶的课程设计。步骤如下：

1. 确认目标是 「表现 」 或 「表达性的」，如果是有数个 正确答案，或结构完整的标准、规格，或者是你期待所有的学生达到明显一致的结果，则目标的陈述最好选择「学习目标」来强调学习的具体表现。
2. 挑一个最能描述预期的学习类型与程度的「动词」。或者什么是学生之前无法做而即将能做的？或者什么是他们以前没体会过而将要学习的内容？

3. 明确说明：(A) 如果是强调表现，则说明表现内容、 条件和衡量标准；(B) 如果是表达性成果，则为脉络、学习活动 与反思。若目标是关注某具体内容，参考下方「撰写目标」中的建议。
4. 略述细节的功能，这里可写下更多细节目标，建议有一张活动内容列表，以便书写教案时使用。
5. 完成最后的学习目标或表达性成果，值得注意的是这个步骤可能需要经过反复斟酌，同时 (4)、(5) 的顺序可能会颠倒。

◆ 制定学习目标的秘诀：

由下节「三大领域不同阶段的行为动词」所提供的列表中，你能选出几个意思相近的行为动词，再从中选出一个最能适当描述学习内容的动词，剩下来的动词也可以用在教案中细节的补充。为了有助于挑选动词，可以每次替换不同的动词，并大声朗读设订出的学习目标。

撰写学习目标的步骤：

步骤一：预想学习成效

用寻常的文字写下一段话，能表达预测透过教学学生能学到的内容，不要期望在第一次就写出完美的目标，一段普通的陈述即可。

步骤二：学生必须做什么来证明掌握了所学知识技能？

你会接受学生给予怎样的证明来表示学习成果？不断重写或改进你所写的陈述，直到它可以准确地描述学生在证明自己掌握了所学知识技能时应该做的内 容。

步骤三：写出条件限制

写出重要的条件，在此情况下学生必须完成的学习内容；描述出学生必须在什么样的条件之下进行，如果有必要，又需要在哪些限制之下进行。

步骤四 ： 订立标准

身为教学者，你需要写出自己如何了解学生掌握了学习内容，何种标准是你所预期的？

应该避免下列现象:

- 挤太多内容在一个目标当中
- 太过模糊的目标
- 过分枝节细微的目标

◆ 撰写学习目标的秘诀: 以下的陈述不能视为教学目标

- 我今日打算讨论关于李尔王中奥妙的主题 (这是教学者自己打算进行的事情)
- 学生将会了解供需法则 (「 了解」无法评估测试)
- 学生将会读这段文字, 并分成小组讨论 (这是教学方法, 并非学习目标)
- 学生能体会到影响化学反应速率的因子 (「体会」不准确, 也无法评估测试)

撰写教学目标:三大领域不同阶段的行为动词

下表是依照不同知识领域和熟练程度列出的一些行为动词。虽然这张表并不全面, 但可作为在撰写 ISW 教学目标及以后课程教学的起点。更多相关信息请参考补充材料:

Taxonomy of Educational Objectives and Levels of Learning .

	认知	技能	情感
初学	引用 定义 辨识 标示 列表 配对 说出名字 概述 选择 解释 陈述 翻译	抓住 听见 辨识 找到定点 移动 下压 拉 推 竖立 挑选 展示 整理	接受 询问 描述 遵循 认同 聆听 指名 辨识 回应 看见 选择 使用
理解	运用 兑换 讨论	调整 组合 复制	认定 累计 协助

	认知	技能	情感
	鉴别 绘图 评估 解释 演示 操作 准备 总结 使用	拆解 描绘 捆绑 植入 摆放 松开 移动 倒转 滑行	选择 赞许 执行 讨论 遵循 表演 练习 分享 研究
熟练	分析 比较 对照 批评 图示 辨析 解释 模型化 设计 预测 安排	激化 校正 建造 复制 修理 加载 操作 测量 运转 表演 追踪	证明 完成 展示 形成 发起 邀请 加入 辩解 提议 审核 进行
专家	评估 组合 创造 批评 设计 制定 生产 组织 提议	改编 结合 组合 设计 发明 诊断 生产 组织 修复	改编 防护 设计 影响 整合 调解 组织 修正 解答

3. 前测

确定学生已经知道多少内容是一个重要的起始阶段,因为这能让教学者知道针对一群特定的学生,该从何教起,又该如何教。有些学生具有可观的课程知识、经验和天赋;有的则知识有限。也可能有些人只知道课程内容的一部份,没有完全掌握所学知识。

前测能协助教学者确认这堂课是否对学生而言起点正确，如果学生已经知道教学内容，他们会感到无趣。如果教学内容远远在学生的基础之上，他们容易产生混淆、挫败，甚至无法跟上进度。无论是进行正式的程度测验，还是课程本身有清楚的知识能力要求，教学者可能会发现，在各个主题或单元上，学生的兴趣和知识技能是参差不齐的。

前测有以下功能：

- 辨别学生的兴趣
- 找出可以成为课堂资源的学生
- 让学生了解并找出不足，以便复习或澄清概念
- 集中注意力，突显课堂重点
- 协助教学者调整课程的深度与步调，能更贴近特定的学生群体
- 让教学者能回应学生个别的强项与弱项

虽然有时前测的结果会令人惊讶学生的课前程度，但是惊讶发生在课堂开始总是好的，毕竟此时还来得及做适当调整。前测可以采用非正式的提问及回答问题，或者是更正式的全班测验。

前测的小秘诀：

最好的前测包含开放式的提问，也就是无法用简单的「是」或「不是」回答的问题。举例来说，「你曾经驾驶过哪种船?」会比 「你是否有过航行经验? 」 效果更好，因为后者导向 「有」或「没有」这种简单的回答。开放式的提问让学生把他们的生活经历加入到课堂中，促进学生的积极参与和投入。

其他前测的策略有：

- 教学前进行的尝试测验，可包含动作技能、特殊观念的专有名词、细节或者公式等等（例如：「演示正确握住高尔夫球杆方法」、「写下硫酸的化学式」）
- 将课堂主题相关的知识串联起来（例如：「你所知道关于科索沃的政治情况是?」、「有没有任何人记得牛顿第一定律?」、「一听到关节炎，你第一个想到的是什么?」）
- 思维刺激（例如：「若要设立一间托儿所，有哪些事情你需要考虑?」、「如果一间小公司没有管理好它的财务，它可能会出什么问题?」）

4. 参与式学习

参与有两种:教学者与学生之间的互动、由教学者引导带领的学生们彼此互动。学习是一种主动的过程,唯有主动投入学习内容或任务中,学生才可能体会深入学习。这样的学习才可能延续持久,也才有别于仅以应付考试的表面学习。

无论何时,我们鼓励教学者促进学生主动融入课堂,以期达到课堂的学习目标。学生们藉由连结、测验、探索,以及心智练习这些概念以理解并且牢记所学的概念。这通常会经过讨论、辩论以及对话见到成效。自然科学及解决问题的技能则随着反复的练习与反馈来进步。个人信仰与态度的改变则难以利用练习来完成,因为它们是学生一点一滴探索多样的观点及经验而积累的。随着时间的推移,这些探索会形成新信息与观点的统一。

参与本身是一种特别困难给与准确定义的概念,不仅是因为它取决于学生们智力技能发展的程度、人格特质的组成,同时也因为学习文化差别而异。举例而言,在某些文化环境下,教学倾向在一种正式的氛围中进行,教学者进行不中断的讲授,而后再提问。此外,也有因为教室场地的约束,固定的座位可能会让小组讨论变得困难。

许多教育学者指出每一个学生都会建构自己的学习。这暗示着最有效的学习产生于学生自己与学习内容或材料互动,进而主动创造他 / 她的整套知识、技能和价值。

如此可能会对大部份采用传统讲授教学信息的老师们产生困扰。由于听课是一种较为被动的方式,而且大多数人并非是主要仰赖听觉的学习者,因此对部分学生来说靠着听课来学习似乎不再是一种有效学习途径。假设你有大量的内容需要传授,可以试着思考如何用增加学生主动参与的方法来改善。当你找到那些方法,学生会普遍地学得更好。

在 ISW 中,我们要求教学者在教学中鼓励参与主动学习;这需要学生练习,并且思考他们正在练习的事物。

鼓励主动参与的方法有:

- 针对某特定问题或课堂内容所引发的问题进行小组讨论
- 讲授中停顿片刻,让学生能反刍一下,可采用书写和讨论,设计问题或简短的应用练习 (如解方程式或小题目)
- 学生针对课堂关键问题进行批判性讨论,也许可以透过「思 考–2 人分组–分享 」 (think-pair-share) 的方式。(详见第四章: 合作学习)

- 预测或预先演示 (通常在某概念或单元的开头)
- 个别或团体的工作活动报告
- 学生共同处理一个问题，再彼此互评
- 角色扮演个案讨论、情境模拟
- 给出一个思考问题，在后面的活动中再予以解答

参与式学习的操作策略同时需要对学生有深入的了解：他们有多想要「学着去学习」，如果是一群熟悉学习过程的学生，则教学者可能只需稍微指引就能让他们进入一个探索的学习情境。相反，若是他们缺乏信心，或者还不是有效率的学习者，则需要精心设计的教学方法可能才有成效。如何促进参与式学习取决于学生们带进课堂的知识、技能与态度。需要一部分学生已经具备预期知识和能力，教学者可让这些学生成为协助教学的重要角色。

◆ 参与式学习的小秘诀：

增进学生参与的策略请参考第四章：教学技巧。

5. 后测

后测能够回答两个问题：

- 学生学到了什么？
- 预计的目标是否达到？

后测必须与课程开始时所预设的学习类型和程度相符合。例如在一堂介绍专业术语的课堂上，若安排词语配对或句子填空的练习当作后测显得很合适。如果是一堂关于制作的课程，通常会直接将实地演练作为后测，可以只操作其中的一部份，或者全部操作过程。表达性成果的后测主要是对于学生们自我经验的反思，可能是写下一段如「这堂课与我的关联」的文字，或者讨论一个新颖观点和方法所有的可能性与局限性。

虽然后测在迷你教学演练中必须很简短，但下列的方法可供做参考调整。

基础知识与理解的测试方式（回忆、理解信息）：

- 选择题
- 是非题
- 配对题
- 填空题
- 简答题

- 简短问答 (口试或面试场合)

熟练运用的测验方式(应用、分析、评估、创造):

