Performance objectives that REALLY measure performance

Implementing True Bloom's

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Instructional Design for Law Enforcement Instructors.

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Introduction

You are most likely writing your performance objectives wrong. How do I know? Because I see the action verbs "describe" and "explain" used way too often for a task that needs neither describing nor explanation, measures neither with the final assessment, and cannot be measured in eLearning courses using a 10 question Multiple-Choice Quiz (MCQ).
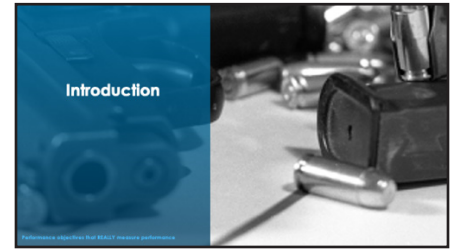
Here's the clue that you may be doing it wrong: if you are creating training (which is not the same as educating) and the Bloom's Taxonomy list you are using only covers "Remember" to "Create," you aren't REALLY using Bloom's correctly.

You can Google Bloom's Taxonomy right now and, overwhelmingly, the results will be the same pyramid with the same hierarchy, and a list of verbs. That's great, it is the Cognitive Domain, but that is only one of three domains.

If you have never seen these before, do not know the difference, or are unaware of the action verbs that exist for these, then you aren't using Bloom's correctly; your performance objectives are not really getting to the action required to complete a task competently nor are they being measured correctly.

There's more. If you are unaware of the Four Types of Knowledge that intersect with the 6 levels of complexity in the Cognitive Domain, your training is suffering and you have been missing opportunities.

Bloom's Taxonomy is more than cognitive performance, but, overwhelmingly, people only use the Cognitive Domain verbs. What's more there is more to using Bloom's Cognitive Domain than just picking a verb that sounds right.

NCP performance objectives

One of the most common criticisms I have when evaluating courses for IADLEST's National Certification Program is the use of performance objectives. Too often, the action verbs that are used are not tied back to an actual task or measured. The only conclusion that can be drawn is that people are picking action verbs that sound like something they expect people to do in class, not as part of the task performance once they are at work.
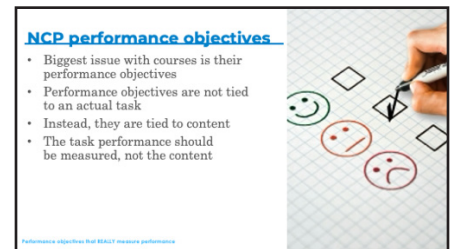
You might ask "Well, when else are we supposed to observe the participant performing the objective?" Fair question, but it misses the point. The counter-argument is "Where in the course are they actually assessed acting the verb out to be measured?" In MCQs, this is rarely the case. In most cases, the MCQ assesses the remembering of content, not the performance of a task.

Refresh: What is *REALLY* training

Before we get into the meat of this issue, let's refresh a webinar I delivered in 2022: *What is REALLY training?* (November, 10, 2022)

First, the definition of training:

the changing or development of behavior.

This is done through developing skills and knowledge to perform certain tasks. But, not everything we do is technically training. Too often, we are subjected to experiences that are called training, we may even get training credit for it, but they aren't really training. Here is how I break it down for clarity:

- A presentation only disseminates knowledge.
- Practice only rehearses a task performance.
- Education disseminates knowledge and then assesses knowledge transfer.
- Training disseminates knowledge AND develops task performance, then assesses knowledge transfer AND performance competency.
- Presentation is not practice, education, or training.
- Practice may include presentation, but it is not education or training.
- Education includes presentation, but it is not training.
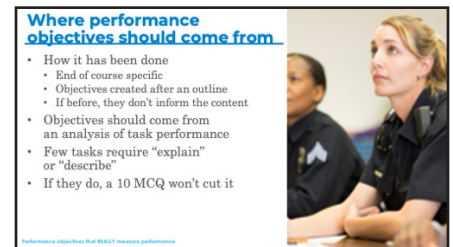- Training includes presentation, practice, AND education.

Where performance objectives should come from

In every instructor's certification course I have taken or reviewed, especially in law enforcement, the creation of performance objectives is based entirely on what the instructor believes a participant should be able to do at the end of a course. I have seen it trained this way, if it is addressed at all.

Mostly, I have seen performance objectives created *after* an outline of a course has been developed, which means the objectives are based on content, not on analysis of a task.

When the performance objectives are created prior to the outline, they don't inform the structure of the outline or are rarely tied to specific content in the course. The outline and content rarely use the performance objectives for what they should be - the anchor points and structure for the content.

Instead, performance objectives should come from analysis of performing tasks. Either by direct observation of the tasks being performed or through other forms of analysis. It is the complexity of performing a task competently (not perfectly) that dictates the action verb that should be

measured in the performance objective. This means, if someone has to do a thing, the action verb should reflect them doing that thing, with the measurement being them doing the thing competently.

This is why I get excited about the use of "describe" and "explain," especially in eLearning courses - rarely does a task require someone to "describe" or "explain" as part of a task and, in every circumstance where I have seen these verbs used, there was absolutely no measurement of that action verb, at all. Action verbs for eLearning are in Appendix 1, pg. 41.

If you observe someone explaining something to someone as part of their task, for instance, explaining the court process after an arrest, *then* it is applicable. **But**, it implies that *every* participant must be assessed doing the explanation, with the performance of explaining measured against a rubric that establishes the scale of performance.

A 10 question quiz doesn't do it. A group discussion doesn't do it. "Identifying" a process is not "explaining" a process, which is what most course quizzes ultimately do. The participant has to be assessed *actually* explaining the part that is required by the task to explain. Anything less is an opening to vicarious liability and is training malpractice.

