



Instructional Systems Design

An Instructor Development Initiative



Municipal Police Officers' Education & Training Commission

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MAJOR Troy S. Lokhaiser

Major Troy S. Lokhaiser, Executive Director
Municipal Police Officers' Education and Training Commission
Commonwealth of Pennsylvania

2018



MPOETC Instructor Development Initiative

Historically, the MPOETC has required basic and in-service instructors to successfully complete a basic instructor development course and meet other rudimentary requirements listed in the Commission's regulations.

In the mid to late 1990s, the Commission offered the "Teaching Techniques and Methods" course which functioned as an advanced instructor development course.

From 2007 to 2009 the Commission offered an "Advanced Instructor Development Program" which focused on generational learning issues, instructional techniques, technology issues, etc.

An instructor development course delivered by an independent contractor that focused on a variety of activities instructors could use in delivering their courses was offered circa 2012-13.

Finally, in 2016, another independent company provided a two-day instructor course for MPOETC instructors.

Topic-specific instructor development courses were provided in the early 2000s with two separate Firearms Instructor Workshops being delivered in consecutive years to the lead firearms instructors from each municipal academy.

In addition, annual mandatory in-service program instructor workshops are provided for in-service instructors.

For several years, the MPOETC has provided academy instructors with a set of pre-designed and pre-developed standardized lesson plans.

The 2015-2017 revision of the basic academy curriculum created a new set of instructor development needs. The architecture of this new curriculum places greater responsibility on individual instructors to design and develop instructional materials and assessment instruments.

In 2018, an instructor needs assessment survey was conducted. Over 170 instructors responded.

Results of the survey indicated that 38% of instructors teaching in the basic academy program had never designed curriculum. Curriculum Design was defined as: A formal, systematic process of identifying what will be taught and how it will be taught. This process includes; identifying instructional goals and objectives, identifying, organizing, and outlining instructional material including the selection of topical areas, determining a chronological order, determining a general scope- (depth and breadth of content), as well as selecting instructional methods- (lecture material, group discussions, structured exercises, video and scenario debriefs, and process and content facilitation).

The survey also indicated that 33.14% of instructors never developed curriculum. Curriculum Development was defined as: The systematic process of developing instructional content. This process includes; identifying, researching, analyzing, and synthesizing information into course content, developing instructional aids, handout material, developing instructional methods, using the process of formative evaluation (i.e. revising and verifying [vetting] information), and developing testing materials.

Lastly, the survey indicated that 26.29% of instructors never developed test questions, and 32% seldom developed test questions.

To meet current and anticipated instructor development needs, the MPOETC is offering a set of developmental opportunities to its instructors. This course is one such opportunity.

The Commission hereby recognizes the following individuals for their contribution in designing, developing, and assessing this program, and providing train-the-trainer workshops.

Instructional Systems Design		
Lieutenant Karyn Baldini Ret. Philadelphia Police	Sergeant James Coughlin Philadelphia Police	Detective Rob Davenport West Manchester Township Police
Officer Ryan Elliott Pittsburgh Bureau of Police	Sergeant Matt Maguire Philadelphia Police	Detective Jamie Pascucci Pittsburgh Bureau of Police
Robert Sands Abington Township Police	Lieutenant Earl Saurman Abington Township Police	Officer Jeffrey Upson Pittsburgh Bureau of Police
Officer Frank Welling Pittsburgh Police	Commander Cristyn Zett Pittsburgh Bureau of Police	Bill Kaiser, M. Ed. MPOETC

Sincerely,

Major Troy S. Lokhaiser
Executive Director



Course Title: Instructional System Design

Summary of Content

This course will address the techniques and procedures used in designing and developing police training courses. Course content will include the ADDIE-R method of instructional systems design. The overall goal of this program is to improve the skill of instructors in designing and developing police training courses.

Instructional Objectives

Section 1 An Overview of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. List the phases of the Instructional Systems Design Process.

Section 2 The Analysis Phase of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Analysis Phase of the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. Describe the Analysis Phase.
2. Identify and develop a training need.
3. Describe various ways of identifying a training need.

Section 3 The Design Phase of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Design Phase of the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. Describe the Design Phase.
2. Identify the characteristics of the cognitive, psychomotor, and affective domains of learning.
3. Describe the tasks that must be performed in the Design Phase.

Section 4 The Development Phase of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Development Phase of the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. Describe the Development Phase.
2. Describe the tasks that must be performed in the Development Phase.



Section 5 The Implementation Phase of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Implementation Phase of the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. Describe the Implementation Phase.
2. Describe the tasks that must be performed in the Implementation phase.

Section 6 The Evaluation Phase of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Evaluation Phase of the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. Describe the Evaluation Phase.
2. Describe the tasks that must be performed in the Evaluation Phase.

Section 7 The Revision Phase of the Instructional Systems Design Process

Terminal Objective- Given the need to design and develop a new training program, the participant will use the Revision Phase of the Instructional Systems Design Process to ensure that a program is developed using a systematic approach.

Enabling Objectives

1. Describe the Revision Phase.
2. Describe the tasks that must be performed in the Revision Phase.

Pre-Requisite Assignment

Participants attending this class must review and be prepared to discuss the following document:
Learning Domains.

In addition, participants will bring a copy of a lesson plan that they teach in the basic curriculum and their test bank of questions they use for this lesson plan.

Method of Instruction

Instruction will be conducted by using concept briefs, practical exercises, PowerPoint slides, and handout material.