- 问题、任务解答
- 短文写作、议论文或评论
- 新理论或新的解释和观点
- 案例、情境分析

实际技能的测验方式:

- 检核表
- 评分量表
- 制作成果或样品
- 表演或展示

态度 (价值观) 的测验方式:

- 问卷、 量表
- 实际展现
- 辩论写作
- 日志或其他反思心得写作
- 手工作品、 加工物

6. 结论

如同导言可以简介并启动一堂课程, 结论则能总结并整理所学知识技能, 营造出完成的感觉。它也帮助学生反思并整合学习的内容, 教学者的总结往往能引入未来的课程, 例如:「现在我们已经完成这部分, 接下来我们将. . . . . 」

结论可以包含:

- 内容回顾 (教学者与学生再次简短概括重点)
- 小组总结 (让学生们交流彼此小组讨论的过程)
- 反馈 (使用一些反馈设计, 如 「一分钟短文」 (one-minute paper)或「疑问点 」 (muddiest-point), 详见第四章:非正式的学习检测)
- 表扬成果 (肯定学生的努力与成果)
- 应用 (未来将如何运用这堂课的内容;提出个人的行动规划)
- 个别意见 (每个学生快速发表一次心得、想法)

对某些学生而言，重新检视课堂的学习目标是自我反思的重要机会；有的学生能藉此庆祝自己达到目标；其他的人则可以发现：「我们是否有做到自己曾经说过要完成的事情」

如果课程开始让学生设定对自己的目标，则在结束时应该想办法让他们重新检视，教学者应该要求他们再次回顾，并且简短说明对自己所设定目标的完成度有多少。 课程最后重新回顾学生们的学习目标与预期效果也是终止学习周期的一个环节。

无论结论使用哪种方法，最后一步通常需要十分精简，迷你教学时尤其如此。下一页提供了迷你教学教案检核表，协助你确保教案完整。你可以在迷你教学演练前使用这份检核表，之后当你反省这次教学的有效程度时也可以再次使用。教案的格式与范例附在检核表后面。

迷你教学演练检核表

基本原理	检核项目	演练前	演练后
B 导言(Bridge-in)	概括而言，导言具有趣味？ 与课程相关？		
O 目标与预期成果 (Objective(s) or Outcomes(s)	用来叙述目标的词语是关于学生的“行动”？		
❖ 如果是表现目标（Objective(s)）	有说明在“什么条件下”？ 具体完成的事物，行为是什么？ 衡量的标准是什么？		
❖ 如果是表达性成果(Outcomes(s))	已有解释学习内容的背景与脉络？ 所学内容是否明确？ 检验学生的反思活动？		
P 前测 (Pre- Assessment)	开放性的提问？ 与预期目标，成果的关联？ 与后测的关联？		
P 参与式学习活动 (Participatory learning)	预期的学生活动？ 弹性的时间规划？ 活动顺序经过考虑？ 教学设备资料清单？		
P 后测 (Post-Assessment)	与目标/成果的一致性？ 审阅/评估解答的计划？		
S 总结 (Summary/Closure)	能重新审视，回顾课程目标？ 能连接未来的学习内容或相关运用？		

其他:

_____

_____

_____

_____

_____

教案格式

教案设计示范 A（撰写指南）

<table>
<tr><td colspan="2">课程名称：ABC101 （课程范例）</td><td colspan="2">时间：本周课程
教师：Alice Macpherson</td></tr>
<tr><td colspan="4">导言（Bridge-in）：
介绍课堂内容，价值，激发学习兴趣</td></tr>
<tr><td colspan="4">学习目标（LearningObjective）：
学生必须做什么？
达到目标的前提
需要完成的程度</td></tr>
<tr><td colspan="2">前测（Pre-Assessment）：
辨识学生的背景知识，学生是否已经达到所设定的目标</td><td colspan="2">教学所需设备和资料（Materials）</td></tr>
<tr><td colspan="4">参与式学习（Participatory Learning）：</td></tr>
<tr><td>时间（分）</td><td>教师活动</td><td>学生活动</td><td>教学资源</td></tr>
<tr><td>所需时间</td><td>教学者用什么带领学习？</td><td>学生要做什么进行主动学习？</td><td>要使用的教学设备和资料</td></tr>
<tr><td colspan="4">后侧 (Post-assessment): 判断学生是否可以展现学习目标中所描述的能力</td></tr>
<tr><td colspan="4">总结 （Summary/Closure):处理已评估课堂信息和互动</td></tr>
</table>

<table>
<tr><td colspan="2">课程名称：</td><td colspan="2">时间：
教师：</td></tr>
<tr><td colspan="4">导言：</td></tr>
<tr><td colspan="4">学习目标：</td></tr>
<tr><td colspan="2">前测：</td><td colspan="2">教学所需设备和资料：</td></tr>
<tr><td colspan="4">参与式学习</td></tr>
<tr><td>时间（分）</td><td>教师活动</td><td>学生活动</td><td>教学资源</td></tr>
<tr><td></td><td></td><td></td><td></td></tr>
<tr><td colspan="4">后侧：</td></tr>
<tr><td colspan="4">总结：</td></tr>
</table>

教案设计示范 B

<table>
<tr><td colspan="2">课程名称：
如何正确打开气泡酒</td><td>教学资源</td><td>时间（分）</td></tr>
<tr><td colspan="2">导言（动机）：
你有曾经为了打开一瓶气泡酒，
而浪费了半瓶酒的经验吗？
你想有专业的开瓶技巧，
能在朋友面前露一手吗？</td><td></td><td>0.5</td></tr>
<tr><td colspan="2">前测
有人已经知道如何熟练打开气泡酒吗？</td><td></td><td>1</td></tr>
<tr><td colspan="2">学习目标：
能够叙述打开气泡酒的七个步骤</td><td>一瓶气泡酒和
投影片 1</td><td>1</td></tr>
<tr><td>教学者活动</td><td>学生活动</td><td></td><td></td></tr>
<tr><td>1. 描述七个步骤
2. 上酒的窍门
3. 用汽水代替气泡酒， 两人或三人一组讨论并操作七个步骤
4. 复习步骤</td><td>提问

有疑问时提问</td><td>投影片 2
投影片 3
两瓶汽水
两条毛巾
两个软木塞</td><td>2
1
2.5</td></tr>
<tr><td>后侧
检视学习效果</td><td>按次序说明步骤</td><td>投影片 1</td><td>1.5</td></tr>
<tr><td colspan="3">总结

重申课后练习之后，学生下次在特殊的场合应能够正确打开气泡葡萄酒</td><td>0.5</td></tr>
</table>

教案格式 B

<table>
<tr><td colspan="2">课程名称：</td><td>教学资源</td><td>时间（分）</td></tr>
<tr><td colspan="2">导言（动机）</td><td></td><td></td></tr>
<tr><td colspan="2">前测</td><td></td><td></td></tr>
<tr><td colspan="2">学习目标</td><td></td><td></td></tr>
<tr><td>教学者活动</td><td>学生活动</td><td></td><td></td></tr>
<tr><td colspan="3">总结</td><td></td></tr>
</table>

教案设计示范 C

以下是 50 分钟课程的教案格式

心理学第 101 教案			
目标：学生能正确分辨神经元和神经胶质细胞的差异，并且能够描述神经胶质细胞的种类和功能。此外，学生能够描述“血脑障壁”的结构，功能和角色。			时间； 节数：4
时间(分)	教学者活动	学生活动	教学资源
2	解释学习目标	讨论神经元和神经胶质细胞的差异	讲义 4：神经胶质细胞的功能
5	复习上节课程中关于神经元的内容	图解神经胶质细胞的类型	课本：生物心理学，24-38 页（Brooks/Cole 出版）
1	发课堂讲义		
2	解释分辨不同类型的脑细胞以及血脑障壁的重要性		
15	利用投影和讲义中的图标，解释神经元和神经胶质细胞的差异		投影片 17，18，19 关于神经元和神经胶质细胞
15	讨论不同类型的神经胶质细胞在脑神经系统中扮演的不同角色	讨论在脑神经系统中神经胶质细胞的角色	投影片 20，21 关于血脑障壁
5	讲解“血脑障壁”。使用投影片说明其功能和结构	使用图表说明血脑障壁的功能和结构	
5	使用“思考-分组-分享”的方式回顾这堂课，指定作业：阅读课本 39-54 页		
备注： 别忘了带那篇关于神经胶质细胞和复合式硬化症的文章			

教案格格式 C

课程名称			
目标：			时间； 节数：
时间(分)	教学者活动	学生活动	教学资源
备注：			

教学设计示范 D

运用「CARD」来设计具有表达性成果的学习活动

(温哥华社区学院 David Tickner)

包含表达性成果的课程或讲座会包含四个组成部分，它们分别是教学内容 (context)、教学活动 (activity)、反思 (reflection)、学习记录 (documentation), 简言之, 我们用它们的缩写「CARD」代表这四个部分。

操作 CARD 教学模式有一项前提：我们必须特别强调反思, 准备反思部分如同准备教学活动一样重要。

1. **教学内容 (context)**：这部分关系到教学重点, 以及阐述教学用意。当进行教学内容时, 请考虑包含以下几点：

   What：这个环节的表达性成果是什么？ 学生需要具备什么背景知识或入门信息？ 有需要提醒学生的事情吗？ 学生需要准备什么？ 教学的元素有哪些?是否有正式规范或标准? 是否有需要的理论架构?

   Why：为何我们需要操作或学习这些内容？ 学生哪方面的学习动机需要被考虑进来?

   How：如何开展这堂课? 整堂课的方向、指引，以及程序是什么?

   Environment：教学空间上需要怎样的安排? 如何创造 / 保持适合学习的环境?

2. **活动 (activity)**：教学活动重视学习「 如何发生 」, 更甚于什么是学习的内容。哪种活动能够促进、引发、刺激我们所预期的、与学习相关的反思?

3. **反思活动 (reflective activity)**：当你在进行反思活动时, 至少包含以下四个问题以开始和促进反思过程：
   - 刚才发生了哪些事情?
   - 它们给你什么感觉? 你怎么想?
   - 你学到哪些内容?
   - 接下来你将会怎么做?

4. **学习记录 (Documentation)**：如果有的话, 学生们将会从这堂课收获学到什么?