Why Bloom's Taxonomy

There are many taxonomies, ways of writing performance objectives, and arguments for and against Bloom's Taxonomy. However, I use Bloom's Taxonomy exclusively for several reasons. As law enforcement professionals; as learning professionals, my goal is to be as objective as possible, using material I can present as evidence.

Lately, my mantra has become:
> *Training should not be based on "background, training, and experience," but on "research, observation, and analysis." Your background, training, and experience should inform the analysis for your training; it should not be the source of your training. ("Experience is only context, not content," presentation IADLEST conference, 2019).*

Established history

Bloom's Taxonomy was the first attempt to establish a cohesive, common source of structure in developing learning and training objectives. It originally started out as a way to classify the performance of WWII veteran college students taking credit examination tests. Bloom's Taxonomy started with "if the topic requires this, we should test to this classification."

My Mantra

Training should not be based on "background, training, and experience," but on "research, observation, and analysis." Your background, training, and experience should inform the analysis for your training, it should not be the source of your training.

Established history
- Research
  - Was based on research for credit examinations for WWII vets
  - Has been researched and studied constantly since then
- Revision
  - Was revised once in 2001, after 6 years of research by Dr. Lorin Anderson and others
  - Only substantial revision in all these years
- Years of application
  - Bloom's Taxonomy has been used consistently and worldwide for over 60 years

Research

Bloom's Taxonomy has been heavily researched for over 60 years. When Bloom's Taxonomy first came out, it was based on seven years of research and consensus building through numerous conferences and conversations. The result was three domains, four types of knowledge in one of the domains, and a focus on education.

The first taxonomy Bloom wrote about was the Cognitive Domain, which is what is used almost exclusively in education and training. He came out years later with a book about the second domain, the Affective Domain, but did not finish his work with a third book on the Psychomotor Domain. Instead, three other researchers took on the project and developed three different types of psychomotor hierarchies.

Revision

Bloom's taxonomy was revised in 2001 and a few things were changed. First, the original Bloom's used nouns instead of verbs. Second, Evaluation was considered a higher complexity than Create (Synthesis). Dr. Lorin Anderson's research changed it to Create being the highest complexity and Evaluation the second highest.

Years of application

Bloom's Taxonomy is used worldwide in most learning institutions and is a foundational principle in the educational field, whether for grade school or graduate school. It has been used to direct testing, content development, and eventually moved into application with training creation.

This established breadth and depth of using Bloom's establishes it as a common source, a reliable benchmark by which to rely, and a trusted method from which to build education and training. It has the time-test that renders it difficult to argue against - when used correctly and appropriately.

Words mean something

In law enforcement training, we are constantly told that the difference between culpability or liability, incarceration and freedom, is articulation. In order to justify our decisions and actions, we have to be able to communicate them and use common words and references that will make sense to as many involved in the hearing as possible.

Words mean something
- Words mean something in law
- Based on complexity of the task
- The action verb sets is the keystone of design

Performance objectives that REALLY measure performance

Words mean something in law

This is a core principle in philosophy and law. Philosophy and law are about debating and arguing over the meanings of words and ideas. There have been cases before the Supreme Court of the United States

that argued the liability of a company in a contract, based solely on the placement of a comma and what it implied.

Words have to mean something and must mean the same thing to everyone who uses them, for them to establish standards and communicate concepts. Bloom's does this.

When you are creating training that may be audited or challenged in court, your words choices matter. Especially in law enforcement, words choices can explain actions, both reveal the intent of the person being examined. If there is confusion in what a word means, it complicates the results and can lead to unintended consequences.

I started a project for an employer where I rewrote all of our job descriptions for the Learning and Development team. I was doing this as an example of what a job description should be - a list of performance objectives, instead of arbitrary years, tools, or what amounts to knowing something. We all know that just because someone has done a job for five years doesn't mean they are good at it or *really* know what they are doing.

So, instead of listing how many years someone needed to have using a tool or sitting in a cubicle, I used action verbs to differentiate the complexity between roles, from Content Developer to Director of Training. I then sent them to the legal department for scrutiny and they freaked out.

They came back with confusion saying that they can be held liable for unfair hiring practices unless they have decisive language that sets clear boundaries. So I explained Bloom's Taxonomy, gave them some resources, and let them decide for themselves.

They came back two days later vibrating with excitement. They had no idea this existed. They were so blown away that there was a system that established complexity without arbitrary numbers and tools. They were beyond excited at the new world this provided them. They also made a point to express the fact that, since it was established in science and had a 60 year track record, the job descriptions were as bullet proof for liability as anything could be. It would have to come down to an argument of experts that no one wants to involve - it took the onus off of the company and put it on research, observation, and analysis. An example of this job description is provided in Appendix 2, pg. 43.

Bloom's action verbs are the complexity of the performance expectation and comes with it the implied competency that would be provided with supporting documentation.

Based on complexity of tasks, not what the instructor wants a participant to do

But the words only mean something if they are based on the original intention of Bloom's Taxonomy - expected performance of a task. If the action verb is not directly tied to the performance of a task and the task is not actually measured, then the action verb is only opinion and you lose the protection of what Bloom's can provide. You *have* to have that "learning chain of evidence" establishing that the action verb is tied to a task relevant to the performance of a job.

When creating training, if we decide to use the word "describe" for a task that doesn't require or involve describing anything, the action verb has no meaning and is not an appropriate representation of the task. Then, an MCQ is created as an assessment and the verb isn't measured because there is no "describing" event. How do you give someone credit for training when they didn't and couldn't meet the objective of the task? Imagine defending yourself in court on that. It may not have happened yet (as far as I can find), but "yet" isn't an insurance plan or a proper defense strategy.

