Overview and Introduction
A Practical Guide to Effective Post Secondary Teaching and Learning

Purpose of the Guide
The purpose of this guide is to provide practical and specific ideas that may enhance the effectiveness of post secondary instruction. The ultimate intended outcome of these hints, suggestions, and possibilities is to make a positive difference in teaching and learning for both post secondary instructors and their students.

The practical guide considers three chapter themes:
- 1. Building positive learning environments and interpersonal relationships
- 2. Effective planning and teaching strategies
- 3. Reflecting and analyzing teaching and learning for long term professional growth

Each chapter has specific topics with background information and practical suggestions that can be adapted for utilization. These topics can be identified and accessed from the table of contents for each of the themes. Many of the topics have excellent extensions and links through the Internet. It is also important to note that each of the chapters and topics can be printed with this printable version of the website content.

Conceptual Framework and Overview of the Guide
Given the intent of the guide, the logical question arises of what is effective post secondary teaching and learning? This classic question has been explored and debated over the centuries. Gross Davis (1993) synthesized some of the research on effective post secondary teaching and established some general themes in a succinct and clear way. These themes will form the conceptual framework for the guide.

THEMES: Effective post secondary instructors are adept at:
- 1. Creating a positive environment for learning. Much of effective teaching is founded on student perceptions of positive interpersonal relationships. Effective teachers: establish and maintain positive rapport with students, are attentive and responsive to their needs, communicate expectations clearly, actively engage students with diverse ways of learning, give appropriate feedback on student work, and demonstrate a genuine caring for student physical and emotional well being. In short, it is what and how students perceive they are being treated as a major motivator for their learning and opinion on the quality of instruction they have received.
2. Organizing and teaching content to best meet most student needs. A teacher must know their teaching material and discipline. Teacher knowledge and experience forms the essence of post secondary instruction. It is however more imperative to understand what and how a student would come to understand the content or concepts, what questions or concerns students might have, to be able to explain or model topics/concepts/skills in easy to understand ways, to identify reasonable expectations, select appropriate teaching methods and material, relate topics to real life, and find ways to assess their learning in meaningful and practical ways. In short, think and learn as if you were the student in your own class!

3. Reflecting and evaluating teaching and willingly adapting their teaching to best meet student needs. Laura Upton, an American educator, has postulated that we do not learn to teach but rather we learn from our teaching. There is so much to learn as a post secondary teacher and it is ones caring, passion, and courage to change that makes it more rewarding for both the teacher and the learner. One needs to systematically consider what students are doing, why they are doing it, how it could be done better. Open and honest communication with students, specific feedback, and an open minded attitude for change are paramount in this reflection, analysis, and adaptation.

A teacher is a very special person who uses their creativity and inquiring mind to encourage others to think, dream, learn, and do.

- Beverly Conklin

One might think back to their own post secondary days to remember what professors or instructors made the biggest impact on their learning and maybe their lives. The memories likely include: their interpersonal skills and relationships, their engaging ways of teaching, and their ability and willingness to adapt and change to best meet your needs. Given the overwhelming wealth of ideas and suggestions found in researching this guide, there are sure to be a few ideas that will make a positive difference in both your own and your students learning.

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Creating a Positive Learning Environment
Chapter 1

Effective teaching is often based on student perceptions of positive interpersonal relationships, both with their instructor and peers.

Effective teachers:
- establish and maintain positive rapport with students
- are attentive and responsive to their needs
- communicate expectations clearly
- actively engage students with diverse ways of learning
- give appropriate feedback on student work
- demonstrate a genuine caring for student physical and emotional well-being.

In short, it is what and how students perceive they are being treated as a major motivator for their learning and opinion on the quality of instruction they have received.

1A. What do most students expect from you?

"Whoever our students may be, whatever the subject we teach, ultimately we teach who we are."

- Parker Palmer (educator and philosopher)

The University of Manitoba (2007) faculty handbook presented a very substantive overview of many ideas on effective post-secondary teaching. The introduction to this handbook included a list of what students value and expect from a professor/instructor.

With the permission of teaching excellence award winner Richard LeBlanc, the University of Manitoba Handbook (2007) summarized what he believed to be the essence of "good teaching" at the post-secondary level.

The University of Iowa provided another succinct list of what students view as effective teaching:

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<th>Category</th>
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| Clarity  | - They communicate clearly about course objectives, content and testing, making sure to:  
  - Provide a rationale for learning particular material  
  - Adapt instruction to their student's level of knowledge and skill |
| Review   | - They review prerequisite knowledge as the foundation for new knowledge |
| Planning | - They are familiar with current research and:  
  - Develop outlines for each class  
  - Begin with information about their students' preparation and skills  
  - Prepare for contingencies and "opportune moments" for teaching |
| Feedback | - They ask questions requiring students to reflect, evaluate, connect ideas while:  
  - Providing clear and specific responses to student comments  
  - Following a correct response to a question with another question |
| Transfer of Learning | - They provide adequate opportunity for mastery of tasks by:  
  - Making sure that principles are understood before asking students to apply them  
  - Offering a wide variety of examples |
| Evaluation | - They solicit formal and informal responses from students during the semester and:  
  - Use this information to improve their courses as they are being taught  
  - Also invite observation and suggestions from colleagues |

"Teaching that impacts is not head-to-head, but heart-to-heart."

- Howard G. Hendricks
1C. Positive first impressions - what can I do the first class?

"We must view people not as empty bottles to be filled, but as candles to be lit."

- Robert H. Shaffer

The first class sets the tone for the term. Students, rightly or wrongly, form impressions that are lasting on this day. It is a very important day. Instructors and students are curious and nervous in anticipation. A relaxed and open learning environment often makes for better learning and more joy in teaching and learning. The following suggestions are presented in an article by Dr. Lee Fink (edited by Bernie Rynowski).

What to Do on the First Day of Class - Lee Fink, University of Oklahoma

What can we do on the first day of class? What should we do? One common answer is simply to start lecturing: "This is day one, here is lecture one, away we go." Another possibility is: "Here is the syllabus, go buy your books and we will see you at the next scheduled class period." Neither of these two options seems desirable. But what are some other possibilities? Several years ago a group of professors at the University of Oklahoma visited each other on the first day of class and then discussed what they saw each other doing. The discussion quickly went from what they observed, to "What might be done?" They eventually identified some possibilities, as described below. A teacher should not feel obliged to do all of these, but doing even one or several of them on the first day (or during the first week) would seem to accomplish a number of important tasks for getting a class started in the right way.

1. Invite students to participate. This can be done in a variety of ways:
   - having them introduce themselves to each other
   - allowing them to think and write silently about what they think the course will offer them
   - having a whole-class or a small-group discussion of their expectations and challenges

Let students know right from the outset that they will be active participants.

2. Establish your own credibility. Sometimes this happens automatically, but at other times students need to know about the teacher's academic qualifications, prior work experience, travel experience, or research and publications in an area. Having this knowledge can help students gain confidence that the "teacher knows what she or he is talking about."

3. Build Rapport. Almost any class will be more enjoyable for both the teacher and the students if they know something about each other. This exchange can be started with mutual introductions, sharing some background information, etc. Reveal something about yourself. Sometimes students can relate to the teacher more productively if they can see him or her as a human being, i.e., as something more than just an authority figure or subject matter expert. Sharing personal stories and being able to laugh at yourself can help this process.

4. Identify the value and importance of the subject. Not all students come to all classes with a clear idea of why this subject is important. The teacher may need to help them understand the significance of the course. The sooner this is done, the sooner the students will be ready to invest time and energy in the task of learning the subject.

5. Provide administrative information. This often takes the form of going through the syllabus, presuming you have a syllabus with this information in it. What reading material the students will need; what kind of homework will be involved; what your office hours are; where your office is located; how the class grade will be determined; what your policies are regarding attendance, late papers, make-up exams, etc. Try to make this an active event (questions, discussions, predicting) vs. reading the outline to the students.

6. Set expectations. This can involve such things as what the teacher considers appropriate amounts of study time and homework for the class, the importance of turning homework in on time, expectations about in-class behavior, how the teacher wants to relate to students, and how much interaction among students is desired. The first day also offers an opportunity to find out what expectations the students have of the teacher and of the class.

7. Establish the "climate" for the class. Different teachers prefer different classroom climates: intense, relaxed, formal, personal, humorous, serious, etc. Whatever climate you want, you should try to establish this early and set the tone for the semester.

8. Introduce the subject matter. Generally this introduction will be facilitated by starting with an overview of the subject. It is a message sent to students that there is a task orientation and important learning to begin – even in the first class.

What is it? What are the parts of the subject? How is it connected to other kinds of knowledge/skills? Why is this knowledge/skill important?

Final Note: Remember that it is imperative that you do on the first day whatever it is you want the class to do the rest of the semester. Keep them active, engaged and relaxed!

First Day Ice Breakers

Nelson (2003) offered some ideas on getting to know your student "Icebreakers" for community building and subject matter.
Social Icebreakers: "Getting to Know You"

* Simple Self-Introductions
  - Students take turns introducing themselves to the class.
* Three-Step Instructions
  - Students share information with a neighbor, who then introduces to the class.
* Class Survey
  - General questions are asked so a broad picture of the class is formed.
* Scavenger Hunt/People Search
  - Students move around the classroom to find others who fit into certain categories.
* "The Circles of _____"
  - Students create a web of groups with which they identify, starting with their name in the central circle.