小结

简单来说, 注重表达性成果目标的一堂课或讲座会包含这些内容：

- 简短的段落概述教学内容。
- 简短的陈述 (如一句话) 描述将进行的活动。

·一系列引导反思的提问, 或是列出进行反思的过程。

以上教学步骤概括了课堂教学所要准备的内容, 以及教学过程中的环节。同理, 一堂演示目标 (Performance Objective) 教学则可以传达具体细节要求和程序。

教案格式 D

在表达性成果教案中运用 CARD 模式--教学内容 / 活动 / 反思 / 学习记录

(温哥华社区学院 David Tickner)

反思练习应用

- **表达性成果:** 描述「反思练习 」如何协助我们应对学习群体的变化。

- **教学内容:** 教学者讲授 (10-15 分钟)

  找出当前一线教学活动中教学者本人和学员亲身感受的问题和挑战。例如:真实评估、学习过程是脑力劳动、在线学习、学生的多元化和课堂的包容性，知识整合、棘手的学生、以及合作学习等等。

  目前教育一个突出的矛盾情况是:在教育环境逐渐重视教学过程中的学习过程、学生的多元化与个体性之时, 教育机构同时需要面对如何响应学生以及整体的学习需求;例如为了响应少数学生, 教育机构必须提供教学群体给予整体性的回应。举例来说, 为了满足方便即时的在线学习需求（网上课程）, 教育机构必须提供整体系列服务 - 在线注册人员、教师、课程建置人员、辅导员、教学技术设备系统的管理维护人员、行政管理人员等等, 同时这些人员要协调和作。

  那么这对于教学与教育者而言有什么影响呢? 反思练习的概念能否提供方法和建议有效地响应不断变化的的教育环境呢?

- **反思活动: 小组讨论, 以及全体讨论** (共 40 分钟)
  先进行小组讨论, 接着全体讨论, 讨论的议题为各种学习模式、反思练习方式, 以及对教师工作的影响。

- **小组讨论** (20 分钟):
  1. 厘清在各种学习模式中使用的术语, 并且提供例子来说明这些学习模式的运用
  2. 这些学习模式足以反映学生的转变与学习过程吗?
  3. 这对教师和教学会带来什么变化?

- **反思过程:** 一连串启动讨论的提问与相应的讨论

- **全场报告与讨论** (20 分钟)
  1. 有哪一、两个重点是每个小组在讨论时都有提到的?
  2. 在哪些主题或议题上, 大家显得最感兴趣、 讨论得最热烈, 或被感染?

3. 为何是这个议题?其他小组也有相同的感受吗?他们有什么意见?
4. 在讨论「教学群体」这样的范畴时,你会如何看待教学者与教学? 一个优秀的教学者应该具备哪些特质和必要的能力。
5. 对你个人而言有哪些启发? 未来自己在对待学生的工作上,会更注重哪些方面?

学习记录:
每位学员摘要写出整场讨论所得的建议与启发。

第三章自我评估与反思

反思练习概说

Donald Schon、 Stephen Brookfield 以及 Parker J. Palmer 等学者在他们的著作中皆提到:有效的教学者为了能在个人教学及专业领域上进步、更新或成长, 他们有责任定期反思自己的教学。

教学技巧讲座 (ISW) 是一个提高教学技巧的「实验室」 , 因为它提供了一个学员可以在其中进行各种教学活动尝试的环境。 尝试的范围涵盖课程设计、教学技巧、教具等主题。有别于不断复制以往的成功经验, 我们鼓励学员藉此机会冒一个「安全的险」来当作练习。

在讲座中, 学员要投入多样的角色, 而整个讲座会有大量的时间用于个人教学准备, 以及参与全部的迷你教学演练。因此, 参加讲座既是停下来检视自己教学技巧的机会也是挑战自己不断进步的机会。为了将讲座的经验作最大、最有效的吸收, 你也许会用到以下的工具:(1) 可以用来组织讲座素材的空白篇幅 (2) 引导你思考的表格。你的培训讲师也许会建议你使用这些辅助工具。在讲座期间请放心自在地增进自己的学习, 并在今后的教学中中温习应用, 扩展你的反思。

许多教学者指出 ISW 开启他们一条不断自我反思的旅程。 参加讲座的学员经常互相听课, 并且持续交换反馈。在〈参考资源〉的章节中, 你会看到很多建议, 可以用来持续自我评估与反思。

还有一个定期反思的重要理由是以身作则 (做到我们期待学生要做的事情)。理想的学习过程要求学生和教学者两者都是自我反思的实践者。

迷你教学演练纪录单

将你所参加的迷你教学简单纪录下来, 有助于加深你自己作为学生时的学习

第一次

	教学者	主题	备注笔记
1			
2			
3			
4			
5			
6			

第二次

	教学者	主题	备注笔记
1			
2			
3			
4			
5			
6			

第三次

	教学者	主题	备注笔记
1			
2			
3			
4			
5			
6			

进行反思：面向未来

为了在讲座中学到更多教学知识和技能，建议你设定「研习目标」。 一开始你可能订出具体的目标 (例如:我要学会如何写出「情感」教学的学习成果) 或是相当笼统的目标(例如:我要学习如何让我的教学更有趣!) 随着讲座的进行,你会被要求与其他学员讨论你的目标,这样才能让大家一起协助你达到目标。设定目标可以是随意地 「 想], 或者跟人讨论时 [说] 出来; 然而, 许多人发现「写」下具体的目标通常比较有效。

讲座初 期 的研习目标:

1. 请简述你的总体目标,参加这次讲座你想学到什么?

2. 列出你脑中浮现的任何具体目标:

持续反思:从自己的迷你教学中学习

第____堂 主题:

目标:

·你自己的经验

整体而言,迷你教学演练是否按照课程设计进行,是或不是,为什么,

根据学生（学员）的反馈,你认为哪一点是这次教学中所获得最重要的建议,

你从自己的教学录像中看到什么,包括上课的步调、态度,讲解的清晰程度, 提问方式,教学上的小习惯,回答技巧,学生的响应、挑战、兴趣等方面。

·整体评估

你感到最意外的是,

对你下次的迷你教学演练有何启发,

对平时你自己的教学有何启发?

综合研习成果 (一) 重新思考 BOPPPS

当你参加过许多堂迷你教学后, 你对基础原理 (BOPPPS) 应该有更清楚且深刻的理解。花点时间思考如何将 BOPPPS 融入到你日常的教学当中。

B 导言:

0 目标与预期成果:

P 前测:

P 参与式学习:

P 后测:

S 总结:

·六项原理中哪一项持续让你觉得困难?为什么?

综合研习成果(二)反思同行经验

ISW 依赖有效的同行经验。绝大多数的学员从同行身上能学到许多有用的教学技巧。因此, 你会发现反思你所体会到的同行经验和所给予的指导, 对你个人的教学有莫大的帮助。

1. 什么能使集体的功能发挥得更淋漓尽致?

2. 有什么原因妨碍了集体的功能?

3. 你作为集体中一份子时, 你学到什么? 那作团体的领导者呢?

4. 通过这次集体经验, 你会在你今后的教学活动中想要加入什么内容, 或是今后的集体互动当中?

综合研习成果(三)反思三次迷你教学后的反馈

重读你在三次迷你教学演练后所拿到的反馈意见，透过这些信息花时间思考你在教学中可以改进的地方。

1. 你所收到的反馈当中,什么是你作为教学者时最珍贵的优点? 为什么?

2. 在你平日的教学中 ,你如何增进这些长处和优点?

3. 什么样的反馈意见仍旧困扰着你? 挑战着你?

4. 你能在你平日的教学经验中想到相似的情况吗,藉此来对这个问题和挑战有更深刻的了解吗?

综合研习成果 (四) ISW 最后的一份自我培养计划

我相信我自己表现出色的地方有:

我打算加强:

我如何培养自己这些项目:

第四章 参考资料

有效的教与学

在如何提升课堂有效教与学的研究课题上,过去研究的重心放在协助老师有效率地组织他们上课的内容,学生则被视为被动的接收容器, 等待被知识填满。即便这样的观点现在仍然有着一定的影响,但人们已经逐渐认识到教与学是一个非常复杂的运作过程,尤其是教师和学习者间的高度互动。教与学双方实则无法区分, 因此我们使用有效的「教」与「学」来强调这个过程交织在一起的本质。

多年来,许许多多的学生被要求写下他们记忆中有效教学者的特质,有四点主要的结果如下:

1. **教学内容专业:**具备该领域的专业知识, 设定清晰的目标, 对课程内容与进程做有效的规划,以及对整体课程的热情。
2. **交流与传达技巧:**对不同的教学技巧保有足够的弹性, 愿意尝试不同方法,鼓励独立思考,运用多样的教学媒体
3. **公正的考试与评估:** 避免苛刻的评论, 考试评估前给学生练习机会,在合理的时间内完成评估
4. **其他激励因素:** 尊重学生的独立性, 给予鼓励,设计适合学生经验的课程内容,并鼓励班上的多样性。

这四个要点被 Chickering 与 Gamson 扩充为教学过程中七项优良实践原则,以下将会概述其内容。

唯一的有效教学诀窍并不存在,此章参考资料中提供了部分的选项,然而你必须自己考虑什么最适合自己和你所教的学生们。

有效的教学具备多种要素:专业知识与「人」的知识、课堂规划与管理、沟通技巧、创造力与解决问题的能力等。有效的教学在教学结构与变化中取得平衡,教学结构由课堂常规、课程设计与教学目标等组成;变化则是取决于多元选择、包容不同类型的学生与观点、擅于抓住教学时机。好的教学仰赖经验积累而成的知识、技巧与智能;然而,更优异的教学往往超越技巧。归根究柢, 有效教学建立在用心与教学双方关系上。

好的老师具有某种连结能力,他们擅长编织一张复杂的网络,串联起自己、学生与教学内容,因此学生能够学习去编织一张自己的世界网络。这些织匠的法宝很多: 讲授课程、苏格拉底对话法 (Socratic dialogues)、实验操作、团队解题、创造性混乱法 (creative chaos)。 不过好的老师创造出来的连结并不仅靠这些法宝,更在于他们的「心」:一个人智力、情感、灵魂与意志交会之所在。

大学教育的七项优良实践原则

1. 落实良好的师生关系

无论在课堂上或是课余时间，频繁的师生接触是学生学习动机与参与感最重要的因素。老师的关心会帮助学生度过艰难并且持续学习，熟识喜欢老师能协助学生对求知更加坚持，并能鼓励学生思索自己的人生价值与未来规划。