The action verb sets is the keystone of design

The learning chain of evidence provides those links. The action verb in a performance objective is the cornerstone of training, yet too often it is treated as a necessary evil or an afterthought of training creation.

The verb establishes the complexity of a task. It determines the level of competency - not the best possible outcome, but what the baseline of competency looks like for measurement. This implies how the performance is measured and thus implies what the assessment will look like.

If the task is "explain the court process after an arrest," the participant has to be able to learn and Understand (the second level of the Cognitive Domain) the court process to answer questions that may be asked. This implies that the measurement of them explaining this requires a rubric of what they can get wrong and still pass or how well and effectively they explain it. Then, the assessment is the participant actually explaining it, either in a scenario or through and essay.

Now you know what has to be in the content of the course to get the participant to the point where they can "explain." Now you know what exercises and activities need to be in the course to support the participant being able to perform competently in the assessment.

This is what "explain" entails. Now think about how often you have used "explain" in a performance objective and how often you have created the rigor to satisfy the use of "explain."

At some point, review some of your past work and look at the performance objectives and ask yourself: was this action verb the best choice, was it appropriate to the task, was it actually measured, and did the content support all of this?

Consistency in application

Consistency exists in interpretation

One of the best parts of Bloom's Taxonomy is that there are hundreds of lists of action verbs and most of them align really well. While nothing in academia or application is 100% agreed upon, the differences between lists is usually in the number of verbs per level, not in the substance of the verbs themselves.

This consistency between lists, between cultures, and between languages provides a consistency that lends itself to a more universally accepted language within the training industry. The more universally accepted something is, the more defensible it is, if applied correctly.

Action verbs are simple enough to be universally applied

The caveat "if applied correctly" is the key. Just as I defined the use of "explained" above, while the word may be universally understood, if it is misapplied, the universality of what it implies can actually be the chink in your liability defensibility.

If you use "explain," and the task doesn't require explanation, the content doesn't support explaining something, and the assessment doesn't measure the performance of an explanation, then the universality of the implications of using "explain" stand against your training.

The problem with Bloom's

There are detractors of Bloom's, of course. Everything in Learning and Development is contentious, it seems at times. Bloom's is no different. Getting into the academic discussions is outside the scope of this presentation, so I will limit this to the problems people have with the application of Bloom's, rather than the theoretical issues.

It is commonly misused

The number one problem is that Bloom's is woefully misused or applied. I remember starting at different Learning and Development organizations and asking what their process in training creation is. What I typically got was "someone tells us what to create, they give us the content, and we create it." I think this is probably the single greatest problem with why performance objectives are written poorly and Bloom's is misused - they aren't based on analysis of a task, they are based on assumptions made by the designer or a stakeholder.
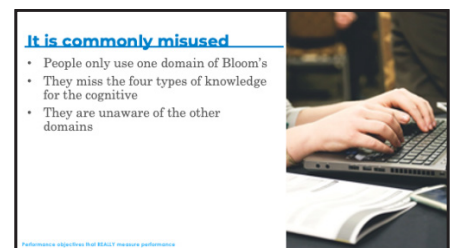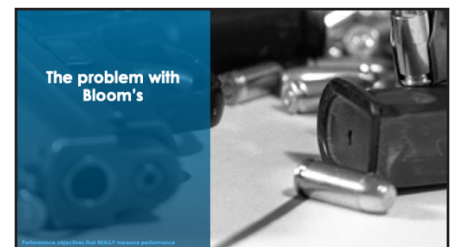
I think this is also why there is a misuse of the different complexities. The assumption is that if you can explain or describe something, you should be able to do something. Try that with a firearm: describing the functioning of a firearm doesn't equal the ability to qualify with it, use it safely, or be proficient in different scenarios, yet we see the word 'describe' used a lot.

People only use one domain of Bloom's

But there is a bigger issue we have with using Bloom's Taxonomy - overwhelmingly, people are only aware of one domain, never realizing that there are three - they are only using one domain of action verbs and trying to squeeze the square beg of training into the circle hole of the Cognitive Domain.

As alluded to earlier, there are two more domains that are never to rarely used. Mostly out of ignorance, partly because it feels like a bridge too far for L&D organizations that are already struggling with only doing two parts of ADDIE - Develop and Implement.

This is where the other domains come in. Instead of trying to force Cognitive Domain verbs into physical task performance, we should be using action verbs for physical performance, which dictate the physical demonstration of content, with practice, measured through physical performance for an assessment.

They miss the four types of knowledge for the cognitive

As stated earlier, however, education is part of training, so there are Cognitive Domain action verbs that will be used in training. The second missed opportunity is that people are exceedingly unaware of the Four Types of Knowledge (FTK) also advanced by Dr. Bloom. Bloom's Taxonomy is often referred to in literature as a rubric for performance objectives, yet we only ever see a pyramid.

A rubric consists of at least two axes - the levels of complexity and the FTK. Without the FTK, there is no real way to establish the rubric and make sure that the objectives are truly covering the content and complexity required for the tasks.

They are unaware of the other domains

Few are aware of the other two domains, the Psychomotor and the Affective. The Psychomotor Domain is for the physical performance of tasks; the Affective we won't touch on today.

The Affective Domain provides action verbs for measuring the attitudes, emotions, and motivations of participants regarding the content and the topic of what is being taught.

Dr. Bloom wrote the second handbook discussing the Affective Domain and provided a lot of evidence regarding the attitudes and emotions of participants. For me, this is the next step after getting instructional designers using psychomotor.

They don't understand the purpose of action verbs

People don't use the action verbs right

When I have discussed performance objectives with different instructional designers and instructors creating their own training, I commonly get much the same response - they are choosing verbs that they believe best represents what they are going to do in class.