Subject-Matter Icebreakers

* Background Knowledge Probe, Focused Listing, and Self-Confidence Surveys
  - These are meant to provide background information on students as well as an orientation to course matter.
* Problem-Posing
  - Students pose problems that may occur in the course. This allows you to facilitate discussion with the class.
* Common Sense Inventory
  - Ease students into the subject matter by providing statements that they have to deem "true" or "false."
* Drawing Class to a Close
  - Have students record their anonymous reactions to the first day of class.

First Day Success

The University of Waterloo teaching tips guide has some suggestions for:

* Surviving the first day of class
* Motivating your students

ID. What are some other hints/ideas for a "good start?"

"We should not be speaking to, but with; that is second nature to any good teacher."
- Noam Chomsky

Gross Davis (1993) synthesized a few more possible suggestions for the first classes. Some of these were:

* Build community with interactive opportunities with active involvement and communication such as personal introductions, generating questions about the course or instructor, and sharing or generating ideas about course content.
* Have student complete an introductory card to share their backgrounds, passions, concerns, hopes, fears, and hobbies/interests.
* Learn and use student names. Consider name cards for the first 2 classes. Play name games (i.e., Alliteration Actions or Yarn Connections) and icebreakers (refer to Nelson's Icebreakers)
* Encourage e-mail or discussion/support groups (buddies) to assist with communication, community building, and logistical support in case a lesson was missed. The University of Waterloo Center for Teaching excellence has some suggestions for timesavers for electronic communication.
* Provide a clear and specific overview of expectations. Clear expectations, assignments, and criteria are a huge deal for students. Provide a course visual overview of key concepts and their order (big picture).

Povlacs offered "101 things you can do in the first three weeks of class." Some of these ideas, adapted by the author, follow:

* Introduce yourself and greet students at the door (by name as you learn them).
* Start/stop classes on time (sets a pattern of expectation).
* Find out about your students with a survey (i.e., Sample Survey).
* Tell students about yourself and your philosophy of teaching/life.
* Remind yourself that students "feed or starve" off your enthusiasm and energy.
* In smaller classes, have students interview each other by finding out about their interests, passions, and past life experiences. Student pairs could introduce one of the new classmates (including you) to the class, sharing one special quality/experience the classmate has had.
* Have a visual overview of the day's lesson with key ideas, concepts, events outlines.
* Mingie with students as much as possible before and after class. Make opportunities to move about the class and interact with students on both the content and personal level.
1E. How can I effectively deal with student “challenges?”

"Student incivility is often a symptom (e.g. poor presentation, boating activities, lack of enthusiasm, and lack of clarity... ) rather than a problem."

- Bernie Krynowska

The reality of post secondary teaching is that there are always inevitable challenging situations that arise. These challenges are not what makes the work interesting, rewarding, and occasionally stressful.

Nelson (2003), based on her research, provided some insights into common incivilities and ways to prevent and deal with them.

- Surveyed students considered the following student behaviors inappropriate: talking in class, arriving late and leaving early, wasting class time with domination of discussions or irrelevant questions, showing disrespect through distracting mannerisms and poor manners (e.g. noisy, fidgeting).

- Surveyed instructors listed main distractions as: acting bored or apathetic (eye rolling, sleeping, eating, not paying attention), missing classes, individuals dominating discussions, students belittling or being sarcastic towards others, using computer/ cell phone/ pager in class, inappropriate e-mails, vulgar or rude comments, challenging the instructor’s credibility in class.

Nelson (2003) offers suggestions for these situations, but prior to, offers preventative measures. Obviously prevention is preferred!

Preventing classroom incivilities

Possibly the biggest prevention of all is working toward positive interpersonal relationships. In addition to relationship building, the underpinnings of prevention revolve around perceptions that you are organized, confident, credible, and will follow up with clear policies and procedures. The University of Waterloo Teaching center provides some suggestion on how to manage your classes by:

- Creating an inclusive environment
- Effective communication - barriers and strategies
- Conflict management for instructors

Some of the specific suggestions from Nelson (2003) included:

- Considering appearance, movement, and presence. These are a huge factor. You may need to act; however, students are watching you for your perceived level of competence and confidence.
• Setting clear expectations, policies and procedures. You need to be clear and firm on what you expect. An effective course syllabus is a good starting point. Some of the shared expectations might include the importance of, or policies regarding: on-time arrivals and departures, participation levels, missed assignments, and phone/computer use in class. Use positive language. For example, “you are expected to...” versus “you will be penalized if...”. Moreover, you can ask for and acknowledge student input into some of the minor policies and procedures (e.g. cell phones going off, talking in class). Ownership is powerful, so involve students.

• Modelling appropriate behaviours yourself. If you are rude, sarcastic, or late for class, what do you expect from students? There is huge power in your modeling!

• Practising being an engaging and interesting presenter. This is easier said than done. Aristotle in his evaluations of teaching not only considered content and arrangement (organization), but also style (sentence structure, delivery [vocal and physical performance], and memory [freedom from notes]). Enthusiasm is contagious! Times may not have changed? More on this topic is presented in getting feedback from peers. Check out the instructor lesson review feedback form which focuses on lesson implementation.

• Having an engaging and interesting variety of learning activities. (e.g. discussion, questioning, small group work, audio visual support, challenges, variety of teaching strategies, talk less and have students do more, and humour/anecdotes/stories).

Robinson (2007), in the University of Manitoba’s Handbook, shared some practical alternatives for motivating students and managing large classes so as to reduce incivilities.

**Responding to Incivilities**

> “The real art of communication is not only to say the right thing in the right place, but also to leave unsaid the wrong thing at the tempting moment.”

- E-mail humour

Nelson (2003) provided some suggestions to deal with a variety of incivilities. As expected, it is easy to give advice; however, trial and error rules. Some general guidelines for incivilities are: remaining calm and in control, responding to issues or challenges immediately rather than letting them slide, and meeting with students in a discreet way to discuss issues.

• Talking in class:
  Try pausing, moving closer, looking disappointed, or a non-verbal cue such as a finger to the mouth. Speak to the student/students quietly, ask to meet with the student after class, or discreetly ask the student/student(s) to change their seating for the next class. Avoid public berating.

• Picking up early and/or leaving late:
  Ask students to be courteous to others, pause as someone enters/leaves, have an area for latecomers, have routines for closing the lesson (e.g. short quiz, writing task, reading or assignment reviews), and/or speak to chronic cases out of class about how and why their behaviour is not professional.

• Dominating discussions:
  Use a system of hands up, communicate to individuals outside of class about their positive contributions but the need for limits, don’t call on the student, yet thank them for volunteering, stop the student with a paraphrase and redirection to others in class, or ask the student to meet with you later to discuss the question/issue. Questions previously asked and answered can be deferred with a question of whether this question has been asked, and/or asking the student to meet with you at the break or end of class for clarification or assistance. Avoid getting trapped by questioners looking for an argument - you can invite the student to meet with you later to discuss the question or issue.

• Computer cell phone use in class:
  Explain why this is an issue for a classroom at the start of the course. Moving about the room is a good way to be proximal and aware, providing less rather than more time to complete in class work, asking to see student work done before leaving class, collecting cell phones/pagers on entry, or asking everyone to turn off their phones as part of a class routine. You might consider a technology collection box on entry if this continues to be a challenge.

• Missing Classes/Assignments:
  Firstly, make the class worth coming to with active engagement. Other ideas include: knowing student names, doing a quick check list on attendance, asking students if in a professional programme to let you know by e-mail that they have missed or may miss a class, encouraging accountability in every lesson with a write or short quiz at the end (for marks), having comprehensive exams that cover content from every class, and/or avoiding pulling all of your lesson materials online as it makes it easy for students not to come. For missing/late assignments, have a policy in your syllabus (e.g. late marks) such as having a private discussion about the assignment and setting up a contract for completion, having a maximum grade for late assignments, or allowing students to pass the course only when all assignments are completed to a post secondary level.

• General Disrespect for Others:
  This behaviour is often attention-seeking or reflective of personal challenges. Communicating with the student outside of class while being empathetic, asking about the possible reasons for the behaviour, asking for solutions from the student, appealing to the sense of need for cooperation, appealing to the sense that they are likely annoying/disrupting other students, and/or possible referencing to
A final thought from Gandhi on values we might reinforce in order to make a positive difference in the realm of teaching and learning. He suggested that we avoid:

"Wealth without work; pleasure without conscience; knowledge without character; commerce without morality; science without humanity; worship without sacrifice; politics without principles."

- Gandhi

Organizing and Teaching to Meet Student Needs
Chapter 2

An effective educator must know their teaching material and discipline. Teacher knowledge and experience forms the essence of post-secondary instruction. It is however more imperative to plan for what and how a student would come to understand the content or concepts, what questions or concerns students might have, to be able to explain or model topics/concepts/skills in easy to understand ways, to identify reasonable expectations, select appropriate teaching methods and material, relate topics to real life, and find ways to assess their learning in meaningful and practical ways.