2. 落实优良的同行合作

团队合作比单打独斗更适合用在学习上。如同工作一般，好的学习状态是同心协力，而非恶性竞争和闭门造车。同行合作往往会增加学习的参与感，分享各自的想法，同时听到他人的意见都会促进思考与深化理解。

3. 落实主动学习的态度

学习并非旁观一场比赛。如果学生只是坐在课堂上听老师授课、死背硬记早就准备好的教材再吐出标准答案，则学习效果会很有限。他们必须与所学的内容对话，自己写下想法，和过去的知识经验相结合，运用到日常生活。他们必须将所学的知识变成自己的一部分。

4. 落实优良的即时反馈

「知其所知」 跟 「知其所不知」都有助于凝聚学习焦点。对于学生的表现需要有适当的反馈，才能让他们在课堂上获益。刚开始，我们需要协助学生评估自身的知识与能力。课程中学生需要充足的机会去实践所学，并接受建议以获得进步。在多元观点的大学环境中，学生最后需要反思自己学了哪些内容，还缺少哪些，又如何自我评估。

5. 落实优良的时间观念

时间加上努力等于学习。成就任何事情，投入时间都是无可取代，所以学习妥善运用时间对学生与专家来说都至关重要。因此，学生需要学习有效的时间管理。分配可用的时间意味学生能有效率地学习，老师能有效率地教书。一个学校如何对学生、教师、行政人员与其他专业人士设下优良的时间规划，是展现优异成果的基石。

6. 落实优良的愿景与期待

有意愿才有动力。每一个人都喜欢被赋予高度期望，无论是准备不够的人、缺乏进步意愿的人，还是既聪明又有动力的人。当老师与机构都对自己

抱有很高的期待，并愿意多做努力时，希望学生表现得更好的念头就会变成一种自我实现的预言 。

7. 落实尊重多元才能与学习方法

条条大路都是学习的路。同学带着不同的天赋与学习风格进入大专院校。在专题研讨会上展露头角的学生可能在实验室或才艺室显得笨手笨脚；擅长动手操作的同学可能拙于理论分析。因此，学生需要机会展现他们的才能，并且用对自己有成效的方法学习，然后才可能接受新的，不熟悉的学习方式。

提供机会让学生设定目标与自我期望

虽然传统上都是由老师替学生订立目标，但若能提供机会让学生反思而后辨认出个人学习需求，对学习而言是很有帮助的。

让学生思索自己所预期的学习成果：

1. 对成年的学员表现出尊重与包容
2. 鼓励参与并建立对学习的信念
3. 刺激学生自觉
4. 提供教学者关于学生的关键信息

对于组织成人教育课程或讲座的人而言，引发学员个人对于课程的需求、期待与目标常常成为导言的一部分，因为这有助于助引起兴趣跟参与感。

有各式各样的方法能帮助学生确立目标：

- 在课程中安排反思、分享个人经验。举例来说，在教室醒目的地方写下：「课程结束时，我希望 . . . . . 」
- 找出对应目标的活动：教学者介绍完课程的目标后，请学员指出哪一项教学者设定的目标最符合自己所预想的，以及哪项对于他个人而言最为重要。
- 请学员在纸条上写下自己的学习目标
- 请学员与另一位学员讨论什么是他们需要 / 想要学习的内容，也可以分小组讨论，接着再轮流向全体学员报告。

学习目标分类

虽然关于学习已存在多样的分类方法，由 Benjamin Bloom 及其研究团队提出的分类法仍被教学者广泛使用 (后由 David Krathwohl 修改)。此认知分类法能协助教学者:

1. 设立学习目标
2. 选择教学策略方法
3. 设计课程所用问题
4. 规划评估与测验的系统

改良后的认知分类 法 (Krathwohl, 2002) 包含:

1. 记忆 (唤起知识): 从长期记忆中唤起相关的知识。
2. 理解: 诠释信息意义; 能够用自己的话「翻译」知识内容; 结合旧学与新知 。
3. 运用: 使用所学去完成指定的任务。
4. 分析: 能分析事物; 剖析意义; 提问「为什么?」; 看出关联性并且明白其中运作方式。
5. 评估: 估计、判断与批评其他阶段的成果
6. 创新 (整合能力): 重新组合; 由已知创造新事物; 辨识新的关系或接合新的知识

在内容丰富的课程中, 有一种常见的风险是学生仅死背信息, 缺乏透彻的理解。这种浅层的学习通常在写完考卷后不久便烟消云散。运用、分析、评估与创造等则被认为是高级阶段的思考方式, 也是能解决问题的能力。

分类法也延伸至其他的领域, 如下表所示:

根据三大领域区分学习项目		
认知	技能	情感
创造（整合） 评估（判断） 分析（拆解） 运用 理解 记忆	自动使用技能 无需知道结合多种操作 无需知道使用单一动作 理解指定的动作；描述指定的行为 认识操作时所需事物	特质化 内化 识别价值， 意义 响应/接受 收到信息（察觉）

学习的层次

当教学者在撰写学习目标、内容的选择、学习活动规划,和评估设计时,考虑不同学习层次是重要的。其中每一层都包含延续自之前层级的知识、技能和态度,继而增加了某种程度的复杂性。例如,以语文智能为主的认知领域里,我们可以将学习区分出四个层次 (依照复杂性递增):

1. 定义关键术语,提供精确、清楚并具权威意义的定义。
2. 从学生的自身现实生活经验中运用关键术语。
3. 分析一例关于此理论的个案、问题或学生自身经验之外的情境。
4. 在同一学科更宽广的脉络中讨论此理论的优劣利弊。

定义关键术语可以在一堂授课中完成,紧接着进行选择题小考。然而,运用则似乎需要更多的讨论,并且可能要有类似简答题的考试。个案分析通常建议以小组讨论的方式进行,再由个人或小组报告讨论结果。在这个例子中,研讨类似专题讨论教与学模式的运用,以及更重比例的自我评量,通常是以学期报告或课堂报告的方式。

随着学习层次提升,对学习效果的期待要保留更多的空间,并且学生的反应也可能出现更多歧异。简单来说,评估会变得更为主观,常会依据评估者在此领域里的总体经验。

根据学生的能力来判断学习层次,可以分为四个阶段:

1. **初学**:依照提示完成动作,教学者必须提供很大程度的支持与教学设计,学生亦步亦趋地学习,所学的大多数内容仅是教学内容的一小部分。
2. **进阶**: 他人提示与自我经验同时指导着学习行为,而学生变得更为独立,然仍需要很大部分的支持。开始辨识其他相关的课程内容,但还不能完整归纳。
3. **合格**:学生将先前老师所教的内容复习,融会贯通后归纳为己用。正确理解判断,学生在合理的程度内调整大多数的规则。
4. **专家**:虽然学生已经可以掌握术语、规则和关系之间的定义与运用,但这些仍然未被纯熟地实践。进入更高的层次后,整体的呈现变得更流畅, 而具专业的水平的人可以将高度复杂的内容深入浅出地表达出来。

关于三大领域中不同学习层次使用的动词示范,已经附在第二章细说基本原理中「学习目标与表达性成果」,请参考。

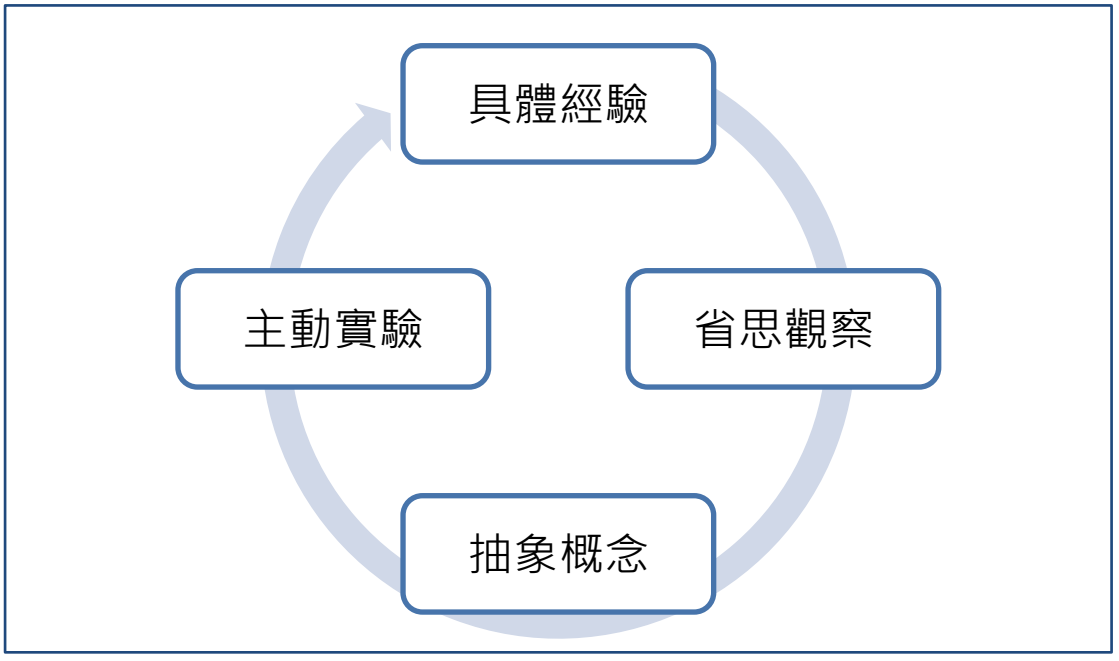
学习风格类型

为了让你的学生更投入于学习过程中，考虑个别学生偏好的学习风格变得相当重要。同时观察归纳自己的学习风格类型也很有用，因为我们经常会用自己喜欢的学习方式来教别人。 Kolb 所用的学习风格量表 (Learning Style Inventory) 是建立在其学习理论上发展而成。这成为一个理论架构， 能够与 ISW 共同搭配，变成教学发展上的实验性途径。

Kolb 的学习风格类型

二十世纪八十年代前期， Case Western 大学管理学院的心理学家 David Kolb， 在他的研究项 目中发展出一套学习风格量表。他划出一个完整的学习循环，其中主要包含四种不同的学习途径：具体经验、省思观察、抽象概念与主动实验。人们通常会有各自偏好的学习途径。当开始一项新的学习时，个人通常会进入这个学习循环中找寻属于自己偏好的基点，而在精通这项学习内容前会经历这四种不同的学习途。

