Training Best Practices:

CHOOSING THE RIGHT INSTRUCTIONAL ACTIVITY

Introduction

It is often said that good training should be active. There are a vast range of activities you could choose to engage people, such as role plays, case studies, problem-based instruction, games, etc. But how do you determine which activity is best? If you make the right choice, learning the material will be easier for people and they will be more willing to apply the necessary effort. Make the wrong choice, and people will struggle. Learning activities should not be selected randomly as some activities are more suited to certain topics and skills than others. Every learning activity should be carefully matched to the nature of the topic/skill being taught. Accomplishing this alignment is a critical part of designing a learning experience that produces results. Fortunately, there are a number of useful frameworks that can be used to guide such decisions. Some of those will be covered in this document.

Consideration #1: What is the goal of the instruction?

The ideal way of teaching depends on the nature of what is being taught. Consider the following learning objectives:

Learning Objective A:

The learner must know the steps involved in using an auto-disable syringe.

Learning Objective B:

The learner must be able to use an auto-disable syringe.

Learning Objective C:

The learner must be able to determine the extent to which an auto-disable syringe is being used properly by a healthcare provider.

The first objective merely requires the learner to know the steps in the process, not to be able to execute them in a clinical setting. This type of objective is sometimes called a “knowledge objective” because the goal is for someone to acquire and retain knowledge or information. To achieve an objective like this, you would need to inform the learner of the steps involved and ask him or her to recall those steps in the correct sequence.

The second objective, on the other hand, requires the learner to actually be able to use the syringe, which is sometimes referred to as a “psychomotor objective” because it involves learning to perform a physical activity. To achieve this objective, you would need to have the learner actually perform each step with coaching and feedback until he or she could do it successfully without any expert assistance.

The third objective might sometimes be referred to as a “judging objective” because it requires the learner to be able to observe someone else performing the procedure and judge the extent to which it is or is not being done correctly. Achieving this objective involves showing the learner many variations of the procedure being

performed incorrectly, pointing out the problems, and then requiring the learner to do the same with additional examples.

As you can see, there are various categories of learning goals. Each category has a finite range of teaching methods that will be effective. If you can determine the category of the learning goal, you can limit the range of possible teaching activities to choose from, thus making the decision easier and increasing the odds that you will design effective instruction.

There are a number of frameworks available which you can use to determine the category of learning objective. Among the more common are Bloom's Taxonomy, Gagne's Taxonomy, Merrill's Instructional Components, and the Jonassen and Tessmer Taxonomy. While these frameworks are all different in nature and complexity, they all require that you first take the time to express your learning objectives in the right way and then break those objectives into their sub-objectives. There is an art and a science to doing this that is outside the scope of this document. (Much has been written about defining learning objectives. If you're interested in learning more, start with Preparing Instructional Objectives, by Robert F. Mager.)

Concerning categorization frameworks, the simpler and easier to use, the better. Here is an example of a simple and, thus, easy to implement framework with four categories of objectives: knowledge-based, procedural, skill-based, and motivational.

Type of Objective	Description	Example
Knowledge-based	The learner needs to be familiar with, be able to recall, or be able to access certain information.	A health worker needs to describe the symptoms of a particular disease.
Procedural	The learner needs to know how to follow a set of steps accurately (using a job aid, as needed). Procedures are a largely unambiguous set of instructions that do not require judgment.	A health worker needs to be able to don personal protective equipment correctly, following the guidelines.
Skill-Based	The learner needs to be able to perform a competency that requires practice, feedback, and coaching. Outcomes can be highly variable. Skills may require expertise and judgment.	An EPI manager needs to be able to identify possible causes for poor coverage rates.
Motivational	The learner may already know the correct action and have the skills necessary, but still may not act correctly. This could be due to factors such as having competing priorities or needing to unlearn an old behavior.	A health worker needs to wash hands according to guidelines with a high level of consistency.