2A. What are some key reminders about effective teaching and motivating students?

"A teacher as scholar is important, the teacher as a person is crucial, the teacher as an effective communicator is indispensable."

- J. Jordan

The University of Manitoba Handbook (2007), provides an overview of excellent teaching attributes from a student perspective.

Effective teaching is intimately connected to motivating students in our courses. Cameron (2007), in the University of Manitoba handbook, reminds us of what we can do to assist students to achieve at a high level.

The University of Waterloo, as part of their teaching center teaching tips, provides an outstanding overview for motivating students and effective communication which are common traits in inspirational teaching.

- Effective Communication: Barriers and Strategies
- Receiving and Giving Effective Feedback
Most students hate it when expensive books are not used in some meaningful way! Order the texts/online materials. Many publishers offer custom courseware packages or one can create their own package with copyright approval through bookstores.

- Communicate course policies in outline which is the mutual contract. These policies need to be consistent with the department and university. The main policies revolve around: regular attendance, missing parts of assignments, unmet assignment standards, make up exams, late work, and grading scales. Consider that attendance or participation likely does not reflect student learning so perhaps it is not a valid evaluation.
  - Note: Students appreciate lesson by lesson overviews with the understanding that there may be adjustments according to student needs.
- Avoid course outline pick up on first class entry. It is a distraction because human nature is that most of us look at and are distracted by what is put in front of us. Provide students with the big picture of the course and why they might care about it prior to perusal.

Other resources for course outline/syllabus preparation

The University of Waterloo Center for Teaching Excellence provides a synopsis of practical hints in syllabus preparation. It includes:

- Course design - questions to consider
- Creating course outlines
- Writing course outcomes

A brief overview of key components of a course outline is provided by Alverno & Randall (1998). Slattery and Carson (2007), in the University of Manitoba Handbook, have done considerable research into current best practices in syllabus preparation with inclusion of student motivation, structure and function, and grading practice.

Please note that an entire sample course outline is linked to illustrate some of the previous planning suggestions.

2C. How do I plan for the “big picture” of the course?

"To be a teacher in the right sense is to be a learner. Instruction begins when you, the teacher learn from the learners, put yourself in their place so that you may understand when they understand and how they understand."

- Soren Kierkegaard

Given the many possibilities of learning activities a professional educator must make choices on best practice to meet student needs while honoring with integrity course and programme outcomes. As a generalization, (all generalizations are false), many instructors find that there is more that could be taught and learned but not enough course, and or student time and energy. Hence, one of the main planning decisions for instructors revolves around: what are the priorities for learning outcomes? What are ways would could assess and evaluate these outcomes? What are the key concepts (knowledge, skills, attitudes) and what order should they be presented in?

There are a multitude of planning models and learning styles that influence how one teaches and learns. There are some general key concepts that influence planning across the models.

- Planning styles are influenced by the instructors learning style and we often teach in ways we like to learn
- Planning is often not a linear process. Many individuals consider programme outcomes, learning outcomes, relevant activities and strategies, and assessment and evaluation options and move back and forth among the connections as they plot the lesson by lesson flow of knowledge, skills, and desired attitudes. It alters the planning in terms of how much is written down and how much is intrinsic

As was previously mentioned a visual overview of key course concepts can be used in nearly every lesson to assist students in linking the key knowledge, skills, and attitudes to be validated or acquired.

The University of Waterloo Center for Teaching Excellence provides a synthesis of practical hints in planning for the “big picture.”

- Course design - planning a class
- Course design - heuristic
- Course design - questions to answer

"It is good to have an end to journey toward, but it is the journey that matters in the end."

- Ursula Le Guin
20. How do I plan for meaningful assignments, assessment, and evaluation?

Once again there are many books, philosophies, and models for assessment and evaluation practice. A common thread in effective planning, teaching, assessment, and evaluation is based on identifying the critical knowledge, skills and attitudes your students will achieve at the end of a lesson or course (learning outcomes). One model, an adaptation from Wiggins & McTighe (1998) "end in mind" design, is illustrated below in Figure 1.

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<th>EXAMPLES</th>
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<td>Identify desired results</td>
<td>(e.g. key concepts, applications, course/program outcomes, specific knowledge, skills, attitudes)</td>
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<tr>
<td>Determine assessments</td>
<td>(e.g. assessment criteria (expectations) and evidence such as portfolios, tests, etc.)</td>
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<tr>
<td>Plan learning experiences/activities</td>
<td>How to actively engage learners? (e.g. projects, field study, centers, etc.)</td>
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Figure 1 Stages in 'End in Mind' Design Related to Assessment/Evaluation

Assessment Language and Effective Practices

Assessment and evaluation, as an integral part of teaching and learning, has "language" that is not always consistent but needs to be understood conceptually in order to improve one's practice. Some key terms and concepts are defined operationally for this practical guide.

Learning Outcomes - what specific knowledge, skills or attitudes will students achieve during or at the end of a course or lesson

Assessment - systematic gathering of relevant information/data by a variety of strategies such as anecdotal observations, papers, tests, portfolios, journals, conferences

Formative Assessment (for learning) - relevant information or feedback (e.g. corrections, self-assessment, criteria, verbal and non-verbal communication) for both students and teachers on student/teacher performance. This information can assist both teachers and learners in terms of supporting learning and informing future instruction.

Summative assessment (of learning) often called evaluation - attempting to make valid (accurate) and reliable (consistent) judgments (valuing) based on assessment data/information/evidence. These judgments relate should relate directly to learning outcomes.

Reporting - systematic presentation or communication of student learning through the assessment and evaluation process. This reporting can be formal (e.g. graded assignments, rubrics, or informal (e.g. verbal or written notes, class work feedback).

Assessment/Teaching & Learning Cycle as Effective Practice

Many educators believe that their individual teaching and learning styles affect how they plan, teach and assess student learning. For many the cycle is not necessarily a linear process as the Wiggins (1998) "end in mind" model might infer. In order to meet student needs, there are likely adjustments in planning, teaching, and learning experiences. In short, the process is very dynamic. This dynamic nature is illustrated in the assessment/teaching cycle diagrams in Fig. 2 below.

![Diagram of Assessment/Teaching & Learning Cycles](image)

Fig. 2. Assessment/Teaching and Learning Cycle - key questions

Specific Example of Using a Teaching Learning Cycle

A specific practical example of utilizing a teaching and learning cycle is provided by Krynowsky (2010) from his teaching at Vancouver Island University Faculty of Education.
The key concept taught, assessed, and evaluated was unit planning for student teachers. The process, which can be readily adapted for other disciplines, was:

1. Learning outcomes were stated in the course outline (Demonstrate expertise in unit planning for teaching).
2. Students read and analyzed three unit planning models in course reader during class time. Reading could also be done in advance.
3. Criteria for an effective unit plan were developed by students. These criteria were summarized and published by the instructor.
4. Individual students developed and recorded their own unit planning process steps and shared them with a peer group of 3 others (formative feedback).
5. Students, in groups of two, practiced creating draft unit plans in class with guidance and feedback from each other and the instructor. The draft was handed in to the instructor.
6. Instructor provided written feedback on their draft unit plans according to the criteria previously developed (formative and summative).
7. Final exam (celebration of learning) – students were asked to produce a unit plan overview (summative) and were evaluated on the previously developed and communicated specific criteria for a unit.

A few general guiding principles for effective assessment and evaluation Cooper (2007), edited by Kynowski, summarized some of the principles that could guide your own assessment and evaluation practices.

- Assessment serves different purposes at different times: it may be used to find out what students already know and can do; it may be used to help students improve their learning; or it may be used to let students know how much they have learned.
- Assessment must be balanced, including oral (say), specific performance or skill (do) and/or written tasks (write).
- Assessment and instruction are inseparable because effective assessment informs both teaching and learning.
- For assessment to be helpful to students, it must inform them in words, not numerical scores or letter grades, what they have done well, what they have done poorly, and what they need to do next in order to improve.

- Assessment is a collaborative process that is most effective when it involves self, peer, and teacher assessment.
- Grading and reporting student achievement is a caring, sensitive process that requires teachers' professional judgment based on evidence.

Evaluation should:

- Be based on specific assessment data and related to outcomes, standards, etc.
- Be valid (accurate) and reliable (consistent) and supported by evidence.
- Be reportable in both formative and summative ways.
- Not be used as reward or punishment.

The University of Waterloo Center for Teaching Excellence provides an excellent synthesis of practical suggestions for assessing and evaluating learning:

- Assignments - designing a checklist
- Assignment design - sequencing
- Effective communication of assignment tasks
- Types of assignments and tests
- Integrating online assignments

2E. What are some more specifics on assessment and evaluation tools, techniques, and strategies?

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There are many possibilities for ways to assess and evaluate learning at the postsecondary level. The following section will provide some general ideas and advice as well as specific tools and possibilities.