Kolb 的有效学习方式

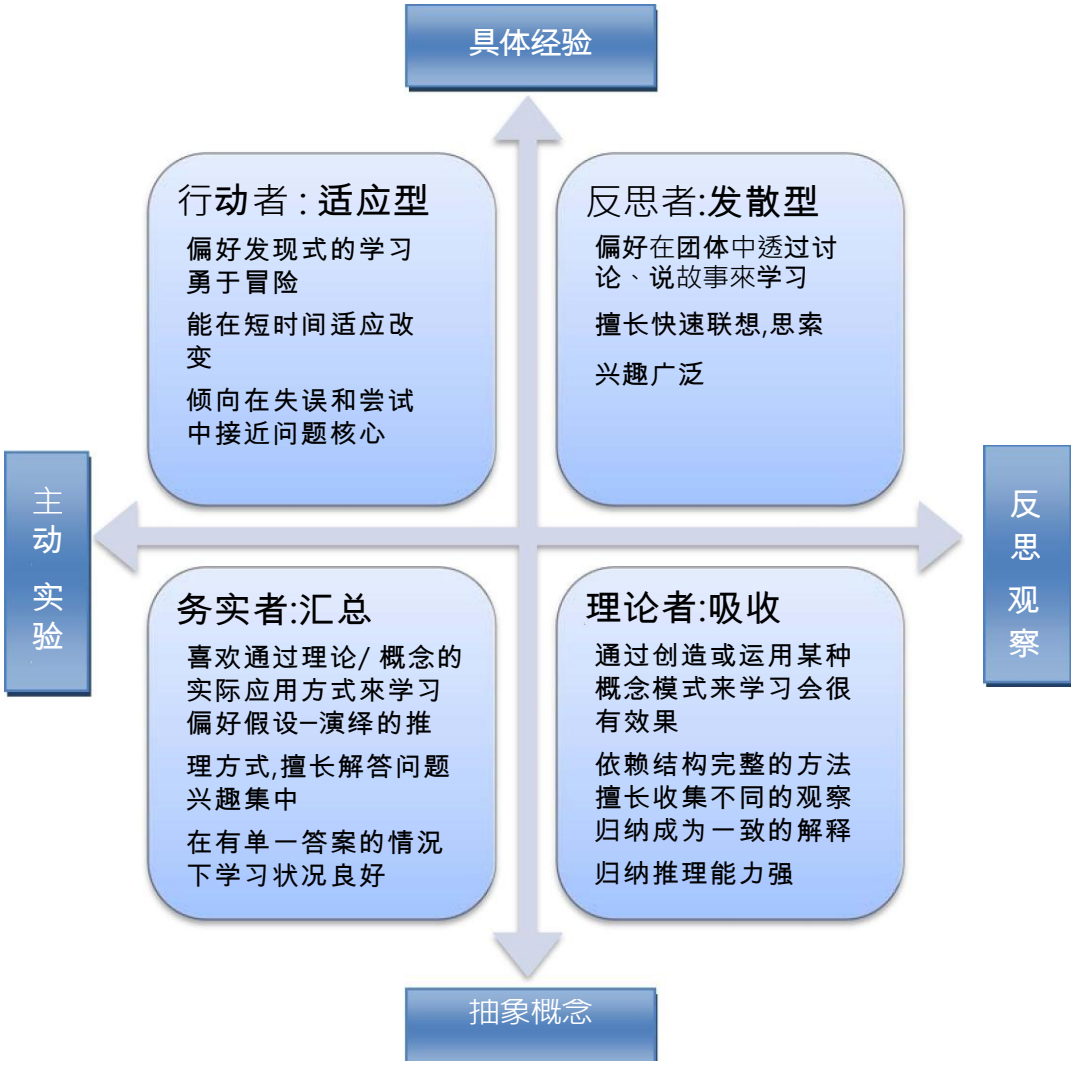


这个学习循环是以四种特定的学习方式当作横轴与纵轴的两极。纵轴表示了如何接受信息，其中一端是偏好由实际的经验来获取信息，属于个人自身参与的经验以及许多个案的判断经验；另一端则是透过运用抽象概念来学习，是一种理性分析的方法。横轴则代表提炼知识的方法， 也就是个人如何消化新获取的信息。 一端是偏好仔细观察、省思所处的情境；另一端则是透过调整变因，反复考察各种可能，并且动手实作来学习，是一种主动实验的学习方法。

对于发展成熟的智能而言，四种学习途径都是必要的，不过任何一种单一的途径都不完全。透过 Kolb 的学习风格量表可以发现，相关的学习偏好途径会画出四个象限。然 Kolb 的理想是让学习者在这些偏好中达到完美的平衡，也就是在横轴与纵轴上分数都趋近原点。

下图是整合了横轴与纵轴上参数的分数，画出四种普遍的学习风格。

Kolb 的普遍学习风格



支持不同学习风格的各种活动可以在学习中合并使用,下面的部分课堂活动列表说明了不同的学习风格在学习过程中相互重叠。

支持不同学习风格的活动表			
具体经验	反思观察	抽象概念	主动实验
实验 观察 课文主要内容 模拟/游戏 实地实习 启发影片 问题线索 举例	记录 报刊 讨论 快速联想 思考问题 反问思考	教授 写作论文 建造模型 专项课题 比喻	模拟 案例研究 实验 实地实习 课题 作业

学习风格容易随情境不同而变化,并且深受文化与民族性影响。辨识学习风格的重点并不在将学生 「归类建档」 ; 相反,它更好得说明学生多元化和教学技巧多样性的重要,以及在班上运用各种不同教育方式来拓展学生技能的可能性。

Kolb 的学习风格也可以有次序地加以考虑,例如, 下方将 Kolb 的学习风格模型用一种有趣且有用的次序排列,每一个类别都配合上 ISW 迷你课程的基本原理。

Kolb	ISW 基本原理
具体经验	简介，情境，热身
反思观察	学习目标，前测，讲授，参与式活动
抽象概念	讲授，参与式活动
主动实验	讲授，参与式活动，后侧
（再次回到）具体经验	总结，回顾，结论，运用，下一阶段

Kolb 的学习风格也强调在成人教育环境中需要平衡「主动实验」与「反思观察 」 两者, 也就是「行」、「 思 」兼顾的重要。

多元智能 (Multiple Intelligences)

多元智能的观念是由哈佛大学心理发展学家 Howard Gardner 教授所带领的团队，于 二十世纪八十年代提出。 一开始多元智能是对智商 (Intelligence Quotient) 提出批评，并指出人类的智能并不只有认知能力。多元智能原始的七项分类为:语言智能、逻辑数学智能、空间智能、肢体运作智能、音乐智能、人际智能与自我反省智能。之后又补充了第八项自然探索智能，以下是八项多元智能的简介:

1. 语言智能:对于文字排列的敏感度;运用语法与句法的能力;对声调、音韵以及语句变化的敏锐度;口语或书面语中说服、激励、传达信息的潜力。
2. 逻辑数学智能: 排列组合事物与流程的能力; 分析与组合能力; 使用抽象象征的能力;运算操作;对逻辑谬误以及不同命题之间关联的敏感度。
3. 空间智能:对视觉角度的精确认识;抽象认知能力;对地貌的方向感; 绘图能力、设计对象与空间能力。
4. 肢体运动智能:手眼协调能力;敏捷度;肌肉耐力与柔软度;平衡感;韵律感与肢体动作的优美感。
5. 音乐智能:对节拍、音律、声调的敏感度; 读谱能力;演奏乐器能力;谱曲规则的掌握程度。
6. 人际智能:在不同个体之间观察与分辨的能力;对他人心态、情绪、动机与其他意图的敏感度;非语言沟通能力;鼓励、游说、 领导与管理能力。
7. 自我反省智能:开通自我感觉世界的能力;对自我心态与动力的敏感度; 情感的柔软度; 对自我经验的反省能力 。
8. 自然探索智能:能划分出人类与其他生物 (动 / 植物) 差异的能力，同时也对自然界其他事物的敏感度 (如云、岩石的型态)。这项能力是人类文明演化历史 (如狩猎、 采集、 农耕) 中具有的价值，至今在厨师或植物学家等角色中仍具重要意义，也在现今一些科学领域中很有价值。

多元智能的概念能够与学习领域的概念互补。它强调的「完整发挥」可弥补三大学习领域区分学习目标之偏颇与不足，并发展出提高递进式的「评估表」。三大学习领域的区分适用于初学者和中等程度。

学习领域与多元智能对照表

学习领域	智能	教学，评估方法范例
认知	语言智能，逻辑数学智能，空间智能	授课，操练，问题解答，作文
技能	肢体运动技能，音乐技能	实地考察，示范，练习，表演，分组课题作业
情感	人际智能，自我反省智能	讨论，角色扮演，反思练习

合作学习

合作学习是让课堂教学更有结构的学习方法,它的重点在于学生分组合作。虽然这并非新奇的概念,但是在近年来经过 Morton Deutsch, Spencer Kagan, David Johnson, Roger Johnson, Karl Smith 和 Rober Slavin 等教学者的努力,又重新受到重视的方法。离开学校后,要在今后的生活中成功,学生必须既能独力学习,也能合作学习,甚至竞争学习。这是平衡能力的问题。长久以来,课堂教育忽视了训练学生与人共事的能力,没有足够重视职场上所需要的团队合作能力。

以下介绍 David Johnson, Roger Johnson, Karl Smith 提出合作学习的五项核心要素:

1. 正能量的相互依存关系

学生们发觉他们需要彼此合作才能完成团体的工作。这需要设立集体的目标、奖励参与、分享资源来完成。同时也要有合适的分工,如整合完成的角色、鼓励参与的角色、作笔记的角色和制作的角色。

个人的成功取决于全体的成功:

- 团队合作
- 团队中每个人的付出都不可缺少
- 每个成员在团队中都有独特的任务与贡献要完成
- 团队整体向计划好的共同目标前进
- 荣辱与共

2. 促进互动

学习建立在促进彼此进步的活动上,成员们必须要支持与维护彼此负责的工作, 并且彼此加油打气 。

团队中促进互动的方法有:

- 向组员们解释阶段的情况进展, 而不仅是最后的标准答案
- 积极互动:组员互相协助、解说、支持和负责任
- 关于组员表现的反馈 (口头或书面)
- 对于工作效率欠佳的组员同时给予鼓励与压力