Once you have placed your objective into one of those categories, you can draw from the learning activities known to be effective for each category, as follows:

Knowledge-Based Learning Activities		
Activity	**Description**	**Example**
Draw a picture	Participants are asked to visually draw the steps in a process, or visually explain an idea or principle.	Participants are asked to create a visual about waste disposal guidelines.
How would you explain?	Participants are asked to determine how they would explain something to a co-worker, patient, new employee, etc. This gives them the opportunity to put it in their own words.	Participants practice explaining the importance of process "XYZ" to a new employee.
Individual, then group	Participants are given a question or a problem and are asked to write down their responses individually, before working with a small group to come up with a group response.	Participants are asked to identify the most likely ways equipment can be incorrectly used, and then with their group come up with solutions.
Sorting	Given a list, sort each item into a category.	Participants are given a list of monitoring indicators. They must sort each one into a category by type.
What do they already know?	In small groups, participants make lists of what they already know about a topic. They write the items on a flip chart or note cards.	The group writes what they already know about community engagement on sticky notes, then creates a list that can be used throughout the class.

Procedural Learning Activities		
Activity	**Description**	**Example**
Teach each other	Parts of a process or task are divided and given to small groups, who have to study the process and then teach their part to the whole group.	Small groups are each given part of the temperature-monitoring process and have to figure out how to teach their part to the rest of the group using props and demonstration.

Pair-practice	When a process needs to be memorized, participants work with a partner (one performing, the other watching and giving feedback,) until they can perform without error.	After a group practice with routine hand washing, participants are paired up to practice until they reach 100% proficiency, with one participant practicing and the other giving feedback (and then trading places).
Predict ther next step	Participants are shown steps in the process, and the participants tell the instructor the next step in the process.	While the instructor demonstrates reconstituting a vaccine, the participants see if they know what the next step is without being told. The instructor can also periodically ask the audience why she/ he is doing a particular step or why it is important.
Find the error / find what is missing	Participants are given (or shown) the steps in a process, and they have to identify what is wrong with that process. If they are working individually, they should write it down, or they can work in small groups to identify the problem.	Participants are shown a demonstration of reconstituting a vaccine, and they have to identify extra, missing, or incorrect steps.

Skill-Based Learning Activities

Activity	Description	Example
Brainstorming	Before presenting an official solution, participants are encouraged to brainstorm several ideas, and then choose one to three best ideas to bring back to the class.	Participants are given scenarios, such as not having the right safety equipment, and asked to brainstorm solutions. Or participants are asked to brainstorm the steps in a process, and then compare those steps to the correct version.
Case study: find the solution	Participants are given a case study and asked to find a solution in small groups. The groups compare their solutions with the whole class.	Participants are given a case study about a new employee who sees his manager taking the occasional safety shortcut, then brainstorm solutions for what the employee should do in that situation.
Library of case examples	Collect multiple case examples that participants can learn from. This could include real-life cases or “war stories” from experienced staff.	Collect a library of problem-solving examples that learners can review and have a quarterly sharing session where someone presents on a problem-solving effort (which can be added to the library).

Feedback with checklist or rubric	Create rubrics or checklists to make feedback easier and more consistent. This can include self-assessment tools.	Create a customer service rubric and have people monitor and self-assess their own behavior. Have them come up with solutions to improve areas where they are less than 100% successful.
Audits	Participants are asked to use a checklist or criteria to audit a practice or an environment.	Participants are asked to rate their safety readiness using a checklist of criteria.
Role play	Participants act out a scenario, either in small groups or for the entire class.	Participants may find it difficult and awkward to point out to co-workers that they should wash their hands, so groups can role play having that conversation with a co-worker.

Motivational Learning Activities

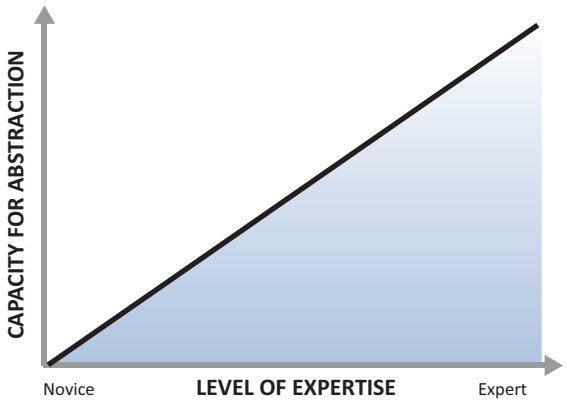
Activity	Description	Example
Create a manifesto	In small groups, participants are asked to write their own manifesto or commitment.	In small groups, participants are asked to write their own safety manifesto, indicating their commitment to temperature monitoring and how they intend to make it happen.
How would you explain?	Participants are asked to determine how they would explain the importance of something to a friend, family member, patient, new employee, etc. This gives them the opportunity to put it in their own words.	Participants practice explaining the importance of process “XYZ” to a new employee.
Identify the consequences	Participants are asked to identify all the consequences of something. (For example, the consequences of not following vaccine safety guidelines.)	Instruct participants to answer the following question on a piece of paper. What are the effects of unsafe vaccination practices on: - patients - caregivers - the community - the EPI program Ask one or two volunteers to share their answers with the group. Discuss.