The University of Waterloo Center for Teaching Excellence for has some specific advice on assessment and evaluation of students. This advice includes:

- Fast and calculable grading
- Managing the paper load
- Integrating online assignments
- Rubrics: useful assessment tools
Overview of Strategies for Teaching and Learning (source unknown)

Professional educators have access to a wide range of teaching methods and strategies to facilitate student learning. Here are a few examples:

- **Argument**: an attempt to establish belief through a course of reasoning
- **Book review**: an oral or written evaluation of material, usually dealing with its style, format, content, literary or informational value
- **Brainstorming**: technique for the stimulation of creative thinking in the development of new ideas consists of individual or small group activity in which a deliberate attempt is made to creatively identify possible approaches and solutions to a given problem. The group participates in spontaneous and unrestrained discussion, followed by evaluative dialogue
- **Case study**: presentation, sometimes involving role-playing, of a true or synthesized situation to develop the judgment of students who evolve and propose possible solutions, either individually or in groups
- **Center or station**: relevant activities that can be done independently based on a theme, subject area, enrichment or adaptation of content
- **Collection**: student or teacher sharing of interests/artifacts
- **Computer base**: Internet, research CD Roms, research skills, networking, communicating
- **Cooperative learning**: a variety of strategies designed to involve students in group process and critical thought
- **Creative writing**: original prose or poetry created with general guidelines
- **Debate**: formal presentation of arguments on both sides of a question before an audience in accordance with standardized procedure
- **Demonstration**: the procedure of doing something in the presence of others either as a means of showing them how to do it themselves, or in order to illustrate a principle or concept
- **Discovery** (also called guided discovery or inquiry): process of gaining knowledge through inquiry or research or experimentation
- **Discussion**: activity in which people talk together in order to share information about a topic or problem or to seek answers to a problem based on available evidence
- **Display** (often called poster): exhibit or showing of articles, research or synthesis of materials
- **Document study**: usually of original, which may provide evidence or information

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2F. What are the possibilities for teaching strategies/ideas/activities?

"Teaching is a process of becoming that continues throughout life, never completely achieved, never completely denied. This is the challenge and the fun of being a teacher—there is no ultimate end to the process."

- Frances Mayesfort

One of the greatest joys of being an educator is that it is a dynamic and exciting profession that allows for personal and professional growth. The art of teaching and learning entails that there are ways use what has worked before, find and try something new, or adapt according to the needs of your students as you go. The key to having growth as a professional educator, is to plan and organize the key concepts and content with a variety of teaching approaches that make teaching and learning compelling for the variety of learning styles that are inevitable in every class you teach.

Professional educators have a wide range of teaching methods and strategies at their disposal to facilitate student learning. The goal of presenting these strategies is not to overwhelm, but to inspire teachers with the possibilities. Using a variety of these strategies allows us to be creative in how we organize and teach our courses. The possibilities are exciting. A brief summary description should help in planning your instruction.
under the auspices of a public

- Provision of a regular, formal, and structured platform for

- Facilitation of learning and development opportunities for students and professionals

- Promotion of networking and collaboration among participants

- Encouragement of interdisciplinary research and innovation

- Fostering of a supportive and inclusive learning environment

- Provision of resources and support for student and professional development

- Enhancement of the reputation and influence of the organization

- Strengthening of partnerships and collaborations with other organizations and institutions

- Advancement of the field through the sharing of knowledge and best practices
Good teaching is the essence of an effective presenter.

2. How can I be an effective presenter?

The development of educational experiences for students should be based on an understanding of learning theories and principles. Effective teaching involves designing learning experiences that engage students and facilitate their understanding of the material. This can be achieved through a variety of methods, including lectures, discussions, and hands-on activities. Regular practice and feedback are essential in refining teaching skills.

Reflect on your teaching activities:

- Reflect on your teaching strategies.
- Consider what worked and what didn’t.
- Share your experiences with colleagues.

Effective teachers are those who can adapt to the needs of their students and create a positive learning environment. They are also those who are committed to continuous improvement and are open to feedback and suggestions for improvement. Effective teaching is not just about conveying information but also about facilitating meaningful learning experiences for students.

In conclusion, effective teaching is a multifaceted process that requires dedication, creativity, and a deep understanding of the learning process. By focusing on these principles and continuously refining their teaching practices, educators can create dynamic and engaging learning experiences for their students.
you or possibly the students, if the content is about a physical education and nutrition share a personal example of food issues and lifestyle have affected their lives. Relevance is a huge motivator.

- Focus on clarity of explanations by creating sense of order for key concepts, using visuals of key ideas, using general statements followed up with specific and memorable examples, move from simple to complex - the familiar to the unfamiliar, have students repeat key ideas or points or directions for activities.

- Having an occasional laugh at yourself and your presentation faux pas helps maintain a relaxed and humorous environment. Occasional jokes may work for some but natural storytelling within the disciplinary context has considerable impact. The power of storytelling is elaborated upon by Green (2007) in the University of Manitoba faculty handbook.

The University of Waterloo Center for Teaching Excellence provides a few more specific suggestions for effective presentations. These include:

- Lecturing effectively in the university classroom
- Preparing your presentation
- Adapting material for classroom delivery
- Polishing your delivery skills
- Designing and using visual aids

Video clip ideas are located at the Toastmasters effective presentations site and effective presenter skills.

"The difference between knowing and teaching is communication."  
- Bernie Krynowsky

21. How can I get students more actively engaged in lesson presentations?

"The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires."  
- William Ward

The importance of active engagement in teaching and learning is obvious but not always easy to implement because of time, large class size, and curriculum constraints. Gross Davis (1993), with editing by Krynowsky (2010), provided some very specific ideas on how students might be more actively engaged during lessons.

- Use small groups to discuss and or summarize key concepts related to the content. Other ideas are to come up with a solution to a problem, identify reasons for an event, record ideas on paper for posting. Students can learn from each other and share their learning with others in an entire class debrief session.

- Ask for advance preparations of content or ideas that are a focus for the presentation. For example: fist key ideas for a reading, do a problem set, be prepared to explain specific concepts in this class.

- Ask students to brainstorm ideas or questions or problems related to the topic or content. Record these ideas or questions. These ideas can be categorized. Come back to these at the end of class to address the salient points or questions.

- Break up lesson presentations with "pause and reflect" moments. Give students in groups or individually time to: solve a problem, summarize key ideas so far, take a little quiz on the topic, do a class vote or survey on an issue.

- Post problems or thoughts of the day. Before you begin a lesson have students ask a question or create a problem related to the topic of the day or the course. These problems can be posted or listed and then considered as a part of a closure of the lesson.

- Have an ask the Instructor question time. Infuse the lesson by having students submit one question about the topic on a piece of paper and pass it back to the instructor who will answer 2 or 3 of them as part of the lesson.

- Organize a debate or role play. Consider Important issues or concept (NOTE: You need to teach the process of how debate or role plays works). Have students take sides and represent points of view. One example is to reenact the trial of Galileo where a variety of points of view are assigned to students who act out a point of view.
• Invite guest speakers to class with specific or more general focus. Have students prepare questions for the speaker in advance and pass them on to the speaker. This increases relevance and attention to the event.

• Be aware of non verbal cues from students. Reading these is both an art and a science. So much to be learned. Scan the room, Eye contact is an amazing tool. Check your perceptions. For example, I think I see break in your eyes..., or I sense some confusion or agreement! - let us check with some of you...

The University of Waterloo teacher center provides more specific suggestions for active engagement of learners.

• Active learning activities
• Activities for large classes
• Varying your teaching activities

2J. What are some specific descriptions of effective teaching and learning strategies?

| “You can have 20 years of teaching experience, or in rare cases one year 20 times.” |
| - Unknown |

There are many possibilities for how teaching and learning can and should be engaging. There are some “tried and true” strategies that will be described in enough detail for you to refine and or try.

Selected Post Secondary Teaching Strategy Suggestions

• a) Direct Instruction
• b) Large Group Instruction/Lecturing
• c) Questioning, Discussion/Debate, and Critical Thinking
• d) Lecture Alternatives (role play, case studies, field study)
• e) Using Technology Effectively
• f) Self-Directed Learning
• g) Group/Cooperative Learning
• h) Special Situations (seminars and laboratory teaching)

o) Direct Instruction

"The mere imparting of information is not education. Above all things, the effort must result in helping a person think and do for himself/herself."

- Carter G. Woodson

Direct Instruction, which can be given other labels with “lecturing” probably the most common. Direct teaching is the foundation for effective teaching. It involves the teacher directing the flow of ideas, information providing meaningful practice opportunities, deciding on learning activities and accountability, and possibly some feedback to students on their learning. There are many models and variations of the model. Madeline Hunter (1975) has done considerable consolidation of the main knowledge skills and attitudes to be an effective teacher utilizing a “direct” method.

Engaging Students with Direct Instruction

Gross Davis (1993), with considerable editing by Krynowski (2010), provided some key guidelines for effective teaching and learning in a directed way. Some of these, with a chronological lesson flow in mind included:

• Need to know your content area - content knowledge cannot be undervalued. If you are knowledgeable and skilled you have much more to share and likely can be more confident and interesting in presentations and learning activities. Finding and utilizing “cool” resources are part of the joy of teaching!