The next response I get is based on how some were trained to develop performance objectives by using what I consider unnecessary language. The fact that they write their objectives to say "At the end of this course/block of instruction/etc., the participant will be able to << action verb >>..." - they are creating action verbs for what they believe someone should be able to do at the end of the course.

While this isn't entirely "wrong," it does create a misconception that results in the misapplication of an action verb. Yes, they should be able to do the action verb at the end of the course, but it's *because the action verb is what they are supposed to be able to do when they are performing the task after completion of the course*, not just by completing a course.

Action verbs are not tied to tasks

This misunderstanding comes from the perspective that the content is the indicator of an action verb, instead of the analysis of a task dictating what the content should be.

The action verb should be based on the complexity of performing a task. If the task is explaining the court process to an arrestee, then the action verb should be "explain." If the task is to arrest someone, the content might include an explanation of how to arrest someone, but that isn't the action verb - "conduct an arrest" is the action verb (Psychomotor Domain using the complexity level of "Complex Overt Response")

They don't measure action verbs correctly

The next mistake is not measuring the action verb correctly. I come across as pretty anti-multiple-choice question (MCQ) testing. I am not, I am anti- using MCQs as a panacea, which are typically poorly written, and do not measure the objectives because they are also treated as a necessary evil.

MCQs work very well in the Cognitive Domain with the complexity level of "Remember" as most are developed. However, I also use them

a lot with "Apply," "Analyze," and "Evaluate,"but writing these MCQs is more complicated, time consuming, and require really understanding the content, yourself.

The problem is that MCQs are used for testing what should be Psychomotor Domain action verbs, too.

To assess "explain the court process to an arrestee," I would either require an essay or a scenario where I observe the participant literally explain the process, then have the role player ask prepared questions.

To assess "conduct and arrest" will require the participant being observed in a scenario-based assessment conducting an arrest, using a rubric or a checklist to determine their competency. There is no other way to assess this.

I see eLearning do this a lot. They will proffer objectives with "describe" or "explain" when a psychomotor verb would have sufficed and the assessment could have actually measured it. Not all psychomotor skills are arresting. We see this a lot in software usage and simulators. Or, they proffer "explain" or "describe" when they could have just as easily raised the level of complexity to "apply" or "analyze," developed a better MCQ, and really improved the quality of the training all together. These missed opportunities is the real tragedy.

Using Bloom's

Three domains

Cognitive is about knowledge

The Cognitive Domain is what most people are most experienced and familiar with. I won't spend a lot of time on this as I have already beleaguered a lot of the foundations and use of the Cognitive Domain action verbs.

One thing I will add - while the pyramids we see representing these different domains are to imply a hierarchy, they are not meant to imply a *cumulative* hierarchy. You do not have to satisfy and assess every level previous to the target level. This is where the concept of using Terminal Performance Objectives (TPOs) and Enabling Performance Objectives (EPOs) comes in handy.

The hierarchy is strictly meant to be a hierarchy of complexity. You do not have to Remember how to ride a bike in order to Analyze why a bike might not be working to repair it. Of course, it would be helpful, but it is not necessary.

Three domains

Cognitive is about knowledge
- Action verbs are about mental skills
- Four Types of Knowledge
- Analyzing POs for what they are supposed to deliver – the 24 grid

	Remember	Understand	Apply	Analyze	Evaluate	Create
Factual	TPO-1					
Conceptual		TPO-2	TPO-3			
Procedural			TPO-4	TPO-5		
Metacognitive						

Cognitive Domain action verbs are about mental skills

The action verbs are targeted specifically to mental skills and knowledge. It is more difficult and more complex to create something than it is to apply something. I can Remember a theorem in Geometry and not be able to apply it. I can Apply that same theorem, but be unable to Create a new one. Action verbs for the Cognitive Domain can be found in Appendix 3, pg. 45.

Four Types of Knowledge

The Four Types of Knowledge is one of the least known and used, but it is tremendously powerful. As stated earlier, it is meant to be a second axis in the rubric of determining whether a performance objective is hitting its target.

The FTK are:
- Factual - knowledge of details and terminology.
- Conceptual - knowing the relationship between details and facts, and the theories that may support the relationships.
- Procedural - knowing the processes for topic-specific skills and knowledge to make them work. Knowing how something works.
- Meta-cognitive - relates to knowing cognitive processes, developing strategies, or synthesizing new information through reflection.

Analyzing POs for what they are supposed to deliver – the 24 grid

When arranged as a grid:

	Remember	**Understand**	**Apply**	**Analyze**	**Evaluate**	**Create**
Factual	TPO-1					
Conceptual		TPO-2	TPO-3			
Procedural			TPO-4	TPO-5		
Metacognitive						

In this rubric, we have determined that the course we are creating is about the policy and procedure of serving a warrant with an arrest. Our analysis provided us with five tasks that should be covered in this course. The tasks we analyzed requires the performance objectives to represent Conceptual and Procedural knowledge, and should be assessed at the

level of Understand, Apply, and Analyze. This course doesn't include affecting an arrest, so we do not have any performance objectives in the Psychomotor Domain.

Our Terminal Performance Objectives (TPOs) are:
- TPO-1: Define legal terms used in the service of warrants.
- TPO-2: Explain the process of a warrant service with an arrest.
- TPO-3: Determine if the warrant is releasable or not.
- TPO-4: Execute different warrants appropriate to the type of warrant presented.
- TPO-5: Analyze different warrants for completeness and appropriateness in relationship to the charge.

When we place these TPOs in the chart, we find that TPO-1 is outside our targeted rubric area. This means that it is not a good TPO. There are two things that we can deduce about this TPO:
1. This is a refresher course, so we can assume that those attending already know the terminology used in warrant service.
2. If there is new terminology, this TPO could easily be an Enabling Performance Objective in support of TPO-2.

