Tutorial Design: Key Considerations

When you are preparing to facilitate a tutorial or lab/practical, make sure to speak with the course instructor (CI) about his or her course and tutorial expectations, policies and schedule.

First, consult the materials related to *Your Relationship with the Course Instructor* in order to get a comprehensive idea of the CI's expectations. There are some core questions that you will need to ask the CI:

➢ What will the discussion or lab sections be used for and how do they relate to the lecture portion of the class?
➢ Will you be expected to lead discussion or lab sections?
➢ If you will, which discussion or lab section or sections will you lead?
➢ If you will, who will be in charge of preparing the discussion or lab section? You? The instructor? Another TA? How far in advance of the actual discussion or lab section will you receive information about what should be in it?
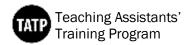(Adapted from College of Science & Engineering, University of Minnesota.)

Second, there are many different ways of approaching the design of a tutorial/lab. Nonetheless, being well prepared is the best way to ensure that you tutorial/lab will run smoothly. There are some core lesson-planning elements that you should keep in mind when designing tutorials. Whether you are facilitating a discussion, giving a pre-lab talk, or leading students in solving problem sets, the key is to think ahead about both the content and the pedagogy of your session. To make this is an effective learning experience for your students and a rewarding teaching experience for yourself, you should consider some key planning elements. You might find that you already use some of these in your teaching.

Pre-assessment & activating prior knowledge

What do students already know and are able to do? Never assume that you have a full grasp of what you students know. Always make sure to identify your students' existing knowledge so that you can build on what your students already know. Similarly to a pre-assessment, you can activate your students' prior knowledge by probing what they already know. New knowledge is constructed from old but quite often, we are in a rush to cover content without checking what students already know about a topic. Doing a pre-assessment and activating prior knowledge will help students make important connection to what is to come in the lesson.

Learning Outcomes

What is the point of the tutorial or lab? Learning outcome is a statement that describes the knowledge, skills and attitudes students should acquire by the end of a particular class (or course). Effective learning outcomes are important because they help students understand the rationale for developing this new knowledge and acquiring particular new skills and attitudes, and they suggest to

students how their learning will be assessed. The process of developing learning outcomes for your tutorial narrows down to one essential question: at the end of the tutorial, what do you expect your students to have learned? It is useful to think in terms of knowledge and skills. Consider the following two questions:

➢ What are the major things that you would like your students to know (e.g., facts, theories, concepts, models, etc.) at the end of a tutorial?
➢ What are the major things that you would like your students to be able to do (e.g., skills, abilities, procedures, etc.) at the end of a tutorial?

Use the *Developing Tutorial Learning Outcomes* worksheet to distil effective tutorial learning outcomes from broad tutorial goals.

In order to translate the tutorial goals into tutorial learning outcome, you need to consider the language that you are using. Remember that your learning outcomes must be observable, measurable and phrased so they state what the learners will do. To guide you in the creation of effective learning outcomes, please consult the handout on *Active Verbs for Bloom's Revised Taxonomy*. For examples of learning outcomes from across various disciplines at the University of Toronto, consult the handout *Examples of Tutorial Learning Outcomes*.
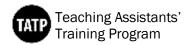
Developing Overall Tutorial Learning Outcomes

Determining the overall tutorial learning outcomes may require a conversation with the CI. Ask the CI about the broad goals of the tutorial. Once you identify the goals, rewrite them into concrete, specific and measurable learning outcomes. Use the *Overall Tutorial Planner* to identify the key outcomes that the CI has for the tutorials. Once you have effective learning outcomes, you can then determine how these outcomes will be delivered and measured in the tutorials:

➢ How will this expected tutorial learning outcome be assessed in the tutorial? What methods will your TAs use to measure students' mastery of this tutorial learning outcome?
➢ When will this expected tutorial learning outcome be assessed? (List prospective dates for each of the assessment techniques listed in the first column.)
➢ If these assessments show deficiencies in students' mastery of this expected tutorial learning outcome, what are your plans for improving student learning related to this outcome?

Having this overall planner for the tutorials in the course will help you organize content for each specific tutorial throughout the semester or year.

Specific Tutorial Planner

There is a certain amount of content to be covered in each tutorial but the manner in which this content is delivered is quite often at your discretion (unless you receive specific instructions from the CI). Hence, you will have to consider how to engage your audience, make the subject matter interesting and engage your students in thinking critically about the content. Please refer to the

Specific Tutorial Planner for a template that will help you design and deliver a successful and effective learning experience to your students.

1. Establish the **learning outcomes** for the tutorial. Identify and focus on 2-4 learning outcomes in each of the tutorials. Make sure to always tell your students what the learning outcomes are for each of the tutorials.
2. Open the tutorial with a **bridging activit**y or assessment, connecting this tutorial's learning outcomes to existing knowledge. Such a pre-assessment activity will activate students' prior knowledge and will prepare them for what is to come in the tutorial.
3. Open your tutorial with a **"hook"**. Such an opening salvo is intended to grab your students' attention and builds their interest in the topic. This can take the form of a newspaper article, a controversial statement, etc.
4. The tutorial **content** needs to be organized to help students meet the learning outcome(s) that you have identified for them at the onset of the session. The Specific Tutorial Planner allows you to chunk the content into well-organized elements. Using such a template will help you navigate the timing of your tutorial so that you don't run out of time or content. It will also assist you in determining the most effective activities/structures and resources to engage your audience. Using a variety of active learning strategies will allow your students to engage with the course content in a variety of ways, tapping into their different learning styles and motivating them. Consult the handout on *Active Learning and Adapting Teaching Techniques* for a list of active learning activities which can be completed by students working as individuals, pairs, small groups or the entire class.
5. At the end of the tutorial, provide a **close/summary** of the key takeaways. Such a conclusion to the tutorial summarizes the learning, re-emphasizes the learning outcomes, and provides closure for your students.
6. It is important that you check whether these intended learning outcomes were met. This can be achieved through a quick **formative assessment** during or at the end of the tutorial.
7. Take the time for a **personal refection** at the end of the tutorial, identifying both the strengths and weaknesses of the teaching experience.