• Do not plan to “lecture” or talk for the majority of class time keep students active. Meaningful student attention span is between 10-15 minutes for listening to anyone - no matter how engaging! You need to have variety in terms of questions, student interactions, supporting media, and student activities. Avoid scripting or following detailed notes.

• Have a catchy title or theme or challenge of the day as a title for the lesson that you can display on an overhead, PowerPoint, or chart as students enter. Visuals work well for many learners.

• Need to share motivation and outcomes - Students may or may not be intrinsically motivated by your course or the topic of the day. Answering the question of why are we learning this stuff? might be a part of every lesson you teach. Students like to know what the learning outcomes are, the application possibilities for the knowledge skills or attitudes to be learned. Be prepared, compelling, and enthusiastic in this presentation.

• Share the connections between lessons. It is important for students to know the connections between this lesson and other lessons. Tell or show them a visual of key
The real challenge in science education is not covering the material with the teacher. Instead, it is providing a meaningful learning experience that engages students and allows them to explore and understand the concepts. This involves creating opportunities for active learning, encouraging critical thinking, and fostering a love for inquiry.

To achieve these goals, educators should focus on:

1. **Inquiry-Based Learning**: Encourage students to ask questions, make observations, and design experiments to find answers.
2. **Collaborative Learning**: Foster a classroom environment where students work together, share ideas, and learn from each other.
3. **Technology Integration**: Utilize digital tools and resources to enhance student engagement and facilitate learning.
4. **Personalized Learning**: Recognize that each student has a unique learning style and pace, and adapt instruction to meet individual needs.
5. **Assessment for Learning**: Use assessments not just as a means of evaluation, but as tools for ongoing feedback and improvement.

By implementing these strategies, educators can create a more dynamic and effective science classroom that prepares students for a world that is increasingly science-driven.
Discussion:

Class discussions and engagements allow for the exchange of ideas, information, and opinions as part of the teaching and learning process. Gross Davis (1993) provided a few suggestions for how discussions in class could better contribute to a course. These contributions can be in the areas of organizing key concepts, formulating arguments, testing ideas, problem solving, and evaluating evidence in critical thinking.

Two outstanding sites, Columbia and Vanderbil University, provide comprehensive and practical ideas for class discussions:
- Planning and implementing effective class discussions
- Creating an environment for good discussions
- Discussions in larger classes

Other Hints for Effective Discussions:

You may need to teach some of the skills and remind students of appropriate protocol for discussion in class. Some of these might be:

- **What are the ground rules for discussions?** (e.g. hands or no hands, right to pass, listening expected, time limits for answers, not criticizing the person, encouraging debates and questioning of ideas... “Listen carefully to ideas, especially if you disagree; everyone is encouraged to participate and this is a safe place to express ideas.”

- **Prepare students for discussions.** For example, define terms of reference, identify main goals for discussion, have key points summarized in some way.

- **Do not overuse discussions** and keep them focused. Consider using student questions to generate an agenda for discussions.

- **Use opening questions, critical incidents, controversy, and brainstorming ideas to open the presenting with an energy, anticipation, and excitement.**

- **Have students divide into smaller groups to discuss a question or concept. Debrief and record key student ideas.**

- **Guide the discussion by taking a few notes, scanning the room and monitoring for off task behaviors, listing to student ideas and summarizing key points, be ready to manage time and change focus at the right time, bring closure to the discussion. Students can summarize major points and ask some new questions.**

- **Student participation in discussion is encouraged by students knowing names, having an effective seating arrangement such as a small groups facing or a circle for large group debrief, limiting your own comments and biases, asking every student to make at least one contribution to the group discussion, provide guidelines for how many times or how long a person has the discussion floor.**

- **Evaluate the time spent in discussion and record some key points that were generalized or made. Solicit reviews of discussion quality from a few students.**

The University of Waterloo Center for Teaching Excellence provides more specific hints for:

- Promoting effective classroom participation
- Facilitating effective discussions

Questioning:

Gross Davis (1993) proved some insight into skills needed to provide engagement central to effective teaching and learning. Suggestions for effective questioning, as part of most lessons and discussion, were outlined.

- Identify the key question in advance - Have a sequence that allows for a flow of questions. For example, if the topic was causes of war, the sequential building up of questions might begin: “What were some of the main issues that contributed to the conflicts?” “What were some of the processes of these conflicts?” “What are some ideas that might reduce the conflicts that have occurred in history?”

- Have a variety in the types and levels of questions. They might be:
  - Factual - what are 2 main types of...
  - Clarification - what did you mean by...
  - Elaboration - what are some other examples of...
  - Justification - what are your reasons for...
  - Hypothetical - suppose there were no symptoms how would you...
  - Redirected question - some ideas presented - does anyone have others?
  - Summary - so what are some of the key ideas that...

Blooms taxonomy of thinking skills (1956) from lower to higher level thinking is a classic model for having variety in questioning for both teaching and assessment of learning.

- Knowledge (facts) - list 3 types of petroleum products...
- Comprehension (meaning of knowledge) - give examples of how petroleum products are used in industry...
- Application (using knowledge in context) - how does the law of supply and demand affect cost of petroleum products?
- Analysis (explaining relationships, breaking down concepts) - does the law of supply and demand apply for gasoline pricing?
- Syntheses (combining key ideas to make a whole) - how could a government stimulus package affect small businesses in the petroleum industry sector?
- Evaluation (making judgments based on criteria or reasoning) - Is it a good idea to have a government stimulus package to support a failing petroleum industry?
The University of Waterloo Center for Teaching Excellence provides further insight into the types of questions you can ask.

- **Asking questions - different types**

  **Questioning Hints:**

  In general effective questioning for student engagement and thinking should:

  - Have more why, how, suppose, justify, defend, and elaborate and less of what, when, who, and which questions.
  - Use wait time and ask students for their response to peer answers use probe further to once ideas and student engagement.
  - Avoid the temptation of asking too many questions at once. Focus the discussion around one question, idea, or theme at a time.
  - Avoid yes/no questioning which stifles creative energy and thinking. The best questions usually do not have one single answer.
  - Avoid leading/rhetorical questions such as "Don't you think that global warming is the greatest threat to our planet as we know it?"
  - Treat most answers as plausible but need clarifications, redirections, or change in focus. This plausibility promotes a "safe" learning environment and encourages participation.
  - Ask questions with a clear focus such as "How can we make a positive effect on the community we live in?" compared to "So what do you think about our community?"
  - Wait time, wait time, wait time - silence and thought time is underutilized. Probe, rephrase, ask students to try an answer out on their neighbor if no response is forthcoming.
  - Search for consensus or feedback on student answers. For example you can ask learners to validate, comment on, analyze, or provide an alternative answer. This technique encourages learners to engage with each other rather than only the instructor.
  - Avoid questions like "Does everyone understand?" or "Do you have any questions?" These questions are a dead end with no purpose. Be more specific!
  - Move around the room to interact with students as they engage in answering and discussion. Listen to the student and make eye contact with them and others in the class. Positive non-verbal (eye contact, smile, physical proximity) are crucial in establishing a positive and safe learning environment.
  - Thank students for volunteering their answer. Do not overpraise responses or it discourages others offering ideas or overcriticize as it also scares away eager participants. Try to find what might be partially valid in a students response and have others build on it.
  - Make sure question responses are heard. You can ask a nearby peer to repeat the question if the student is too quiet. Avoid repeating or paraphrasing every student question as this may discourage listening to the initial question.
  - If time is wasted and or the question is not appropriate, tell the questioner you will be pleased to answer the question at a break or after class.

- If you do not know the answer, you can ask others in the class to help, suggest resources that might help, make note of the question and tell them you will get back to them the next lesson or via e-mail.
- If you have a question and it gets repeated, you can ask the questioner to figure it out with some hints provided by you or ask another student to answer.
- When a student responds, there are many possible directions such as asking for clarification or elaboration, asking for another point of view, acknowledging the originality and creativity of the response, having others restate the response.

The University of Waterloo Center for Teaching Excellence provides a synthesis of practical questioning hints:

- **Asking questions - different types**
- **Question Strategies**

  Davis (2007), in the University of Manitoba handbook, also provides suggestions for effective questioning as part of the role of discussion in a class setting.

**Critical Thinking:**

One of the major goals and outcomes of a past secondary education is to model, promote, and practice the knowledge, skills, and attitudes of a critical thinker. Paul and Elder (2004) define a critical thinker as one who:

- Raises vital questions and problems clearly
- Gathers and evaluates relevant information and ideas
- Comes to well reasoned conclusions based on evidence
- Thinks openly with consideration of assumptions and implication
- Communicates ideas and analysis in clear and effective manner

Critical thinking entails a willingness and ability to analyze ideas, studies, and claims and come up with well reasoned arguments and judgments on their value and validity. Critical thinking is not only a crucial life skill but the essence of a lifelong learner and contributing member of any society.

There are many ways to define and teach for critical thinking. The nature of the discipline and or content helps the educator create the opportunities for critical analysis. For example, in the critical analysis of the claim that "9 out of 10 dentists recommend Brand X of toothpaste," there should be numerous questions that evolve regarding the claim such as: "How many groups of dentist were surveyed?" "Were the dentists paid and by whom?" "Where are the specific results of the survey?" "Who were the dentists?" and the list can go on. Critical thinking activities and learning can be, and the author would argue should be, part of all post secondary courses and programmes. The concept of critical thinking at post secondary is worthy of an entire book, however, this guide will focus on some practical ideas to engage students in meaningful and compelling critical thinking activities.