合作学习团队在课程中的实行方式有很多种, 正式的团队通常是短期的, 如为了一个项目报告或特定的学习内容成立的团队。非正式的情况可能是为了课堂讨论或短时间的活动才形成的, 这类的团队经常更换组成的学生。 但也有 「固定组员」 , 这是为了让学生交换信息, 在学业上彼此协助而组成长期团队, 成员间往往有持久的伙伴关系。

3. 个人责任

合作学习的目的是让每个成员进步。团队的成员需要理解自己所贡献的质量会关系到整个团队的成功。应对个别成员测试或随机选择个别成员回答问题。

有两种方式通常有效:「完成你的工作, 我们才能接着做。」、「我们要如何帮你才能将这件事做得更好?」

教学者在合作学习中需要:

- 提供可以评估个别成员贡献的方法
- 给整体团队反馈或建议
- 确认每个成员对团队的成果负责

4. 人际互动与小组技巧

合作学习的主要功能在于发展人际互动技能。透过实际的运作, 学生必须:

- 确实沟通
- 彼此信任
- 互相帮助
- 解决彼此之间差异

5. 团队经历

这项要素需要团队成员定期聚会讨论如何达到他们所订的目标。团队经历代表成员们反思整个小组学习的过程, 以及为了达到目标他们所制定出来的方法。他们可以花几分钟回答这类问题:「以一个

团队来说，我们哪些方面做得好?」 、 「接下来我们可以做什么让我们做得更好?」

合作学习与传统团队工作的分别

主张合作学习的人认为这跟传统的团队工作有以下明显的不同:

合作学习强调正能量的相互关系:

1. 它同时强调个人与团体的责任
2. 它使用不同类型学生的组合 (混合不同能力)
3. 重视团队领导, 而非个人领导
4. 促进人际互动技能是重要的目标之一
5. 重视团队的责任感
6. 团队反思并分析各自的表现
7. 教学者同时观察并参与团队事务

教学者的角色

教学者在合作学习中扮演着主动及指导的角色, 其责任有:

1. 决定团队的规模和组成人员
2. 安排团队所需要相关物品
3. 安排与设计成员间相互的工作
4. 指定特定工作给成员, 确定相互依存关系成立
5. 厘清、 解释学习目标
6. 确定学生了解团队的目标, 及如何彼此相互合作
7. 对成员的贡献给予反馈, 以强化个别成员的责任感
8. 解释成功的标准
9. 评估学习成果的质量
10. 确认团队定期监测他们的进展和进步

学习者的角色

在合作学习中学生需要做到:

1. 发挥并运用在团队中所需的各种技能, 如何合作、协调或妥协。
2. 准确完成目标所需要的题目或工作
3. 协助团队中遇到困难的成员
4. 激励效率不佳的成员
5. 管理、指导团体整体的活动

6. 通过集体的努力对所接触的知识内容有更深入准确的理解

合作学习策略范例

1. 思考 - 分组 - 分享(think-pair-share)

教学者设定一个问题, 最好是需要分析、判断或组织整合的题目。给学生一些时间思考，然后回答, 也可以写下答案。接着学生和另一个同伴分享观点看法，在之后讨论中学生可以继续向更多同学分享答案, 也可以与全班分享。 这个方法增加了讨论的范围, 而且学生可以受益于自我反思与口语表达。这是一种无须花过多时间却有多方面效果的方法。

2. 数字方式 (numbered heads together)

让学生四个成一组, 并编号 1、2、3、4, 老师设定一个问题, 让学生小组讨论。确定每个学生都知道小组讨论的答案, 教学者指定一个数字, 小组中代表该数字的成员就是小组的发言人。学生得到训练口语表达, 同时又辅助了各种程度的学生。所有的学生都要积极参与其中, 每个小组成员也会受益于理解这个议题的正确答案。 这种活动有助于帮助全体学生对课堂讨论有所贡献。

3. 圆桌会议式(roundtable)

学生轮流写下他们的想法，观点, 一边写一边大声念出来。越来越多的信息会随着活动进行而增加, 直到关于这个主题各式意见都被列出。

4. 拼图板 (simple jigsaw)

教学者将一份作业或主题分成四个区块, 一组四个学生分别认领一个区块, 成为 「 专家」 。 同一区块的「专家们」聚在一起, 努力熟练掌握他们所负责的四分之一内容, 并想出最容易让人学懂的方式方法。接着, 所有的「专家」回到原本的小组中教会其他组员自己所属的区块知识。

教学技巧

这里将介绍多种教学技巧, 包含教学者与学生应扮演的角色。 使用各种教学技巧时, 教学者需要决定方法来评估其效果。

1. 快速联想

快速联想的方法能够对一个问题罗列出全部的可能性答案或解决方案。这个方法优点是:

- 记录所有学生答案和反应, 容易让全体学生都主动参与
- 解决困难的问题
- 探测出学生们的知识和经历背景
- 时间不足时, 可以当成做决定的过程

教学者的角色

- 提出问题或议题
- 指定一个负责记录的学生
- 说明规则 (例如:不能出言不逊、所提的意见要合理，能被人接受等)
- 如果需要, 提供思考方向建议
- 避免评论单独的意见
- 设定时间限制
- 协助学生拓宽思考的范围
- 确定评估回应的标准

学习者的角色

- 创意思考
- 知无不言
- 避免用别人的解答换个说法再说
- 当快速联想结束时， 协助评估所有的答案
- 决定最有用，适合的信息

2. 热烈讨论法 (小组讨论)

将班级同学依 3-6 个人为一组, 讨论一个主题或解决一个问题。每组派一个代表向全班报告各组的讨论成果。

教学者的角色

- 决定待讨论的问题
- 依 3-6 个人为单位分组
- 告知各小组规则

- 清楚解释问题以及小组要做的事情
- 提醒小组成员时间限制 (通常 5 至 15 分钟)
- 建议各小组选出组长与纪录者
- 讲清议题；回答疑问
- 穿梭各组间提供协助
- 剩两分钟时作出提醒
- 准时向各小组回收结果、询问各组的结论
- 询问各组成员额外的意见
- 总结、整合各组的意见
- 提出进一步的学习或活动

学习者的角色

- 协助决定议题或问题
- 选出组长与纪录者
- 再次界定议题或问题
- 讨论议题或提出建议
- 仔细聆听组内其他人的意见
- 整理其他人的观点
- 判断这些信息如何被运用, 并实践
- 记录重点，需要的话提供给全组人参考

3. 案例研究

案例研究是将真实生活的情境介绍给学生, 让他们分析问题的各个层面, 并提出解决的办法。分析时可以是以个人为单位， 也可以是以小组为单位。

教学者的角色

- 根据实际信息准备案例研究的数据, 需考虑以下相关问题:
  (1) 参与的人
  (2) 历史背景
  (3) 人物关系
  (4) 社会因素
  (5) 经济因素
  (6) 人物的背景
  (7) 民族
  (8) 引发问题的因素
- 协助小组成员分析并解决疑问
- 总结讨论意见

- 提供重要的信息和要点

学习者的角色

- 需要时协助准备案例研究的素材
- 认真阅读与聆听案例
- 分辨重点议题
- 分辨案例的各个角色对议题的影响和作用
- 分辨为何会发生问题
- 分辨何种原理有助于理解情境
- 提供解决的意见
- 思索出最能解决问题的方法，并提出适当的理由

4. 辩论法

举行辩论时，两方论辩人分别提出议题相对的观点，以让人信服。再由全体人员讨论这个议题。论辩人应要：

- 为他们的观点提供足够的证据
- 批评对手的论点
- 维护自己的论点
- 总结自己的主张

教学者的角色

- 与论辩人讨论，确认议题
- 与全班确认议题
- 扮演主持人
- 辩论后总结讨论主题
- 建议课外学习材料

学习者的角色

- 思索要讨论的议题
- 参与讨论
- 进行论辩后的活动

5. 示范与演练

示范与演练对于培养技能的学习活动很有效。最终学生能独立实行这项技能到熟练的标准。这种学习法：

- 协助学生精通某项运动技能
- 将理论转换至应用
- 应该附带一系列的问题与解答

- 最好用在小规模的团体
- 在练习过程中必须是个别指导
- 高度的团体参与度

教学者的角色

- 准备适当的示范设备
- 必须有信心自己能做出这个示范项目
- 介绍理论与目标
- 描述活动的每个步骤
- 缓慢进行
- 复习程序, 解答疑惑
- 协助练习

学习者的角色

- 了解示范的目的
- 主动聆听、仔细观察
- 询问不懂的地方
- 建议新的想法或不同方法
- 练习每个步骤
- 运用新知识

6. 实地考察

一次实地考察是有计划的班级参观访问, 包含:

- 与教室里无法运用的社区资源合作
- 提供视觉教育, 让学生在有兴趣的地方获得第一手经验, 有实际的学习经验
- 调整课程内容
- 课程中包含社区的发展
- 行前应在教室内有短暂的介绍, 结束后也需安排讨论的时间

教学者的角色

- 调查当地社区或地域以确定参访的地点和单位
- 取得参访单位或地点同意
- 事前详细的准备, 如:目的、人数、抵达时间和停留的时间等
- 安排交通, 包含交通所花费用
- 让同学知道这次实地考察的目的

- 考察后让大家讨论与发提出问题
- 整理考察的经验
- 建议延伸学习的新材料

学习者的角色

考察前:

- 了解意义与目标
- 聆听领队的说明
- 搜集考察地的信息

考察时:

- 参考参访地点或参访单位的宣传手册
- 提问或者询问额外的信息
- 将所见所闻联系到学习目标

考察后:

- 透过团体讨论分析、说出考察途中所得到的知识

7. 集体讨论

集体讨论是指几个人在一起合作讨论一个互相关心的主题。主持人提供一个主题，参与者讨论。

教学者的角色

- 决定有意思的主题
- 在讨论前指定阅读材料
- 准备引发讨论的问题
- 提示进行集体讨论的规则 ， 如避免离题等
- 维持讨论的状况
- 鼓励所有成员参与
- 避免选边站
- 总结
- 建议相关主题的学习材料