The rest of the TPOs are within range of the expected performance outcome. You will notice that there are two cells without TPOs, don't worry about it. You do not need to fill every box, you just need to make sure that your TPOs are addressing the right action verb and type of knowledge.

This is the true power of Bloom's - it provides an excellent analysis tool for targeting our performance objectives before we even get to creating content.
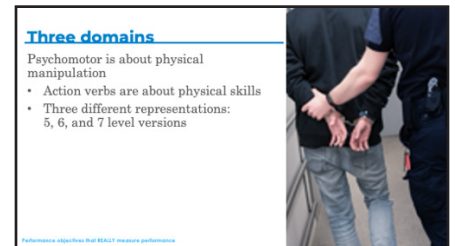
Analysis dictates the performance objectives. Performance objectives dictate the assessment and measurement. Assessment and measurement dictate content. This is how we create solid, defensible courses.

Psychomotor is about physical manipulation

The domain that we are missing in creating training, across *all* industries, is the Psychomotor Domain. For far too long, we have tried to shoehorn Cognitive Domain action verbs into courses where we physical activities are the tasks that need to be measured.

Dr. Bloom didn't complete a book about this domain, however, but there are three hierarchies that resulted from further research. Each have specific advantages and applications, which can be applied to law enforcement for different topics.

The Psychomotor Domain is powerful. By adding this domain to our repertoire of action verbs, we can really get to the exact nature of training.

Three domains

Psychomotor is about physical manipulation
- Action verbs are about physical skills
- Three different representations: 5, 6, and 7 level versions

Performance objectives that REALLY measure performance

With our example above for the Cognitive Domain rubric, we only addressed the cognitive parts of a warrant service. If we added performing an arrest to this course, it would have become problematic.

Action verbs are about physical skills

The action verbs here are about actually doing a thing. There are different levels of doing something, and each hierarchy addresses this. You may notice that there are words that carry over from the Cognitive Domain to the Psychomotor Domain, like "Identify" or "Choose."

How you measure "Identify" in the Cognitive Domain will be very different from how you would in the Psychomotor Domain. In the Psychomotor Domain, a participant may be expected to physically identify the target of their action, like identifying the correct target to shoot in a shoot-don't shoot scenario. Action verbs for the Psychomotor Domain are in Appendix 4, pg. 47.

Knowing which domain we are using when we are using the different action verbs informs us what the assessment and measurement will look like. Measuring the assessment of "identifying" in the Cognitive Domain may be matching words to definitions and counting how many were matched correctly. In the Psychomotor Domain, it would be counting how many "victims" were shot in relationship to how many rounds were placed on "bad guy" targets.

Three different Psychomotor Domain hierarchies: 5, 6, and 7 level versions.

5-level hierarchy

Dave's Psychomotor Domain (1970) is focused on repetitive manual tasks, like putting nuts on bolts. While this has some relevance to law enforcement, I believe this one applies more to manual labor and the corporate world. The five levels of complexity are:
- Imitation - being able to repeat a skill by observing someone else performing the task.
- Manipulation - performing tasks from memory or by following instructions.
- Precision - perform tasks accurately and expertly.
- Articulation - adapting skills to new situations.
- Naturalization - being able to perform tasks without thinking about them, essentially, instinctively or unconsciously.

6-level hierarchy

Harrow's Psychomotor Domain (1972) is focused on physical activities, like lifting weights, running a 500m race, acting in a play, or dance. The six levels of complexity are:
- Reflex Movements - reacting involuntarily: flinching or twitching.
- Fundamental Movements - combinations of reflex movements: running.

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- Perceptual Abilities - adapting to perceptual changes: running around an obstacle.
- Physical Abilities - require strength, endurance, etc.: running for a mile.
- Skilled Movements - moving with efficiency: running for a mile in under 10 minutes.
- Non-discursive Communication - communicating through body movements: running on to stage while gesticulating with your arms as part of a dance routine.

7-level hierarchy

Simpson's Psychomotor Domain (1972) is focused on adaptation and invention – developing physical skills that may need to be adapted in different situations or develop new ones with new information. I believe this is the best for most of what law enforcement requires. I can see application of all three, but I believe Simpson's is most applicable due to the nature of ever changing circumstances in law enforcement. The seven levels of complexity are:

- Perception - senses guide activity
- Set - readiness to act
- Guided Response - imitation and practice
- Mechanism - habituated action with proficiency
- Complex Overt Response - efficient and effective performance
- Adaptation - skillful action can be modified in new situations
- Origination - creating new actions for new situations or improvement

The Psychomotor Domain action verbs in the Appendix are for Simpson's Psychomotor Domain. The list is the result of combining several different lists as there was not one that was comprehensive enough to cover the many ways law enforcement perform.

Also, I believe Simpson's action verbs are the most useful and applicable for law enforcement. Primarily it best represents how law enforcement train versus how they perform in real world. Firearms training, defensive tactics, driving, communication with subjects, etc, can only be taught in hygienic ways in the academy, but will be different for every call, every day, throughout one's career. Simpson's action verbs and 7-level hierarchy best models what we experience in the day-to-day and then translates back to training, especially Origination.

So what does this look like?