**Other Strategies for Teaching Critical Thinking:**
opportunity for multiple small groups

- Be flexible with the room layout to accommodate various group sizes.
- Provide clear instructions and guidelines for group activities.

Each group should be given a set of materials and a specific task to complete.

For example, one group can focus on a scientific experiment, while another group can work on a creative writing project.

B) What can you do to build on the course content?

- Encourage students to apply the concepts learned in the course to real-world challenges.
- Facilitate group discussions to foster critical thinking and problem-solving skills.

C) What are some of the challenges students face when trying to connect the course content to the real world?

- Lack of practical experiences in the field.
- Difficulty in relating theoretical concepts to real-world applications.

D) What can you do to help students overcome these challenges?

- Provide case studies and real-world examples to illustrate course concepts.
- Encourage peer learning through group projects and discussions.

E) What are the benefits of group work in educational settings?

- Enhanced critical thinking and problem-solving skills.
- Improved communication and collaboration among students.

F) How can group work be used to support diverse learning styles?

- Assign group projects that cater to different learning styles (e.g., visual, auditory, kinesthetic).
- Facilitate discussions that encourage all students to participate.

G) What are some common mistakes made in group work?

- Unequal participation among group members.
- Difficulty in managing group dynamics.

H) How can these mistakes be avoided?

- Establish clear expectations and roles for group members.
- Provide regular feedback to groups to address any issues.

I) What are some effective strategies for promoting group cohesion?

- Encourage students to reflect on group dynamics and strategies for improvement.
- Facilitate team-building activities to foster positive relationships.

J) What are some common challenges faced by teachers in facilitating group work?

- Time management and scheduling.
- Balancing student expectations and management.

K) How can these challenges be addressed?

- Develop a clear and structured plan for group work.
- Provide ongoing support and guidance to groups.

L) What are some strategies for evaluating group work?

- Rubrics and criteria for assessing group projects.
- Peer evaluation and self-assessment.

M) What are some common misconceptions about group work?

- Group work is always more efficient than individual work.
- Group work leads to reduced accountability.

N) How can these misconceptions be addressed?

- Emphasize the importance of individual responsibility within group work.
- Highlight the benefits of collaborative learning.

O) What are some strategies for facilitating group work in a virtual setting?

- Use video conferencing tools for group discussions.
- Provide structured guidelines and resources for group projects.

P) What are some common concerns about group work?

- Unequal participation and distribution of tasks.
- Difficulty in managing group dynamics.

Q) How can these concerns be addressed?

- Establish clear expectations and roles for group members.
- Facilitate regular check-ins to address any issues.

R) What are some potential benefits of group work?

- Improved critical thinking and problem-solving skills.
- Enhanced communication and collaboration among students.

S) What are some potential drawbacks of group work?

- Unequal participation and distribution of tasks.
- Difficulty in managing group dynamics.

T) How can these drawbacks be addressed?

- Establish clear expectations and roles for group members.
- Facilitate regular check-ins to address any issues.

U) What are some strategies for facilitating group work in a virtual setting?

- Use video conferencing tools for group discussions.
- Provide structured guidelines and resources for group projects.

V) What are some common concerns about group work?

- Unequal participation and distribution of tasks.
- Difficulty in managing group dynamics.

W) How can these concerns be addressed?

- Establish clear expectations and roles for group members.
- Facilitate regular check-ins to address any issues.

X) What are some potential benefits of group work?

- Improved critical thinking and problem-solving skills.
- Enhanced communication and collaboration among students.

Y) What are some potential drawbacks of group work?

- Unequal participation and distribution of tasks.
- Difficulty in managing group dynamics.

Z) How can these drawbacks be addressed?

- Establish clear expectations and roles for group members.
- Facilitate regular check-ins to address any issues.
- Make the roles and situations meaningful and relevant. The situations might have elements of choice, decision, conflict, moral issues, social problems, current media. A classic example might be the organization of town hall meeting to decide on the fate of power plant proposal for the community.

- Brief the participants and observers. Be clear on roles and structure. Be sure everyone has something to do or record, especially observers.

- There is no need to go all the way with the role situation. Once there has been the role experience and a few high points, the experience, will be able to be debriefed and pursued further as the course progresses. You need to plan for follow up questions and activities.

A concise overview of more specifics that will help in organizing a role play is found at the Carlton University site.

Case Studies:

Case studies, which entail the presentations of scenarios or situations for critical analysis, have been used extensively in the teaching of law, medicine and business. If one invests time and energy into the case study potential, there are probably opportunities a variety of disciplines for this strategy. For example, there may be a real life problem presented in a teaching programme where there has been a formal complaint about standardized testing in the school system. For this case, students would need to learn relevant background, sequence of events, and other facts in the case. The exploration of alternatives, choices, decisions and critical analysis provides a wealth of knowledge, skills and attitudes to be learned.

Vanderbilt research center presents an effective overview of sources for learning more about using case studies.

Gross Davis (1993) provides some suggestions for effective case study:

- Chose the case carefully. Search the internet for sources needs to be relevant and compelling with challenge and choices. You need to have the case described carefully. Some examples for cases are form the media, journals, your experiences, experiences of practitioners in the field. Students need to be familiar with and prepare for the case study in advance. Engaging ideas for case study include: real stories, thought provoking issues, no clear cut answer but demands some point of view or choice.

- Provide guidance on what they are looking for in the cases. For example, events, decisions that were or were not made, key players, possible solutions to the challenges. Provide a structure for how the case will be explored (e.g. debate, role play, discussion, presentation).

- Facilitate and ask questions. Your role is to probe, have students interact and justify positions, and come up with possible alternatives or solutions.

- Students can summarize their learning as a result of the case study in journals, notes, assignments.

e) Using Technology Effectively

There are many technology related tools that can make your teaching and learning more or less effective. Chickering and Ehrmann (1996) provided seven key principles for utilizing technology for "good practice:"

1. Encourages contact between student and faculty
2. Develops sharing and cooperation among students
3. Encourages active learning
4. Gives prompt feedback
5. Emphasizes time on task
6. Communicates high expectations
7. Respects diverse talents and ways of learning

Siemens (2007) in the University of Manitoba handbook, provided an excellent overview of the issues challenges and possible practical uses of technology in your own teaching.

Using technology is not a gimmick but a tool. If you use it have a clear purpose and appropriate use. For example computer aided presentations have many benefits in terms of meeting student expectations, are easy to change and adapt, can be shared electronically, can incorporate graphics and music, and have access to coast Internet connections. Race (2001) offered suggestions for more effective computer aided instruction.

- Avoid "death by bullet point". Students have been known to thank an instructor for not having power points.

- Really check out the hard ware! Have a plan B. Very few things frustrate as much as technology that does not work properly. Having a few key back up overheads is a great stress reliever.

- Use special effects sparingly. Slides do not and probably should not be the same but to many floaters and singers can create too many distract actions

- Consider resolution from computer to display screen is great. Be aware of room lighting.

- Do not overload any one slide with information. No more than 15 words per slide.

- Avoid reading the slides. These are post secondary students. Try to have interactive content. For example probing questions, a significant challenge, an interesting or proactive quote as a topic starter.

- Be careful with colour choices. Use dark colours for main print - black, dark green, and blue - and light colours for background.
The course teaches independent project concepts to be used in most every job.

- Self-decision making - ordered to learn
- Self-decision making - self-directed
- Self-decision making - out of pocket

Suggestions for self-directed learning: These include:
- The majority of project centers for teaching excellence has some specific tools and
  equipment available to students for planning the kind of learning outcomes

Traditionally, assignments have been a vehicle for self-directed or independent learning.

- Thomas L. Compton

"A good teacher is one who makes..."

(1) Self-directed/Independent Learning

- Computer Basics for the Elderly
- Effective Accessory Material
- Appropriate Accessory Material
- Focus on the Instruction Theme of "Mastery"
- Focus on the Instruction Theme of "Learning"
- Focus on the Instruction Theme of "Development"
- Focus on the Instruction Theme of "Practice"
- Focus on the Instruction Theme of "Improvement"
- Focus on the Instruction Theme of "Participation"
Need to teach or review some of the skills for group work. Assuming students know how to do cooperative work can lead to challenges. The University of Waterloo site has specific suggestions for students that you can teach in:
  - Being an effective group member
  - Handling problems in group work
  - Group decision making

Consider written contracts which might describe responsibilities, obligations and deadlines. There is power in written contracts compared to the aural "I thought you said..."

Consider how groups will be formed. Alternatives include self selection, random, and instructor selected. These election methods have their own benefits and risks. In general, group sizes of 3-4 work best according to Gross and Davis (1993).

Have periodic check ins and progress reports from groups on their progress or challenges.

Provide a structure for the group work or project. Students need to know about grades, deadlines, what each member does, accountability, and reporting. The quality of how you organize the project has plenty to do with its success.