学习者的角色

- 协助决定讨论主题
- 讨论前阅读适合的材料
- 确认讨论的目标与步骤
- 主动聆听
- 鼓励其他成员的参与和意见

- 只提供与主题有关的信息与意见

8. 演讲授课

演讲是由一位胜任的人发表口头演说, 交流的形式主要是信息由单向地讲者到学生。

演讲是一种合适的教学方法, 当

- 基本的教学内容是传授信息
- 信息的内容不能靠阅读或其他方式取得
- 该主题是学生感兴趣的议题
- 演讲内容倾向短期记忆
- 简介主题或指示一个方向, 可由其他教学方法继续发展

教学者的角色

演讲的效果将会提高, 如果:

- 内容富有意义
- 所举的例子是学生经验里所熟悉的
- 演讲前后都经过整合、归纳
- 演讲伴随着其他教学方法或设计, 学生可以参与

学习者的角色

- 聆听、思考、作笔记
- 准备问题，在演讲中或结束后提出疑问

9. 座谈小组

请专家座谈分享指定主题, 并和参与研讨的老师、学生与其他专家交流意见。

教学者的角色

- 挑选并邀请专家
- 与座谈会的成员讨论流程
- 提示同学进一步阅读材料与相关研究
- 安排场地、介绍研讨会成员与主题、主持、整合研讨会的意见、建议后续的学习活动

学习者的角色

- 进一步的阅读与研究
- 结合新信息与旧经验
- 辨识与整合新的想法

- 在后续活动中运用新的知识技能

10. 训练学习

训练学习是将一种操作反复练习, 学生能在教学者的指导下熟练掌握一项技能。

教学者的角色

- 提供标准动作
- 说明正确的反应
- 一个口令一个动作指导学生第一次练习
- 让学生练习动作
- 提供适当的学习条件—尽量接近自然的环境, 使技巧转移更容易
- 纠正、评判结果

学习者的角色

- 若示范不清楚要提问
- 每个练习阶段都设定目标
- 不断练习直到精熟技能

11. 角色扮演

角色扮演是在行动中处理问题的过程。问题被提出, 以表演形式进行讨论展示。角色扮演的精髓在于参与真实的问题情境中, 并且渴望寻求答案以及伴随演出引发的深入理解。一些学生进入角色扮演, 有些则当观众。

角色扮演是一种媒介, 使人可以进入他人的态度、价值观或观点中探索其感受与看法。

教学者与学习者的角色:

有效的角色扮演包含全体学生, 教学者必须熟悉以下八个阶段, 但只是从旁指导 。参与的人进行 2, 5, 6, 7, 8 阶段。

阶段 1:热身

简介并概述问题, 创造出可以包容任何感受、 观点 与行为的气氛。各种真实生活或电视、图书中的例子都可以用来提示整个情境。

- 辨别、 简介问题

- 使问题清晰
- 诠释产生问题的故事，发掘议题
- 解释角色扮演是一种教学策略

阶段 2:选角

对情节有强烈感觉的人可以自告奋勇参加演出。教学者也可以推荐你认为最能胜任、烘托问题情境的人。

- 分析角色
- 协助选角

阶段 3:布置场景

保持场景单纯简洁让参与者感到安心。再次重复角色，并决定从何处开始演。

- 设计布局与活动范围
- 重申角色名单

阶段 4:指导观众评估这场活动的效果

阶段 5：开始角色扮演

整场表演应保持精短。当预定的角色演得鲜明，其中的行动才会表现出要表达的观点或思想，或者印象才会深刻。

- 开始角色扮演
- 维护表演正常进行
- 终止角色扮演

阶段 6:简短回顾整场活动

重点放在探索背后动机与某些行为造成的影响。

- 回顾角色扮演（事件、 立场、 真实性）
- 讨论主要议题
- 准备下一阶段的演出

阶段 7：二次演出

- 扮演修改过的角色，建议剧情发展或替代的行为
- 如果需要可以更换演员

阶段 8：分享经验与概括结论

- 结合问题的情境到真实生活与问题
- 分析角色扮演，发掘出行为的原因规则

12. 模拟游戏

模拟游戏是让参与者融入一个逼真的场景、对象或人物, 其学习内容来自他们练习后产生的影响。模拟游戏收到良好效果需要:

- 分析现实存在的系统
- 评估一个新的系统模式
- 提供一个呈现真实生活的情境当作学习环境, 以帮助学习模拟

教学者的角色:

教学者首先分析这场模拟游戏中的各个要素, 以及它们对于学习目标有关的优点, 然后设定一套标准。其他需要考虑的则是与课程相关的问题, 如学生的需求, 或管理这场教学的设定规则等等。教学者心中要记住:

- 问题是什么,
- 这场模拟游戏要教什么,
- 参与者有哪些可行的方案或选项,
- 模拟游戏要进行多久,
- 规则有哪些,
- 对策有哪些,
- 必须有哪些准备,
- 这个模拟游戏适合我的学生吗,

进行模拟游戏时, 教学者应当:

- 解释游戏规则以便活动顺利进行
- 说明各种选项,动作,
- 裁决或掌握进展情况
- 鼓励参与者在过程中反思

学习者的角色:

学生会从中学到:

- 为了克服困难、 达到目标而产生的竞争力和毅力,困难是天然的动力,
- 合作的益处
- 理解角色所产生的认同心理

- 概念
- 行为如何影响环境
- 环境如何被行动所影响
- 缺乏技能或判断失误的后果
- 现实世界中机会的要素
- 可替换的解决问题策略（方法）、其他人的反应、在模拟的情况下各种技能的有效性

教学技巧 、 用意和举例

教学技巧	主要用意	范例
快速联想	产生新点子	为会议想一个主题
热烈讨论法	小组讨论议题或解决问题	找出增加士气的方法
案例研究	分析一个真实生活情境，并提出解决方法	解决职场人际关系问题
辩论	提供不同的观点与相反的看法	指定一个正发生的时事议题给学生
示范演练	传授技术	进行科学实验
实地考察	将社区资源纳入学习	参访电话公司
集体讨论	讨论一个议题	讨论（罗密欧与朱丽叶）的主题
演讲授课	传播信息	一堂历史课
座谈会	提供向专家学习的机会	讨论妇女在行政管理会上的挑战
训练学习	反复练习一个操作	练习打字
角色扮演	在行动中学习；激发行为或想法上改变	示范良好/不良打电话技巧
模拟游戏	通过行为的结果，影响学习	一次急救状况

教学资源

现代有各式各样的教学工具、技巧和技术,可以用来增进学习。下面介绍，总结了过去至今被认为是教学的辅助物品。 为了适应当今学生成长于数字时代之需求, 教学辅助是需要探索的一个领域, 希望能在教学中呈现更多的真实性。然而，任何运用在课堂、实验室或学校的工具、技巧、技术都是用来增加学习效果的,不该反客为主,毕竟它们是辅助手段， 不能取代老师。

下表列出了几种教学工具，效果,与使用时的注意事项。适当运用这些资源可以帮助学生更好的学习经历。

资源类型	优点/理由	缺点	备注
黑板/白板	授课笔记；图片；图表；即兴笔记；迅速好用；可以擦拭重复使用；多人可同时使用	有时不容易看见；粉尘；书写时打断课堂连贯性	干净平面 两寸字体 版面的组织 用在重点，总结，强调
挂纸	笔记；图片；图表；可以事前准备；可用呈现集体（小组）答案；简单；容易使用；携带方便；列出快速联想答案；可以保留至下次上课	可能消耗不少纸张；大的教室不容易看见	两寸字体 一张纸约 8 到 10 个重点 测试纸笔的颜色以求清晰易见
实体教具	任何用来增加学习效果的物品或手工制品（设备，工具，模型）	考虑管理搬运教具方法	经过挑选 有足够时间让所有人浏览观看
投影设备；高架投影机；幻灯片投影(OHP)	能面对学生；可制作图表或图片	学生注意力被分散；依赖电力，灯泡等	要时常移动以免挡住某一部分学生视线
实物投影机	展示范围比幻灯片，投影机更广；可展示印出的材料与图片；立体物品；所有内容可储存在电脑中。	同上；还需要有屏幕或数字投影机	在课前测试 需要有用来转换焦点的空白面

资源类型	优点/理由	缺点	备注
数码投影机	可投影出多种电子输入来源 – 计算机；影片；实物投影；电视等	在大教室使用需要数个屏幕；设备昂贵；不容易携带；依赖电力；可能发生器材故障	同上 测试设备 准备通知学生要观看的重点
讲义	笔记；图案；图表；练习；教学内容；课表；大纲；学生们可以保存；容易阅读；没有复杂的技术	无法集中注意力；有时讲义会包含太多，太难的内容（应保持简单）；太多会让学生分心	考虑发讲义的时间 发讲义前先说明你要学生怎么使用他们
投影	可事前准备；可使用色彩；可以运用图表或图片；可以展示著作权规定下无法电子化或发送的材料	容易放太多内容；播放太快	要组织投影片 多利用图示
幻灯	图片用以说明课程，地图；表格；印象深刻	幻灯片的顺序已经固定；需要排好/测试幻灯机	辨识所有幻灯片
影片/录像	呈现过程，步骤，有影响力的精神，态度；能使用事前制作的影片，也可用录像，让学生观看自己（作为反馈）；可在有限的训练后作出很好的影片	制作/租用影片录像的费用可能昂贵；也可能发生版权问题	使用 PSNI Purpose,Setup, Narrative, Integration) (宗旨，规划，叙述，整合) 影片要与课程相关 播放后要总结 指定后续作业

非正式学习评估法

虽然现在已有很多方法评估学生的进步,在这里介绍的是一种非正式的学习评估方法,它包含在课程进行中搜集信息或反馈,以判断课程进行如何,以及是否正朝着课程学习目标迈进。

几种非正式的学习评估方式

花时间检视你的课程大纲、教案和每堂课所作的笔记,每个部份你觉得进行得如何?下一次你会想做哪些修正?同时思考一下该堂课中比较薄弱的环节,你打算下次如何改进弥补或者复习那些主题 / 技能?保持自身敏锐的感觉。若是感到不舒服、紧张、厌倦、兴奋或好奇,这些感受可能会反映或影响到学生。然而,不要急着下结论 – 不如在课堂上检测一下你的感受。

以下介绍几种建议方法,可以搜集学生学习的情况。

1. 观察:注意学生们的表情、姿势等,来判断他们是否理解你正在说明的内容。他们显得感兴趣、兴致勃勃,或者无聊?听听他们所问的问题、在课堂上与课后说的话。

2. 讨论:尤其是大班级,经过几堂课后花些时间与学生们谈谈课程的状况,以及他们喜欢哪些部分,不喜欢哪些部分。然而, 注意不要花在「 检测」的时间比教学时间还要多。