We conducted a task analysis during Analysis Phase and decided that our course about policy and "procedure of serving a warrant with an arrest" needs to include a scenario-based assessment that includes an arrest. During the Design Phase, we decided that it will require the assessment of a participant's ability to not only serve the warrant correctly, but they need to demonstrate the ability to arrest someone correctly and safely.
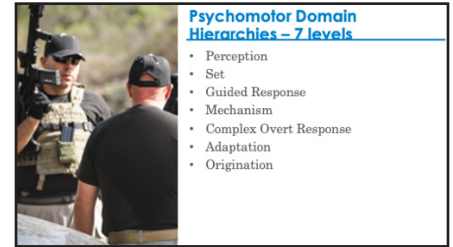
Our initial task analysis led to the following Cognitive Domain TPOs:
- TPO-1: Define legal terms used in the service of warrants.
- TPO-2: Explain the process of a warrant service with an arrest.
- TPO-3: Determine if the warrant is releasable or not.
- TPO-4: Execute different warrants appropriate to the type of warrant presented.
- TPO-5: Analyze different warrants for completeness and appropriateness in relationship to the charge.

After analyzing them with the 24-grid, we decided that TPO-1 is actually an EPO for TPO-2. So now the TPO list looks like this:
- TPO-1: Explain the process of a warrant service with an arrest.
- TPO-2: Determine if the warrant is releasable or not.
- TPO-3: Execute different warrants appropriate to the type of warrant presented.
- TPO-4: Analyze different warrants for completeness and appropriateness in relationship to the charge.

However, we are adding the Psychomotor Domain and TPO-3 falls into this domain, so we need to re-evaluate how we are going to assess the performance of these tasks, so we restructure the list like this:
- Cognitive Domain TPOs
  - TPO-1: Explain the process of a warrant service with an arrest.
  - TPO-2: Determine if the warrant is releasable or not.
  - TPO-3: Analyze different warrants for completeness and appropriateness in relationship to the charge.

- Psychomotor Domain TPOs:
  - TPO-4: Execute different warrants appropriate to the type of warrant presented.
  - TPO-5: Safely conduct an arrest of a subject with the appropriate warrant.

This divides the assessment into two functions. The Cognitive Domain could be conducted in several different ways, including a MCQ. However, the addition of the Psychomotor Domain action verbs implies the need for a scenario-based assessment at best, a demonstraiton at the least. A scenario or a demonstration could measure both domains, where the Cognitive Domain can **only** measure TPOs-1 - 3.

Knowing that their are a potential for two different types of assessments now dictates the method of instruction, the content that needs to be included, and requires detailed instructions for the instructor on how to conduct it all. It also implies the need for different assessment grading tools: if an MCQ is still used, you will need an answer key. For the scenario or deominstration, a rubric or check-list is necessary.

Affective is about emotion

The Affective Domain was addressed in Dr. Bloom's second handbook. We won't get into the Affective Domain in this webinar primarily because of time limits and the complexity of using the Affective Domain.

I will say that the Affective Domain could be a game changer for how we perceive the courses we create. Imagine building performance objectives that include measuring attitudes and emotions about certain content and the course materials themselves. The action verbs for Affective Domain are in Appendix 5, pg. 49.

This may be a topic for a later webinar - especially after I experiment with the efficacy and application of this domain in my own training creation. I don't know if this is a bridge too far for law enforcement training, but, especially with societal perceptions of law enforcement and with potential issues with the quality of recruits that are entering training, Affective Domain may be a major impact on how we design training and create training materials.

Honestly, I truly believe Affective domain won't be truly realized until we get away from the traditional way training is conducted now, where materials are minimal and participants sit in classrooms while being lectured with underwhelming slide decks. Until we can change the paradigm of training law enforcement, I believe the Affective domain will be too difficult to pull off.

Summary

If you are only using the Cognitive Domain for training, your training is woefully short and maybe ineffective.

If you are not using the four Types of Knowledge in a rubric to analyze your performance objectives, you may be missing a lot of opportunities or wasting time in your training.

We defined Presentation, Practice, Education, and Training to differentiate what the expectations should be for what we create and deliver.

We have covered why performance objectives are the cornerstone of training. We have looked at how performance objectives created without analysis are missing training opportunities and exposing us to potential liability.

We have shown that performance objectives should not be based on content and should not be treated as afterthoughts. We have also covered why the performance objective is essential to establishing how performance is measured and assessed, as well as its impact on content.

Any objectives for physical skills should be using psychomotor, NOT cognitive domain action verbs.

Finally, we covered briefly the three different Psychomotor Domain hierarchies and briefly discussed where they may be appropriate for use in creating training products.

End of webinar

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All materials used in this presentation will be emailed to participants upon completion.

Citations and references will be included.

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Appendix 1: CD action verbs for eLearning

Bloom's Taxonomy - Verbs for eLearning

There are action verbs in Bloom's Taxonomy that are commonly misused in eLearning. Action verbs are supposed to establish the complexity of a participant's performance capability upon completion of training. This means that the action verb must be measurable, not just assumed. If you cannot measure the participant's performance, then you shouldn't use the verb. The more complex the verb, the less likely it can be measured by a multiple-choice test - the most common assessment tool of eLearning.

This is not a comprehensive list, of course.

Verbs to use	Verbs that are dodgy	Verbs not to use
list	paraphrase	recite
outline	summarize	define
match	interpret	describe
quote	diagram	explain
identify	illustrate	paraphrase
label	break down	discuss
recognize	design	criticize
contrast	build	defend
classify	invent	argue
categorize	contrast	justify
analyze	name	support
associate	simplify	convince
choose	relate	compose
determine	compare	recall
judge		restate
grade		support
select		
evaluate		
formulate		
create		
generate		
derive		
modify		
develop		

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Verbs to use: can be used to make assessments that can measure performance. Not all are conducive to a multiple-choice quiz, but not all assessments should be a multiple-choice quiz, either. Some of these action verbs will require creativity and more complex assessments.