Have a system for handling student concerns. Prevention in organization and communication is much better than handling problems! The University of Waterloo provides suggestions for handling problems in group work.

h) Special Situations

Seminars:

A seminar teaching and learning has a variety of ways to be organized. The main thread in this approach is smaller group with a focus on questioning, discussion, debate, and problem solving. Often part of the seminar involves the presentation of some information by the professor or students.

Queens University has a site that summarizes some key ideas for effective seminars along with some links that add more depth to using the approach.

Laboratory Teaching:

"It is worth remembering that effective laboratory instruction entails using principles of effective teaching and learning presented in this guide."

- Bernie Kynowsky

Many post secondary institutions have a variety of laboratory teaching especially in science and technology related fields. This strategy is invaluable and necessary for making connections between the theory of constructs and their exploration, validation, modification, rejection. The focus is mostly "hands on" with a variety of skills and procedures that are part of the education of many students, scholars, and professionals.

Some of the common disciplines that utilize the laboratory setting include physical sciences, social sciences such as geography and psychology, medicine, engineering, earth sciences, and life sciences. The list of applications is considerable and therefore deserves some attention in this guide.

One of the challenges in laboratory teaching is the linkage of knowledge skills and desired attitudes to the coursework. If the laboratory section of the course is taught by another individual, clear and regular communication is essential so that the possible disconnect can be reduced.

The University of Virginia has created a check list of ideas to assist laboratory teachers in the areas of preparation, implementation, and effective presentation.

The Faculty of Medicine and Dentistry of the University of New Jersey has compiled 16 links that provide a comprehensive examination of many possibilities for effective lab teaching.

2K. What are some other teaching hints and ideas?

"Teaching hints and suggestions are easy to provide. It is the determination and willingness to attempt some of them that will inevitably make a positive difference in teaching and learning."

- Bernie Kynowsky

There are many sources of ideas for you to "linker" or adapt your planning, teaching, and student assessment. Some of the sources are your colleagues, professional magazines, current disciplinary knowledge, the Internet, books, and this guide. Changing is contingent upon your desire to make it better for your students. This section of the guide will loosely organize a collection of ideas that may work for you and your students. Please feel free to add to this list by e-mailing Bernie Kynowsky.

Nilson (2003), in "Teaching at its Best" and Gross Davis (1993) in "Tools for Teaching" provided summaries of ideas that both validate and summarize many ideas in this guide.

Student Motivation and Positive Relationships

- Deliver your presentations with enthusiasm and energy. Strive for vocal variety and constant eye contact. Vary your speaking pace, and add dramatic pauses after
major points. Gesture and move around the class. Be expressive. To your students, be they right or wrong, your dynamic presence signifies your passion and enthusiasm which can be contagious.

- **Make the course personal.** Give reasons why you are so interested in the material and make it relevant to your students’ concerns. Show how the knowledge skills and attitudes learned are important to them or society. You can become a role model for student interest and involvement as a lifelong learner.

- **Get to know your students.** Ask them about their majors, interests, and backgrounds. This information will help you tailor the material to their concerns. Your personal interest in them may inspire their personal loyalty to you. Talk to your students about what excites and interests them. In the least if you do not inspire, you have made a personal connection!

- **Foster good lines of communication in both directions.** Convey your course expectations in clear and systematic way, both verbally and in writing. Be willing and open to suggestions. If students perceive you are willing to listen and change, they often forgive other shortcomings.

- **Provide frequent early, positive, and specific feedback on student performance.** Students need or should know how they are doing. Offering extra assistance is a great remediation and public relations strategy.

- **Use student ideas and contributions and build upon them.** Use questioning, probing, and sharing of ideas as a way to relate content and concepts.

- **Use humour where appropriate.** A joke or humorous anecdote lightens the mood and can enhance learning. A positive, open, and occasionally fun learning environment equals great faculty reviews!

- **Active learning with a variety of activities is essential.** Discussing, questioning, brainstorming, recording, sharing ideas, manipulating concrete material, analyzing ideas with critical thinking. No more than 10 minutes of lecturing in any stretch.

- **In summary, student motivation is related to instructor enthusiasm, perceived relevance of material, clear organization and expectations, active involvement of students, variety in presentations, positive rapport within the group, use of concrete and easy to follow examples.**

**Course Organization and Delivery**

- **Design, structure, and develop your course as if you were a student in your own class.** Explain its organization and your rationale for the content. In general, most students respond well to reasons versus none.

- **Give students some voice in determining what the course will uncover.** If students perceive that they have input, they will feel more invested and responsible for their learning. Try a needs survey or pre-instructional task to find out what they know and want to learn about.

- **Be clear about expectations and course requirements.** Provide opportunities for clarifying and questions. Assignments examples make instructor life much easier.

- **Plan for variety - active student engagement with students listening, writing, sharing, designing, and problem solving. Talk less and have students do more!**

- **Appeal to extrinsic motivators and make relevance explicit.** Inform students about what jobs and careers are available in your discipline and how your course content prepares students for these opportunities.

**Effective Teaching**

- **Explain the how and why for the lesson/course structure.** Many of us respond well to sharing of strategies and rationales.

- **Use examples and realistic case studies when possible.** Many students learn inductively and relate well to relevant and real examples.

- **Provide opportunities for discovery learning.** There can be a great satisfaction and motivation by reasoning through a problem or concept versus being told.

- **Use a variety of student-active teaching formats and methods for the diversity of learning styles that are inevitable.** Discussion, debates, press conferences, symposia, role playing, simulations, problem-based learning, and the case method, problem solving, and writing exercises. These activities directly engage students in the material and give them opportunities to achieve a level of mastery for achievement’s sake.

- **Teach with the arts to stir student emotion.** This is a standard culture-learning strategy in the foreign languages, but it has for broader application. In math courses, show the utility of concepts and equations in visual design and musical composition. In history, anthropology, literature, and comparative politics courses, show students the art of the age or place.

- **Make the material accessible.** Explain it in common language avoiding jargon and big words which often hide meaning.

**Assignments and Tests**

- **Stress conceptual understanding above rote memorization.** While students must acquire some facts to master the basics of any discipline, facts are only tools with which to construct broader concepts.

- **Set realistic performance goals and help students achieve them by encouraging students with your genuine enthusiasm and your own goal setting.**
3. How can I improve my teaching and learning? - Reflective Practice

Chapter 3

and Personal Growth

Thoughts and Ideas for Self-Reflection

- Understand the unique learning environment.
- Reflect on your own teaching.

The University of Texas Teaching Center provides some specific ideas for enhancing teaching and learning. Some of the suggestions include:

- Conceptual framework for how and why we might consider reflective practice.
- In the University of Maryland Faculty Handbook, M. Levine (2007) provides an effective.

- Reflective Teaching.
- Blended Learning.
- Other Models.

1. Reflect on your teaching. How do your teaching experiences influence student learning?
2. Reflect on your teaching. How do your teaching experiences influence student learning?
3. Reflect on your teaching. How do your teaching experiences influence student learning?

Feedback on Teaching and Learning:

- Professional development.
- Student feedback.
- Peer feedback.
- Self-reflection.

According to the Office of Teaching and Learning, feedback is critical for improvement in teaching and learning. Effective feedback can help students improve their learning and teaching practices. The feedback received can also help teachers improve their teaching methods and strategies.

- What have you learned? How has this process helped you improve your teaching?
- What have you learned? How has this process helped you improve your teaching?
- What have you learned? How has this process helped you improve your teaching?

- Consider the feedback you've received and apply it to the next course you teach. How has this feedback influenced your teaching?
3B. How can I get useful feedback from my students?

"Much I have learned from my teachers and colleagues, but most from my students."
- Talmud

Getting Results: Gaining Insight on Your Teaching

With all the focus on student assessment, instructors sometimes overlook the second major reason to assess learning in the classroom—to gain insight on teaching. Getting a read on which teaching methods are most successful becomes easier after many years in the classroom—but even novice instructors can begin to assess the effectiveness of their teaching with the use of some simple evaluation tools. In this section, you'll learn how to evaluate your teaching through classroom research, peer review, and teacher reflection.

The most widely used feedback method is an end of course survey. Most post secondary institutions have some form of after the class evaluation survey. These surveys are often part of formal faculty evaluations. These surveys or variations of them can be useful for an instructor to gather information from students about their own teaching and learning. Some examples of surveys will be found in After Course Student Feedback.

There are many other ways to gather information from students during the term to improve teaching and learning in a more immediate and powerful way. Some ideas for these will be highlighted in Getting Immediate Student Feedback.

Getting Immediate Student Feedback

Gross Davis (1993) provided some practical ideas on getting useful information from students that can assist instructors in improving short and long term teaching. With immediate feedback and some action, it is not too late for the students you are working with to benefit. The feedback can help with selection of teaching methods, knowing what students' needs are, improving clarity and expectations, and possibly adjusting assignments. You need to be clear on what specific information is useful and have a variety of strategies to collect the information. Some of the possible strategies are:

- **Student Feedback Form** with anonymous voluntary feedback at the end of a section of the term. General questions and open response work well with this technique. For example you can ask what is going well for them and why, what suggestions they may have for course content or delivery, and/or what their needs are that need to be addressed. You are best to leave the room and have a student volunteer collect the forms and return them to a department secretary for pickup after.

