

Reference Material

Introduction and directions:

The main goal of this workshop is to provide insight into the development of higher order learning skills by the TBL process and how to use this as a context when developing an effective TBL module.

The workshop will consist of a brief introductory presentation with most of the time spent in a group RAT and a group application exercise. The TBL RAT and Application Exercise questions will cover information summarized in this handout and additional materials found at the SuccessTypes Medical Education Page at <http://www.ttuhsu.edu/SOM/success>. Copies of this handout will be available at the session for reference during the RAT and Application Exercise.

At the SuccessTypes website you will find a downloadable copy of SuccessTypes. Please review chapters 2-5 (pages 19-50). The materials below summarize much of the key concepts in the book chapters.

Fundamentals of “Type”

Learning Type – a normal pattern of behavior determined by preferences in perception and decision making.

- Derived from personality type
- Comfort zone for thinking
- Four preferences have opposites
- Opposites used by everyone in normal adaptation to circumstances
- Opposite way of thinking requires more attention and energy
- Opposite can be consciously developed as a skill to achieve effective thinking.

Personality type is a normal preference for giving attention to new information and for making a decision about that information.

Personality type influences both learning behavior and teaching behavior similarly.

The most effective thinking and performing is produced by developing not only the preferred thinking, the learning type, but by *also developing the opposite thinking skills*.

Insight into the nature of personality type is a beginning point for teaching balance in thinking.

It is always the student’s responsibility to transform themselves into a producer of knowledge, i.e. to become a self-directed learner.

Misconceptions about personality type

1. *Personality type is a stereotype.* Personality type only indicates *general* tendencies in a person’s behavior due to preferences for the way they process information. It does not confine anyone to a certain behavior pattern, since all people adapt their behavior to a situation regardless of their preferences.

2. *Personality type describes a person's limitations.* Personality type describes a person's potential. Awareness of one's own preferences enables a person to develop non-preferred skills.
3. *Personality type is a measure of competence.* Personality type can serve as an aptitude measure in that it describes behavior that is preferred and, therefore, more comfortable. This behavior, if allowed, can develop through use into a competence.
4. *Personality type can be strong or weak, like a trait.* There is no valid instrument that can measure the degree to which a type preference exists. The MBTI was developed only as a sorting tool to describe which of two opposite ways of thinking are preferred when circumstances permit a choice.
5. *Some personality types are smarter than other types.* The MBTI is not an intelligence test. There are no smart or dumb types, just as there are no bad or good types or sick or well types. Type is only a declared preference.
6. *Differences among those with the same type invalidate the theory.* The MBTI demonstrates some of the strongest validity data for personality instruments. The theory predicts that people will only share general tendencies in common, and that these tendencies will be persistent. It does not predict the extent to which these thinking tendencies will be used or developed within individuals, nor does it predict the impact of other aspects of personality or life experience.
7. *Your personality type is determined by what you do.* Your personality type influences what you do just as demands of job, family, and friends influence what you do. People do not have the choice of doing only what they prefer in life, therefore, they often have to function in modes opposite to their type.

How Do Preferences Relate To Learning?

- Extraversion: Good at initiating
 - think out loud and then work alone
- Introversion: Good at reacting
 - work alone and then think out loud
- Sensing: Enjoy using what already learned
 - annoyed when part of learning left to imagination
- Intuition: Enjoy learning new things
 - bored when learning too explicit
- Thinking: Learn best when given a clear and objective rationale
 - like receiving a critical analysis
- Feeling: Learn best when given personal encouragement
 - criticisms are often taken personally
- Judging: Value orderly use of information
 - complete tasks at expense of new information
- Perceiving: Value inquiry
 - postpone tasks to acquire more information

How do preferences contribute to group dynamics?

Hearing the your opposite think out loud helps you develop that type of thinking. For example,

- Extraverts energize the group while introverts bring depth of thinking.
- Sensing types develop integrative/pattern thinking while intuitive types hear overlooked details.
- Thinking types learn to work in harmony while feeling types develop logical abilities.
- Perceptive types bring more options while judging types keep the group on task and arrive at conclusions.

Creating Modules for Team-Based Learning (TBL)

Efficiency: Getting The Most Out Of Your Time

The most efficient way to develop a Team-Based Learning activity is to start with the application. This is based on a highly relevant principle first proposed by Covey in his best-selling book, *The 7 Habits of Highly Effective People* (1989, Free Press). The principle—*begin with the end in mind*—is explained by Covey:

To begin with the end in mind means to start with a clear understanding of your destination. It means to know where you're going so that you better understand where you are now and so that *the steps you take are always in the right direction* [emphasis added].

The Right Direction Is Tightly Coupled

The “right direction,” when applied to the development of a TBL exercise, creates objectives that are directly relevant to the RATs and RATs that are directly relevant to the application exercise. Thus, one fundamental aspect of TBL is that each phase of the process must be coupled together logically. From the student perspective each successive phase of the TBL exercise will be seen as meaningful work, i.e. the students will view this as something for them and not just for the teacher. As such, the students will quickly acquire a respect for the entire process, from individual preparation to group problem solving. If, on the other hand, the application exercise is not appropriate to both the stage of the student's development and to real world application of course content, the remainder of the TBL exercise, i.e. RATs and learning objectives, will seem like busy work and have no obvious purpose.