Verbs that are dodgy: can be used, but require a higher level of assessment creation that would be intense with programming or require heavy use of graphics, animations, or word repositories. For instance, "summarize" could be done with creating a scenario that the participant would have to provide a summary of what they experienced. Summarizing would require them to either choose a series of comments that best relates with what they experienced or have a series of correct words that would then be compared to a list of acceptable words. You will have to decide if the level of complexity of performance required for the level of complexity of design of the assessment is worth the effort. There may be better, easier ways to assess the performance.

Verbs not to use: unless you are willing to build an eLearning course that requires a real person, using a rubric, to read and assess a participant's response for each time this needs to be measured, you should avoid these action verbs. These verbs require measurement that is either logistically difficult or require an extensive time commitment.

Appendix 2: Job Description as TPOs

Instructional Designer

The Company was founded specifically to make change in the lives of its customers and employees, through education and training them for success. We believe that change in society can come from the economic power of business, to change lives by providing job opportunities and advising customers on creating opportunities for themselves.

Company Knowledge is the Learning and Development team in The Company, where all the change that The Company is pursuing begins. We are empowered to be the third-party, objective consultants for the business. We do this through analyzing, designing, and developing learning solutions, discovering technologies, and analyzing processes, systems, and behavior. Our goal is to improve efficiency and profitability within the company and provide a path to successful performance for the employee.

The Instructional Designer is responsible for every step of the process from discovery and deployment of Learning and Development products. In this role, they will liaise with stakeholders, leaders, and Subject Matter Experts to analyze needs and develop appropriate solutions to accomplish the goals of maintaining and developing skill and knowledge sets. The Instructional Designer will also manage projects and provide direction and feedback to Content Developers and maintain production schedules.

Salary range: $72-84,000 per year

Soft skills – required transferable skills:
- Create unique solutions for a myriad of needs that may not be what is expected or requested
- Develop relationships quickly and build trust in coworkers and leaders
- Deconstruct complex processes and systems into simple explanations
- Apply processes consistently with little supervision
- Analyze and evaluate large amounts of data in a systematic way
- Communicate effectively in-person and using different modes of communications
- Manage time and projects efficiently

Required hard skills – required industry specific skills:
- Create content using English with native-speaker proficiency
- Use content authoring tools with high level of proficiency
- Apply project management principles to an ever-evolving environment
- Apply current learning development methodologies
- Apply Quality Assurance practices
- Apply different development iterative frameworks
- Apply different modalities of measurement

Hard skills – skills that would be good to have, but we will help develop, if not:
- Create Learning and Development (L&D) products
- Create highly technical content as needed
- Evaluate efficacy of L&D solutions
- Evaluate processes, systems, and behaviors required for the expected performance of employees in different roles

Appendix 3: Cognitive Domain Action Verbs

Uber Bloom's Taxonomy Verb List

Cognitive Domain (Best used for mental skills or "knowledge")

		Competencies must fall in these categories when using the Cognitive Domain.			
Remembering	**Understanding**	**Applying**	**Analyzing**	**Evaluating**	**Creating**
Arrange*	Account for	Acquire*	Analyze	Appraise*	Abstract
Choose*	Acquire*	Adapt*	Appraise*	Argue	Act
Cite	Add	Allocate	Arrange*	Assess	Adapt*
Count	Annotate	Alphabetize	Audit	Award	Add to
Define	Approximate	Apply	Blueprint	Choose*	Animate
Describe*	Articulate	Ascertain	Break down	Compare*	Anticipate
Distinguish*	Ask	Assign	Calculate*	Conclude*	Arrange*
Draw*	Associate	Attain	Catalogue	Contrast*	Assemble
Enumerate	Calculate*	Avoid	Categorize*	Counsel	Blend
Fill in the blank	Characterize*	Back up	Characterize*	Criticize*	Budget
Find	Clarify	Calculate*	Classify*	Critique*	Build
Give an example*	Classify*	Capture	Compare*	Debate*	Categorize*
Group*	Compare*	Change*	Confirm	Decide	Change*
Identify*	Compute*	Choose*	Contract	Defend*	Code
Index	Conclude*	Classify*	Contrast*	Determine*	Collaborate
Indicate	Contrast*	Collect*	Correct	Diagnose*	Collect*
Know	Convert	Complete	Correlate	Direct	Combine
Label	Critique*	Compute*	Criticize*	Discriminate*	Communicate
List*	Defend*	Conclude*	Debate*	Discuss*	Compare*
Listen	Demonstrate*	Conduct	Deduce	Enhance*	Compile
Locate*	Describe*	Construct	Deduct	Estimate*	Compose
Match	Detail	Create*	Detect	Evaluate	Concoct
Meet	Differentiate*	Customize	Determine the	Explain*	Construct
Memorize	Discuss*	Demonstrate*	factors	Give your opinion	Contrast*
Name	Distinguish*	Depreciate	Diagnose*	Grade	Cope
Outline*	Elaborate	Derive*	Diagram	Hire	Correspond
Point	Estimate*	Determine*	Differentiate*	Infer*	Create*
Provide*	Examine*	Develop*	Discover*	Interpret*	Cultivate
Quote	Example	Diminish	Discriminate*	Investigate*	Debug
Read	Expand upon	Discover*	Discuss*	Judge	Depict
Recall	Explain*	Dramatize	Dissect	Justify	Derive*
Recite	Express*	Draw*	Distinguish*	Measure*	Design
Recognize*	Extend	Employ	Divide	Predict*	Develop*
Record*	Extrapolate*	Examine*	Document	Prescribe	Devise
Relate*	Factor*	Execute	Ensure	Present a case for	Dictate
Repeat	Generalize*	Exercise	Examine*	Prioritize*	Enhance*
Reproduce	Give	Exhibit	Experiment*	Probe*	Establish
Review*	Give main idea	Experiment*	Explain*	Project-manage	Explain*
Select*	Identify*	Explore*	Explore*	Prove	Express*
Sequence*	Illustrate*	Expose	Extrapolate*	Rank	Facilitate
Show*	Infer*	Express*	Figure out*	Rate	Find an unusual way
Sort	Interact	Factor*	File	Recommend	Forecast
Spell	Interpolate	Figure out*	Graph*	Referee	Format
State	Interpret*	Find out	Group*	Reframe	Formulate
Study*	Locate*	Give an example*	Identify*	Reject	Generalize*
Tabulate*	Observe	Graph*	Illustrate*	Relate*	Generate
Tell*	Outline*	Handle*	Infer*	Release	Handle*
Trace*	Paraphrase	Illustrate*	Inquire	Report on	Hypothesize
Underline	Picture graphically	Implement	Inspect	Research*	Imagine
Write*	Predict*	Interconvert	Interpret*	Review*	Import
	Put in order	Interpret*	Interrupt	Revise*	Improve
	Recognize*	Interview	Inventory	Score	Incorporate
	Reference	Investigate*	Investigate*	Select*	Individualize
	Reiterate	List*	Layout	Summarize*	Infer*
			Manage*		