- **Lesson Questionnaire** at the end of class with 4-6 short answer specific considerations that can be rated or commented on. You can ask about level of difficulty, use of class time, pace of the class, degree of engagement in lesson, and/or specific suggestions for change.

- **Student Focus Group Form** - You or a colleague can conduct an informal feedback session with your students during the concluding 10 minutes of one class. Students can be asked to meet in small groups with a recorder who will summarize suggestions and positive comments from the group. You can have general questions such as:
  - What is working well for you or not?
  - What are the most positive aspects of the course?
  - What suggestions might you have for course improvement?

  A colleague or student can collect and organize the comments or provide them as is.

- **Management Committee Feedback Form** - Establish a student liaison or management committee. You can ask for volunteers or have an appointed/elected group of 2-4 to meet with you periodically outside of class to provide a gauge for how well the content and instruction is working for class members. Students need to know who the liaison committee members are. If teaching multiple sections you can have one delegate from each volunteered, appointed, or elected. Meet with the committee once or twice in the term and acknowledge the meeting results with the rest of the class.

- **Suggestions Boxes** - Have a place for written anonymous suggestions for course content, course comments, questions, student needs, and lesson presentations. You can have a locked box in a convenient location. The back of a classroom or department office are possible locations.

- **Electronic Student Survey** - You can solicit student feedback with an electronic survey such as Zoomarang or SurveyMonkey. This strategy has many positive features such as anonymity, efficiency, ease of use, and statistical analysis. Surveys can be used multiple times or at the end of the course.

- **E-mail or other discussion groups** (blogs, moodle, wiki's) can be useful in responding to facilitating communication and acknowledging student needs and input. Students appreciate a timely response.

- **Individual Student Interviews**. Carefully select students from the class who will provide honest and sincere feedback on how the course is progressing from a student perspective. Summarize the main points of the interview in terms of what is going well and possible changes for both the immediate and future.

- **Closing Course Outcome Review**. Make copies of your course outcome page from your course outline. Ask students to review/evaluate the intended outcomes by rating or commenting on the degree to which the outcome was achieved. This
After the Course/Element Feedback

Suggest ways to use student feedback

Design: In the University of Maryland Department of Teaching and Learning in the University of Maryland, a Learning and Teaching Center.

Learning and Teaching Center promotes and supports the development of innovative, evidence-based teaching practices.


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When these insights are used, they can result in significant increases in student learning.


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Finding a feedback culture to observe and provide feedback can be an exceptional tool to improve teaching and learning.

1. **Collective Feedback Community**: Use feedback to create a collective feedback community. Encourage peers and colleagues to provide feedback on your teaching. This can help you improve your teaching by seeking and receiving feedback from others.

2. **Encourage Student Feedback**: Encourage students to provide feedback on your teaching. This can help you identify areas for improvement and make necessary changes.

3. **Student Feedback Survey**: Use student feedback surveys to gather information about your teaching. This can help you understand how students perceive your teaching and make necessary changes.

Finding feedback from my colleagues and other sources can provide valuable insights into my teaching practices. These insights can help me improve my teaching and better serve my students.

How can I gather feedback from my colleagues and other sources?
- **Plan for the observation** - You need to meet the observer before to determine: previous and future lessons overview, intended lesson outcomes, course goals, approach to be used. Provide a course outline for peer review. Determine what the observer will be looking for (e.g. checklists, rating scales, open-ended comments). Ask for specifics you would like them to collect data on. Data is more powerful than opinion. You might consider focus on: questioning, positioning, organisation and flow of content, engagement of learners, teacher mannerisms, clarity of explanations, or verbalisms.

- **Meet with the observer after the lesson** - Ask them questions about what they experienced. Concrete and specific data makes more of a difference in analysis. Come up with 2 or 3 main areas where strengths were observed and one or two areas where specific improvements might be desirable.

A sample peer lesson review form might provide an effective starting point.

**Video a Lesson**

Watching yourself on video can be very enlightening and effective for self improvement. You need to do this with 'broad strokes' and not focus on the details that do not affect your teaching. You can do an analysis of what you see in terms of how you: dominate discussion, ask and answer questions, deliver content, communicate with mannerisms and eye contact. Gross Davis (1993) offered a few suggestions for viewing. These included: use the media center to do the taping, select a typical lesson and let the students know in advance, view the tape soon after, plan to review the tape with goals in mind, go for the "big picture" of what went well and what specific behaviors/strategies might be changed.

You can analyze specific behaviors such as movement about the room, bias in questioning, types of questions asked (need variety in levels), and teacher talk vs. student talk, verbalism of how you responded.

A video lesson review form might assist in providing clear and specific information.

Information and questions from your students, colleagues and other sources often create challenges and possibilities for change. Gross Davis (1993) provided a few insights into how one might implement changes.

- **Jot down or record your data, ideas, and suggestions for your teaching of lessons or the course.** The attached sample lesson adjustment form may be a useful starting point.

"The dullest pencil exceeds the sharpest memory."

- Unknown

3D. How can I document and record my professional growth and scholarly activity?

"It is good to have an end to journey toward; but it's the journey that matters in the end."

- Ursula Le Guin

Post secondary teachers are often held accountable for their performance in terms of not only teaching but scholarly and community service. Many post secondary institutions have a "race for tenure" system that requires the documentation and organization of professional scholarly activities.

Benbow (2007), in the University of Manitoba faculty handbook, offers some suggestions for preparing a professional portfolio.

The University of Waterloo Center for Teaching excellence provides some excellent guidelines and suggestions for creating a teaching dossier.
3E. What are some inspirational and motivating thoughts and ideas on teaching for long term professional growth?

The profession of post secondary instructor or professor is time honored and important in the lives of future generations and societies. There have been many inspirational ideas regarding the teaching profession. It is fitting that these ideas provide a reminder for how important our work is and how we can continue to grow personally and professionally.

Inspirational Teaching Ideas and Quotes

As a good teacher knows, the methods of instruction and range of material covered are matters of small importance compared with the success in arousing the natural curiosities of students and stimulating their interest in exploring on their own.

- Noam Chomsky

Whoever our students may be, whatever the subject we teach, ultimately we teach who we are.

- Parker Palmer

A good teacher has been defined as one who makes himself/herself progressively unnecessary.

- Thomas J. Harns

Who a teacher is, is more important than what he/she teaches.

- Karl Menninger

The Teacher as Scholar is Important...the Teacher as Person is crucial...the Teacher as Communicator is Indispensable.

- J. Jordan

Watch your thoughts; they become words. Watch your words; they become actions. Watch your actions; they become habits. Watch your habits; they become character. Watch your character; it becomes your destiny.

- Frank Outlaw

To be a teacher in the right sense is to be a learner. Instruction begins when you, the teacher, learn from the learner, put yourself in their place so that you may understand when they understand and in the way they understand it.

- Søren Kierkegaard

To know how to suggest is the great art of teaching.

- Henri Frederic Amiel

We should not be speaking to, but with; that is second nature to any good teacher.

- Noam Chomsky

A teacher is a very special person who uses his or her creativity and loving, inquiring mind to encourage others to think, to dream, to learn, to try, to do!

- Beverly Conklin

I have heard that successful people do the best he/she can with the conditions as he/she finds, and do not wait for next year for better.

- E. W. Howe

Good teaching is one-fourth preparation and three-fourths theatre.

- Gail Godwin

I am not a teacher, but an awakener.

- Robert Frost
The mediocre teacher tells. The good teacher explains. The superior teacher demonstrates. The great teacher inspires.

- William Arthur Ward

The teacher who is full of his/her subject is usually very slow in emptying himself/herself.

- Evan Esar

The person who can make hard things easy is the educator.

- Ralph Waldo Emerson

The difference between knowing and teaching is communication.

- Hurt, Scott and McCroskey

Much have I learned from my teachers and colleagues, but most from my students.

- Talmud: Ta'anith, 7b

The art of being wise is the art of knowing what to overlook.

- William James

The educator should be the “leading learner.”

- Thomas Groome

Not only is there an art in knowing a thing, but also a certain art in teaching it: "Nam non solum scire aliquid artis est. Sed quamdam artis etiam doenda."

- Cicero, De Legibus

Nothing great was ever achieved without enthusiasm.

- Ralph Waldo Emerson

When you have nothing to say, say nothing.

- Charles Colton

There are three things to remember when teaching: know your stuff, know whom you are stuffing, and then stuff them elegantly.

- Lola May

There are two ways of spreading light: to be the candle or the mirror that reflects it.

- Edith Wharton

The real art of communication is not only to say the right thing in the right place, but also to leave unsaid the wrong thing at the tempting moment.

- E-mail humour

The real challenge in college teaching is not covering the material for the students but uncovering the material with the students.

- Karl Smith

We must view young people not as empty bottles to be filled, but as candles to be lit.

- Robert H. Shaffer

To educate a person in mind and not in morals is to educate a menace to society.

- Theodore Roosevelt

Any fool can criticize, condemn, and complain—and most fools do.