Working Backwards

The most efficient way to create coupled TBL exercises is to create the application exercise first, then to create RATs that match the application exercise, and finally to create objectives that match the RATs. This eliminates objectives that are not relevant to the RATs and thus ensuring that they will be accomplished before the group TBL exercise begins. This also eliminates questions on the RATs that are not relevant to the application exercises, thus eliminating the feeling that they are simply just another course exam. After several TBL sessions have been conducted, the students will acquire a sense of purpose in each step of the process and improve the quality of their participation. Thus a coupled TBL exercise will ensure a meaningful, high quality involvement of the students in the process... and we haven't even mentioned how much easier it will be to conduct the exercise itself.

Steps in Developing A TBL Exercise

The steps involved in developing a TBL exercise can be represented by a list of questions aimed at what needs to be accomplished. The first question concerns the creation of one or more vignettes (the application) that represent current course material with opportunities for integration with other disciplines. This is followed by a question that concerns the best way to assess the student's readiness to think about the application (the RAT). The final question relates to the clearest description of individual study that will prepare each student to get the most out of the TBL session (the objectives).

First Step – What is the application that I want to develop?

For many faculty, this is the most intimidating question to answer. It asks about an unfamiliar aspect of a subject for many teachers, namely, how is the information meaningfully applied to problem solving. The least efficient approach is to attempt to derive a vignette question directly from lecture content. The first step, then, involves seeking out resources that can speed up this process by illustrating application of concepts.

Second Step – What is the core knowledge needed to solve the case vignette(s)?

After the development of the application exercise the steps become much more manageable because the task is more familiar. Now it is necessary to construct a Readiness Assurance Test (RAT) to determine the students' fundamental grasp of knowledge that pertains to the application exercise. For a two hour TBL session, there will be enough time for a RAT of approximately 5 questions. Experience will guide you if more are needed, but it is less stressful to have too few initially, allowing plenty of time for discussion. The RAT questions are ordinary test questions. To be sure they are selected to elicit discussion and, likewise, they are selected to be relevant to the case. However, they probably already exist in your test item bank.

Good RATs and Bad RATs

There are several important considerations when choosing RAT questions that concern: 1) sampling of knowledge and 2) relevance to the application case vignette answer choices and trigger words.

- **Sampling of knowledge:** It is worth remembering that the RAT can be relevant without being a comprehensive sampling of knowledge. You will likely find that if you target the RAT questions to correlate with the case vignette answer choices and the trigger words in the vignette, then you will automatically have a good sampling of the content for that topic from your lectures.
- **Relevance to answer choices and trigger words:** If the students are going to be deciding on a single best answer for your case vignette questions, they need to understand each of the answer choices presented to them and not just the correct answer choice. Knowledge that is restricted only to the correct answer choice is not enough to assure the thinking needed to rule out incorrect answers. "Ruling out" thinking is the essence of critical, or analytic, thinking.

Third Step – How do I help the students prepare for the TBL activity?

Ideally, your students should already be prepared for the TBL activity since you are testing on what you have been teaching. Specific behavioral learning objectives will help them to focus on the knowledge that pertains directly to the team learning activity.

- If the objectives are not specific they more likely represent broad goals which are also important in education, but don't help students use their time effectively.

Putting the Fun Back In Writing Learning Objectives

The prospect of writing learning objectives is often discouraging and intimidating to teachers. It is a task that seems unduly contrived and tedious in its demands, but this does not have to be the case. Learning objectives only have to follow a simple rule.

“A good learning objective is a good short essay question.”

- Goal – Understand type 2 diabetes.
- Objective – Compare the pathologic outcomes of type 1 and type 2 diabetes.

Identifying The Learning Objectives Needed For The TBL Exercise

The reference point for composing your list of learning objectives is the list of RAT questions that you have just composed.

- First look in the question stems and write objectives that assure the students will give the proper attention to the concepts present.
- Proceed to look at each answer choice and continue adding objectives if these concepts are not already covered in the objectives you have just written.
- You should expect to either consolidate some objectives or to divide others as you consider the list as a whole.

Supplementary reading

There will be some occasions where the course content needs to be supplemented with additional reading before a given case vignette is feasible as an application exercise. This additional reading can be supplied with the learning objectives and can be accompanied by additional learning objectives that guide the study of this additional material. Supplementary material can be as brief as a bulleted list of facts or can include articles or other assigned reading. Ideally, no supplementary reading should be necessary so that the student sees TBL as an extension of what they are already learning for course exams.

- Extensive supplementary reading with unclear or uncertain expectations for the course or the exercise, e.g. technical papers, will be met with low morale and resistance from the students.