TBL Course Design

Course design, like most complex projects, is an iterative, non-linear process, with the big course-level ideas and goals informing and affecting smaller daily tasks, and vice versa. The implication for building a successful course is that you need to think simultaneously and dialectically about the overarching goals of your course AND the steps students will take to reach those goals. Below, we have sketched out one strategy for handling this back-and-forth between the big picture and the day-to-day of your course that we have found to be highly successful in our work with faculty. Dee Fink’s *Designing Significant Learning Experiences* (2003) has deeply influenced our thinking about course design, as will be reflected in various ways in the following paragraphs.

Begin by Identifying Key Actions

We have found through several years of experience in working with university instructors that starting with big goals (e.g., “think critically,” “develop a global perspective,” “understand how to apply the scientific method”) and trying to work down toward concrete activities for the classroom is less successful and less intuitive than starting with something concrete and representative, then working back to the broader goals. We have seen many syllabi with beautifully written, lofty goals, but with no evidence that those goals are operationalized in the daily work of students the classroom. To avoid this, begin by recording what students need to do concretely to learn how to use your course content. These will become the basis for your team tasks in class.
Why start with Team Tasks? Team tasks are where most of the learning takes place, because they translate knowledge and thinking (analysis, integration of information) into collective action. Actions, particularly decisions, are the embodiment of and visible evidence for thinking. These are the moments when students take what they are newly familiar with and experiment with using it in new situations. Team tasks also validate and reward students’ preparation and performance on the RATs by putting them into the role of autonomous agents whose decisions actually carry value within the marketplace of ideas in the classroom. We therefore advocate starting course design with a concrete description of what students specifically will be doing in your course on a daily basis, in order to practice using disciplinary content.

Start by writing down a set of concrete actions that someone needs to do in order to be successful in your discipline (as represented by your specific course content area). Write these in clear language that students can understand. Here are some sample actions from various disciplines.

- History: interpret primary sources; evaluate arguments and evidence
- Biology: detect patterns of permutation in DNA; assess the impact of a given environment on a given species
- Economics: compare explanations for data; make judgments about the impact of a phenomenon on a given market
o Nursing: conduct diagnoses; make determinations about the accuracy of a given diagnosis
o Chemistry: evaluate hypotheses that attempt to explain variations in molecular configurations
o Business: evaluate, make a judgment about a given market's potential reaction to a given event

**Getting Unstuck Activity**

Brainstorming what I want students to be able to do” and those concrete disciplinary actions and relating it to the “content I feel compelled to cover”. Take a ledger size page and divide it into two quadrants. Down the right side brainstorm for ideas what you would like your students to be able to do/solve. Down the left side, list all the content you felt compelled to cover in your course. What you are hoping to find are compelling problems to solve, that lead back to the content you hope to cover – this is an iterative process of focusing the problems, considering what content is really essential or what content might need to be added to allow the students to successfully solve the problems. Hopefully significant, interesting discipline specific concrete actions emerge that will become the focus for the development of your application activities.

The actions you identify as characteristic of expert work in your field will provide you with a concrete core around which to begin constructing the new version of your course. Your list of actions will point you directly to selecting or writing relevant RAT questions, creating engaging, relevant and challenging tasks, and
designing graded assignments that authentically measure student learning.

**Draft a Single, Complete Learning Module Focusing on Student Actions**

The reason for focusing next on a single activity sequence at the outset of course design is to give yourself early awareness of what learning looks and feels like in a TBL course. This exercise will give you a sense of how student experience in the course will need to be structured and paced overall.

Beginning in this way—in the middle and working outward—is counter-intuitive for many of us in academe. The more common approach is to work deductively and hierarchically, from broad, dominant conceptual goals to specific content and activities. But here is the rationale for inverting the process: without a core of action-driven team tasks that embody disciplinary thinking, and without coherent sequencing of those tasks as a driver of student learning, TBL can (and often does, based on our observations of classrooms) quickly devolve into a series of RATs interspersed with too much accidental lecturing and unfocused, *ad hoc*, small group conversations. The active, student-centered learning module is the backbone of the successful TBL course. It provides the logic and coherence of students’ experience in the course, and ensures that the broader course goals are actually met and visibly measurable.