Contact Tina Rettler-Pagel at CETL for more information   ***=verb falls into two domain levels**

Appendix 4: Psychomotor Domain Action Verbs

Bloom's Taxonomy - Psychomotor Domain Action Verbs

Perception	Set	Guided Response	Mechanism	Complex Overt Response	Adaptation	Origination
Senses guide activity	*Readiness to act*	*Immitation and practice*	*Habituated action with proficiency*	*Efficient and effective performance*	*Skillful action can be modified in new situations*	*Creating new actions for new situations or improvement*
Choose	Begin	Assemble	Assemble	Assemble	Adapt	Arrange
Describe	Display	Build	Build	Build	Adjust	Combine
Detect	Explain	Calibrate	Calibrate	Calibrate	Alter	Compose
Differentiate	Move	Construct	Construct	Conduct	Change	Construct
Distinguish	Proceed	Describe	Demonstrate	Construct	Rearrange	Create
Identify	React	Dismantle	Dismantle	Demonstrate	Reorganize	Design
Isolate	Respond	Display	Display	Dismantle	Revise	Invent
Predict	Show	Dissect	Dissect	Display	Vary	Make
Relate	Start	Fasten	Fasten	Dissect		Originate
Recognize	Volunteer	Fix	Fix	Execute		
Select		Grind	Grind	Fasten		
Separate		Heat	Heat	Fix		
		Manipulate	Manipulate	Grind		
		Measure	Measure	Heat		
		Mend	Mend	Manipulate		
		Mix	Mix	Measure		
		Organize	Operate	Mend		
		Sketch	Organize	Mix		
		Work	Sets Up	Operate		
			Sketch	Organize		
			Work	Show		
			Write	Sketch		
				Work		

Appendix 5: Affective Domain Action Verbs

Bloom's Taxonomy - Affective Domain Action Verbs

Receiving	Responding	Valuing	Organization	Characterization
listening and being attentive	*active participation*	*value attached to a subject*	*building a consistent value system*	*value system controls behavior*
Acknowledge	Agree	Act	Abstract	Act
Attend	Allow	Argue	Adhere	Administer
Ask	Answer	Adopt	Alter	Advance
Choose	Ask	Aid	Anticipate	Advocate
Control	Assist	Care (for)	Arrange	Aid
Describe	Attempt	Complement	Balance	Avoid
Discern	Choose	Complete	Collaborate	Challenge
Follow	Comply	Contribute	Combine	Change
Give	Communicate	Convince	Compare	Commit (to)
Hear	Conform	Debate	Complete	Counsel
Hold	Cooperate	Delay	Confer	Criticize
Identify	Demonstrate	Describe	Consider	Debate
Listen	Describe	Display	Consult	Defend
Locate	Display	Differentiate	Coordinate	Discriminate
Look	Discuss	Encourage	Decide	Disagree
Meet	Exhibit	Endorse	Defend	Display
Name	Follow	Enforce	Define	Dispute
Notice	Give	Evaluate	Design	Empathize
Observe	Greet	Explain	Direct	Enhance
Point to	Help	Expedite	Explain	Excuse
Select	Identify	Express	Establish	Exhibit
Share	Label	Follow	Facilitate	Influence
Sit	Locate	Forms	Follow through	Internalize
Erect	Notify	Foster	Formulate	Listen
Receive	Obey	Guide	Generalize	Manage
Reply	Offer	Help	Identify	Modify
Use	Participate	Initiate	Integrate	Motivate
	Perform	Interact	Investigate	Negotiate
	Play	Invite	Judge	Object
	Practice	Join	Lead	Performs
	Present	Justify	Manage	Persevere
	Read	Maintain	Modify	Persist
	Recite	Monitor	Order	Practices
	Relay	Organize	Organize	Praise
	Reply	Praise	Oversee	Profess
	Report	Prefer	Plan	Promote
	Respond	Preserve	Qualify	Promulgate
	Select	Propose	Recommend	Propose
	Tell	Query	Relate	Qualify
	Try	React	Revise	Question
	Volunteer	Read	Select	Reject
	Write	Respect	Simplify	Require
		Seek	Specify	Resist
		Select	Submit	Resolve
		Share	Synthesize	Revise
		Study	Systemize	Seek
		Subscribe	Test	Serve
		Suggest	Theorize	Solve
		Support	Vary	Strive
		Thank	Weigh	Tolerate
		Uphold		Use
		Work		Verify
				Volunteer (for)

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