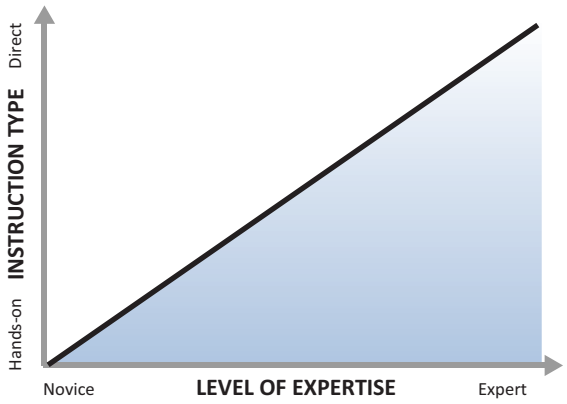
Make it real / visible	When the consequences are invisible, simulate the action with some visible way to show the consequences.	The instructor asks a participant to demonstrate what they do in the workplace. The instructor puts a small piece of colored paper on every object or surface they touch. Then the instructor points out that if the participant's hands had infectious bacteria on them, this would be all the places in the workspace that would now be contaminated.
Problem-solving	Participants are asked for common barriers to correct performance (or are given a list of common barriers) and asked to brainstorm in small groups about solutions. Correct solutions are gathered in a list.	Participants are asked to think about all the reasons syringes are not properly disposed of and to think of ways to solve those problems.
Provoke an emotion	Using a story or an image, evoke an emotional response in learners.	Ask participants to think about how they would feel if a child or grandchild was infected because someone was not careful about vaccine safety.
Role play	Participants act out a scenario, either in small groups or for the entire class.	Participants may find it difficult and awkward to point out to co-workers that they should wash their hands, so groups can role play having that conversation with a co-worker.
Share it forward	Have participants think of three people they could share this information with.	Have participants determine some critical element of safety that everyone should know and identify three people they will share that information with.
Tell me why	During a demonstration, the participants are asked why a critical step has to happen when and how it does. Or have participants review a process and identify what the purpose or importance is of each step.	During a waste disposal demonstration, participants are asked to explain the purpose and importance of each step.
Tie it to a personal experience	Participants are asked to share a story that they have experienced or witnessed about the consequences of poor or incorrect performance.	Have participants share stories of people they know who have been impacted by safety errors. "How would you feel if someone you loved got sick? Do you know anyone who has experienced an adverse event due to vaccine safety errors? How important is it that the people who vaccinate your children follow safe practices?"

Tie it to identity	Participants are asked to explain what they think the best qualities of their profession are, why those qualities are important, and how that relates to safety.	Participants describe why being a health worker or EPI manager is important, and how safety contributes to that. Or Other people create a list of reasons why a role is necessary ("Why are good health workers important? What do the best health workers do?") and relate that back to safety.

Consideration #2: How novice or expert are learners?

When I say the word "school" what comes to mind? For most of us, that single word carries a vast body of meaning. You may think of teachers, administrators, curricula, studying, textbooks – an entire system designed to educate children. The word "school" seems simple enough, but that's because we have a vast body of experience with the concept that we can draw upon to understand the meaning. Because of this experience, we can conceptualize "boarding school" and "trade school" without too much effort. But imagine trying to explain the idea of a "boarding school" to someone who has never encountered schools before nor even heard of the concept. Without a pre-existing base of experience to draw from, that phrase will be nothing but an abstraction no more meaningful than a random collection of letters. The amount of effort needed to develop the same mental references that you or I have will be substantial. Teaching the concept of a "boarding school" to a novice will require a different approach than teaching it to an expert. In sum, the novice learner will have to develop the experiential mental imagery associated with that phrase first. Until that happens, the words will be nothing but abstractions.