3. 问卷调查:可以有效获得学生的满意度、建议改进之处,加入学生想要更深入学习的主题或技能。试着让问卷单纯、简短。课程的中期也许是问卷调查的好时机。

4. 课堂活动:多数的课堂正式活动可以提供大量学生学习成效的信息。角色扮演、表演、练习、问答等都是有用的「非正式」学习评估。

5. 检核、评量表:可以让学生自我检测其学习进度,同时教师也了解了他们的进度。也可以藉此了解课程或教学内容中学生掌握的 「等级」 。

6. 技能练习和展示:让学生练习或表演技能是一种有效的方式,让你知道他们是否熟练这一技能,同时也是一个很好的机会让学生得到需要的反馈。

7. 纸笔测验:不计分时，小考、测验也是一种非正式的测试方法。

选择学生回答问题的策略

请学生填写一张纸卡,上面有他们的重要个人信息,如姓名、专业、先前的学历,职业目标、个人兴趣及兼职工作等。在纸卡的另一面则写下姓名。当挑选学生回答问题时就随便抽一张卡片,再将卡片不按照顺序放回去。这个方法可以有效地记住学生的姓名,并且营造一种期望参与的感觉。

课堂评估技巧 (C.A.T.s)

这些方法包含教学者与学生持续检测学习状态的小措施。它提供学校关于学习效果的反馈,也评估学生的进步。这些工具协助教学者运用多样的反馈方法,以发现学生掌握哪些内容、如何更好掌握。

最重要的是,课堂评估技巧是一种快速的方式,帮助判断学生正在学什么、哪些教学方法有效、又有哪些知识令他们感到困难。以下有几种方式的示范， 以及其他的互动评估策略。

1. 一分钟报告 (one-minute paper)

提早一点下课,并提出一、两个问题,例如:「今日上课你所学到的重要内容是什么?」还有「有没有还未解答的问题?」或者「今天课程中的疑问是什么? 你觉得最清楚的地方是什么?」让学生写下他们对课堂的理解印象,下课前写完交给你。大约花五分钟就可以完成这个活动,你可以在下次上课前看完他们的反馈意见。

在课程中其他可以考虑提出的问题有:

- 你了解这门课的大纲、目标和评分方式吗?是否有疑问?
- 这门课是否符合你的期望?你是否有什么建议?
- 课程内容是否讲解清楚、逻辑关系清楚？ 关于课程教学,教学者有什么需要改进的地方吗?
- 关于你的课堂学习,教师是否给你特别的反馈? 哪些后续的反馈会有助于你在这门课的学习 ?
- 你时时都很清楚自己对这门课的期望吗? 如何提高你的期望?

- 你认为课程的评估方式恰当公平吗? 你有改进评估方式的建议吗?

要点清单 (focused listing)

- 选一个已经学过的主题, 请学生列出最能描述这个主题的关键词。让学生自己回顾这张清单, 并与同学交换审阅, 可以删除增加清单上的内容
- 写下你在课堂上学过的重要知识或技能, 然后列出这些知识技能可运用的方法
- 写下 5 到 7 个字或一个短句来解释这个主题

解释定义 (directed paraphrasing)

- 请学生归纳他们所学过的某项主题, 但要浓缩成三句以内的精简句子, 可以解释给朋友, 家人听看他们是否明白
- 请学生解释一个特定的课程或阅读材料, 并且配合指定的篇幅或限定讲解的时间
- 完成解释定义之后, 请学生分组讨论他们的答案, 并全班分享一些不同的解释答案
- 请学生观看一项技能展示。然后请学生阅读课本或手册中关于此技能的说明, 接着请他们用自己的话写下这些步骤, 而后可以请学生亲手操作这项技能

坚持观点 (stand where you stand)

这是在面对一个具争议性议题时, 鼓励安全讨论的方式。在教室的四面墙壁上画定几种标记:同意、非常同意、不同意、坚决不同意。选择一个具争议性的命题、道德陈述, 让学生走到最能表达自己观点的墙壁。例如:「全面禁止砍罚成长缓慢的树木」, 请学生说明他们为何选择特定的立场, 接着邀请另一位持相反观点的人回应。一开始教学者让举手自愿的同学发表, 随后可慢慢指名同学回答。若学生改变立场可以让他们移动到不同的位置。

总结这个活动时, 可以考虑让学生匿名写下一些反思的问题, 将这些意见混合后, 在班上传阅, 并且让同学念出他们手上所拿到的意见。

简单的反思性问题如:

- 我很开心我 ….
- 我希望我能 ….

我希望我能…

- 我很惊讶. . .

5. 价值观念线 (value line)

选择一个具争议性的主题, 在地板上画一条线 (用胶带在两头与中间做出标记), 线的一头代表强烈支持某立场, 另一头则是强烈反对。请学生根据他们对此议题支持或反对的程度站在线上。要求学生分享他们的观点。

以下是一些问题可以帮助你设计其他非正式学习评估法:

课程初期:

- 学生对这门课的期待、兴趣及运用是什么?
- 关于这个领域, 学生的已具备的知识、经验是什么?
- 学生可能会有哪些担忧或关心的事情?

课程中期:

- 学生是否达到课程的目标或预期成果?
- 学生享受课程吗?对课程满意吗?
- 学生团队合作学习顺利吗?或者有哪些问题存在?
- 课程内容的组织、步骤和讲解展示是否适当?

课程后期:

- 学习目标与预期的成果是否达到?
- 学生个别的目的是否完成?
- 学生现在对课程的感觉是什么?
- 他们所学的知识内容是否与自身相关?是否有用?
- 团队合作状况如何?

问问自己的问题:

- 身为教学者, 你的教学技巧和方法效果有多少 ?
- 这门课的准备、组织有多完善?

学生的反馈

对学生而言,有机会表达意见非常重要。以下有几种常见的方式可以获得学生们的反馈:

1. 试着用匿名的方式取得意见,有些学生可能不愿意直接真诚地回应。
2. 解释为何你需要反馈意见, 并且当你决定如何运用这些意见时要向全班说明,或是说明为何你无法采纳这些意见。
3. 鼓励讨论式或评论式的意见,而非简单的「是」与「不是」
4. 先询问比较概括性的问题,再逐步具体。开始先问一些较简单的问题,再越来越深入。
5. 同时也使用课堂上得到的反馈意见,这样可以取得更多你需要的信息,并了解课程是否运作正常。

课程与讲座设计

课程设计是将教学资源、活动与内容作系统性的组织。一套课程的设计是一份活档案，它包含：

1. 一份课程大纲，可让学生具有整堂课程教学概况
2. 一系列课堂的教案
3. 一份清单，上面依照每堂课罗列教学资源、素材

当你在规画你的课程与每堂课时，请记住下列问题：

1. 我想要完成什么?学生们想要完成什么?
2. 我能完成什么?学生们能完成什么?
3. 我们如何知道自己做得好不好?

以下是建议规划课程的十项步骤，以及每阶段需要考虑的问题。实际生活中，这套流程可能会有些「随机」，未必按部就班由步骤1 到步骤10。

1. 设想一下学生，并用以下的问题来评估：
    - 他们可能有哪些期待?
    - 他们可能会对自己、这个主题或环境有什么感觉?
    - 他们选择这门课的理由有哪些?
    - 他们有哪些其他的需求 / 压力?
    - 所规划的教学内容，对他们而言有什么用处?
    - 他们有哪些学习动机? 你如何利用这些动机?
    - 他们有哪些先备知识 / 经验可以展开学习?
2. 设想自己：
    - 这门课哪些方面令你感到兴趣盎然?
    - 你的长处与短处是什么?
    - 对于这个题目/ 技能，你最重视的是什么?
3. 设定学习目标或成果：
    - 课程完成时，你希望学生从课堂中带走什么?
    - 他们应该获得哪些技能 / 知识 / 态度?
    - 有证书，凭证或演示吗?
    - 写下你所有的想法
        - 这些安排可行性高吗?
        - 它们符合可运用的时间 / 资源吗?
        - 哪些内容是「基本的」，「重要的」，「最好能知道的」?

- 哪些内容是可以省略的?
- 先设定一些笼统的课程目标, 再以此为基础发展出各堂课的具体目标
- 确认你对于这些目标的弹性有多大
- 确认你会如何与学生沟通这些目标

4. 组织内容:

- 关于课程—决定每堂课要达到的学习目标/成果, 以及它们的顺序
- 关于每堂课的层次, 将学习目标拆成数个具体的主题 / 技能, 再用有意义的顺序组织起来。
- 组织教材可用的方式有:
  - 简单到复杂 (已知到未知)
  - 笼统到具体 (概括到细节)
  - 具体到抽象 (案例研究)
  - 按时间顺序
  - 按程序步骤
  - 以问题为中心的途径

5. 选择教学方法:

- 达到各个目标最好的活动 / 技巧是?
- 你打算用哪些教学方法 (如:授课、讨论、个案分析、实地考察)?
- 在各堂课中尝试变换技巧, 同时也变换学生的学习状态 (如: 听讲、讨论、提问、演练)

6. 规划你的时间:

- 关于课程—列出整体的规划, 里面有学习目标与每堂课的教学内容
- 关于每堂课—写出时间流程, 如教案表格中所建议
- 设想整堂课中你将会做些什么, 学生又会做些什么
- 安排适当的练习机会
- 考虑时间与材料的份量是否可行? 如果时间不够时, 哪些可以被删减?
- 你是否准备足够的时间让学生吸收思考与提问?

7. 安排教学设备:

- 你需要哪些设备、讲稿或素材?需要详细的列出来—接线、备用灯泡、笔、胶带等
- 事前准备完善 — 预订或安排你所需要 的物品, 并在上课前试用以保证它们可正常运行

8. 决定如何评估:

- 你如何评估:
  - 学生的成果?
  - 学生的满意度?
  - 你自己的表现?

9. 设想如何解决 「程度不同和多元性」 :

- 有些学生对特定的主题或技能会学得很快,有些则要比较多时间。你会如何面对这样素质程度参差不齐的班级?
  - 请已经学会的同学去帮助另一位?
  - 组成小团队,并个别辅导?
  - 针对比较薄弱的学习环节提供额外的材料或练习?

10. 准备强化学习内容:

安排一些方法加强已经学过的内容