**Designing a learning module**

1. Identify a discipline-specific action/decision that students will need to practice, based on the kind of thinking you want them to develop in your course. Refer to the examples in the section above.

2. Now think ahead to the end of the module. Construct an assignment or comprehensive task (written assignment; higher level test question; complex case analysis; problem set; etc.) that would make visible to you and to your students whether they are able to think and act the way you described in #1, above. This will be a draft of the final assessment for the module. It should be
conceived at least in substantial part as an individual assignment, so that you will be able to monitor the process of all students. Keep in mind that you've had students practicing application throughout the unit, so it is essential that this final assessment be appropriately challenging (i.e., don’t just ask students to recall information or demonstrate basic understanding).

3. Now look at the content sources you are planning to use for the course. Ignore the sequence of chapters if you are using a textbook. Instead, select a set of readings (wherever they appear) that will be useful to students in providing the information they will need en route to executing the types of thinking and actions you have targeted in your final assessment for the module. Think first about the fundamental concepts students need to understand in order to be ready to do application tasks based on the readings, and choose ONLY readings that address these core concepts. This can lead to some very difficult choices, and it’s easy to fall into the trap of assigning certain readings just because they are “important” generally, or “really interesting” in themselves. It may be necessary to make selections that do not break with whole chapters, because the concept you want students to use appears piecemeal in three different places. Keep in mind that you can assign additional, more focused, follow-up readings later in a unit, after students have mastered the larger concepts.

4. Develop a RAT on these readings. The RAT will be a multiple choice test of understanding of key concepts (not small details). Bloom’s Taxonomy is a good guide to consider for distribution of questions of varying difficulty. Most of the questions will fall toward the lower end of the Taxonomy (comprehension, simple application), but it will be useful to include a few questions at the higher end as well (analysis, synthesis, evaluation), to ensure good discussion within the teams. Most importantly, think of how you will use RAT questions to point students to the kinds of thinking you want them to practice in this learning sequence. We recommend keeping RATs fairly short (10-20 questions), so that both the iRAT and tRAT can be administered in one class meeting, but disciplinary needs and customs will affect your
decision. Above all, it is important to keep in mind that the RAT should not be designed as a comprehensive assessment of learning: it is a sampling and measure of preliminary understanding. It is designed to bring students to a common point of awareness of key ideas so that the real learning—how to use these ideas—can begin.

5. Now comes the hard part: Develop a series of team tasks that scale from simple to more complex, more ambiguous and more difficult. The most effective tasks are actions that require students to use their knowledge to make a judgment resulting in a decision. Early in the sequence tasks can be short (3-10 minutes) and serve to clarify understanding of the content through simple applications or analyses that begin to push students beyond what they learned in the RAT. Later tasks should require more analytical and integrative thinking, asking students to work with complex situations, cases and scenarios that require knowledge and reasoning as well as judgment. In the more complex scenarios students might need as much as a half-hour to reach a decision. If there is a product (e.g. poster explanation or graphic) associated with the task, still more time might be needed. Designing tasks that conform to the 4-S principles will ensure that you are focusing on critical thinking and decision-making. We recommend that you use PowerPoint or another presentation tool to project, step-by-step in concrete language, what students will do to complete these tasks. This will also help you prepare, by requiring you to envision in detail how the task will play out.

6. Consider how you want students to continue processing between class meetings. Some options: you can plan for students to work alone, outside of class, through some tasks on their own, so as to prepare them for more complex in-class team tasks; you can also assign supplemental readings to further their understanding within the sequence.

7. Finally, consider the pacing of the whole module. How much time will be needed for students to work through all the components of the sequence? Typically the iRAT and the tRat together will take an hour or more to complete, which for most university class schedules takes most or all of one
class meeting, especially if you have planned for appeals and for instructor clarification. If you teach in an extended class meeting format of three or more hours, the RAT typically takes up the first half, followed by a first round of team tasks. A typical module will be built around 5-9 hours of class meeting time distributed over 2-4 days, culminating in a substantive, graded assignment that caps the sequence.

**Activity Two:** Finish by creating a module map to guide your development of course materials. This can help you both visualize the work ahead as well as visualize the flow of using the materials in the classroom.