Novices can do little with abstractions – words, concepts, definitions, ideas – without a visceral, experiential knowledge of their true meanings. For novices, meaning precedes definitions, concepts, words, etc. Meaning comes first. (This is a simple theory with wide ranging implications far beyond the topic of this post.) Experts, however, already have expansive, experiential memories to draw upon in a domain. New words and ideas can be

translated into meaning because of the things they already know. In other words, experts are far better able to turn abstractions into meaning and action. This is the reason, for example, why doctors can read highly abstract research articles and translate them into clinical practice with relative ease. They already have a pre-existing, experiential knowledge-base that new ideas can integrate into. For people like that, highly situational training with lots of practice and examples and experiential content can seem frustrating – to them, it can seem like it stands in the way of their getting to the core of something.

What this means for the learning and development practitioner is that if you are expanding the knowledge or skills or a population with lots of pre-existing experience in the domain, you can and often should, take a very direct, abstract learning path to your goal. On the other hand, if you are dealing with a learner population that is brand new to the domain, you will need to take more time and effort building up an experience base using examples, practice, activity, etc. Of course, expertise, like abstraction, exists on a continuum. So, the question you should be asking yourself is, just how novice/expert is my population? The answer is an important factor that should inform your approach.

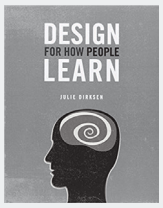
Use concrete examples and practice

When you know you are teaching novice learners, be sure to use high-context learning strategies whenever possible. High-context strategies may include realistic case studies, didactic content that includes specific examples, or images and environments that are recognizable and realistic.

Instead of:	**Use this instead:**
Which of the following are tools for analyzing root cause? a) Fishbone Diagrams b) Five Whys c) Group Discussion d) Brainstorming with post-it notes	You are working with a group of your co-workers on improving the patient intake process. Your colleague Charles is arguing with your colleague Nafisa about why the patient intake process takes such a long time. Charles believes that patients are not prepared to answer questions, while Nafisa believes that the staff just needs to be more efficient. Which of the following would be useful to analyze the root causes of the slow intake process? a) A structured debate b) Five Whys Analysis c) An observational study of the current process with interviews of the staff and patients d) Group discussion
“Here are examples of each disease type with a list of symptoms.”	“Here are the patients you need to see today. Examine each patient and see if you can create a differential diagnosis of each patient’s condition.”

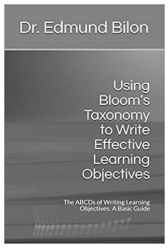
Annex 1: Resources

Explore these resources for more information.



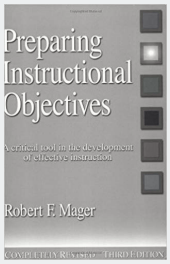
Design for How People Learn
by Julie Dirksen

This is an easy to use, all-purpose book that vastly simplifies the ideas and practices behind creating great instruction that people can actually learn from. It describes some simple methods for choosing effective instructional activities.



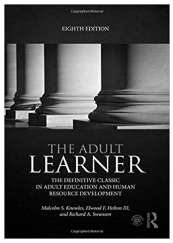
Using Bloom's Taxonomy to Write Effective Learning Objectives: The ABCDs of Writing Learning Objectives: A Basic Guide
by Dr. Edmund Bilon

This book introduces you to Bloom's Taxonomy and how to use it to create and categorize your learning objectives.



Preparing Instructional Objectives: A Critical Tool in the Development of Effective Instruction
by Robert F. Mager

Robert Mager is one of the leading training, learning, and instructional design thinkers and practitioners who helped set the standard when it comes to, among other things, defining objectives. This is a good foundational guide.



The Adult Learner: The definitive classic in adult education and human resource development
By Malcolm S. Knowles

This is the original book within which the phrase "adult learning" was coined. There is much that can be learned about teaching methods from this resource.