Instructor Preparation

By using a standardized lesson plan, comprehensive instructor notes, instructor reference material, and supplemental instructor material, the MPOETC provides specific course content and teaching-method instruction to law enforcement trainers.

However, the Commission fully expects every course instructor to complete additional research and preparation and to take any other steps needed to present the course in the most professional manner possible. Instructors must be thoroughly familiar with and understand the Instructor Reference material contained within this lesson plan.

Time Allocation

Instructors are advised that the instructional timings specified in each section of the lesson plan are guidelines, and may be adjusted to meet the overall course objectives and presentation requirements.



Course Section	Approximate Time
Section 1- An Overview of the ISD Process	15 Minutes
Section 2- The Analysis Phase	30 Minutes
<i>Break</i>	10 Minutes
Section 3- The Design Phase <i>Learning Domains</i>	50 Minutes
<i>Break</i>	10 Minutes
Section 3- The Design Phase <i>Terminal /Enabling Objectives</i>	60 Minutes
<i>Break</i>	10 Minutes
Section 3- The Design Phase <i>Scope, outline, methods, time, evaluations</i>	60 Minutes
<i>Break</i>	10 Minutes
Section 4- The Development Phase	50 Minutes
<i>Break</i>	10 Minutes
Section 5- The Implementation Phase	15 Minutes
Section 6- The Evaluation Phase	30 Minutes
<i>Break</i>	10 Minutes
Section 7- The Revision Phase	15 Minutes
Course Summary & Questions	10 Minutes
Instructional Time	335 Minutes/5.6 Hours
Total Time (Breaks, lunch, testing 60+45+30=135)	470 Minutes/7.8 Hours

Testing Protocol

Instructors will participate in a written course evaluation and debrief.

Important Notes

This course contains information excerpted from the Federal Law Enforcement Training Center's (FLETC) "Instructional Systems Design Training Program."

While the above program provides a partial structure to this course, the Municipal Police Officers' Education & Training Commission has modified some of this material, and has provided additional material.

In addition, some modifications contained in this course are a departure from both the FLETC-specific ADDIE-R methodology, and the traditional ADDIE methodology. These modifications reflect the needs and preferences of the Commission's Instructor Development Initiative.

Bill Kaiser
MPOETC



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Section 1- Overview of the Instructional Systems Design Process

A. The ADDIE-R Design & Development Approach

Section 1 Enabling Objective #1 List the phases of the Instructional Systems Design Process.

Designing a stimulating and adaptable training curriculum can be a daunting task. Having a systematic approach to constructing and implementing a course can enable the designer/developer to successfully complete the process systematically and effectively.

1. The ADDIE-R Process **Source-**FLETC, MPOETC CDC

Display PowerPoint Slide– The ADDIE-R Process (progressive builds a.-f.)

a. Analysis

In this phase, the need for training is identified and developed.

There are various ways to determine training needs. All training should be related to an identified, or articulated job-related need.

In cases where an identified training need has not been articulated, such needs could be reasonably and accurately extrapolated by reviewing appropriate intelligence information concerning current trends, activities, and tactics occurring in the USA or other countries.

b. Design

In this phase, instructional objectives are identified and written.

A topical outline is developed and instructional methods are identified.

Testable areas are identified, and assessment questions can be developed at this point or at a later time.

c. Development

In this phase, topical material is researched, and synthesized into course content.

Handout material and other instructional aids are identified and or developed with researched and vetted material.

Instructional methods are developed.

d. Implementation

In this phase, the course is piloted. In cases where no pilot course will be conducted, the course can be presented to participants. Course surveys are administered for later analysis and course adjustments and improvements.



e. Evaluation

In this phase, the results of the pilot course surveys are analyzed. If no pilot course was offered, results of the Level 1 (Kirkpatrick Level 1) course survey are analyzed.

Preliminary assumptions can be made about the effectiveness of the course based in part on the participant feedback and results of participant performance on course evaluations.

Course evaluations are analyzed for potential problems with test questions, distractors, assessment items or criteria, Instructional Objective-to-content-to item linkage, etc.

f. Revision

In this phase, the results of the evaluation phase are used to make appropriate content, instructional methods, or timing changes.

Display PowerPoint Slide– The ADDIE-R Process Formative Evaluation build

2. Formative Evaluation

Formative evaluation is an overarching process that spans the design, development, implementation, evaluation, and revision, phases.

It is a process involving a continual feedback loop that promotes effective training development.

Instructor Note:

A weakness of the ADDIE methodology is that it assumes that all required information needed to complete the program is known **before** the process is started.

The research conducted during the development phase may provide new or refined information not available at the beginning of the process.

By continually researching and assessing course design and content, developers can make ongoing improvements in the training program.

This process includes the following:

- Checking, improving, and when needed, revising the structure of the training program during the design phase;
 - Ensure that instructional objectives are refined or added as needed;
- Verifying, vetting, and continually improving information and instructional content during the development phase;
 - Ensuring that content being developed reflects identified needs and objectives;
- Monitoring the delivery of the program during the implementation phase and noting problematic issues; and
- Revising instructional and assessment material and methods as needed.



Section 2- The Analysis Phase of the Instructional Systems Design

A. The Analysis Phase

Section 2 Enabling Objective #1: Describe the Analysis Phase.

1. Description of the Analysis Phase

Display PowerPoint Slide– The Analysis Phase

The Analysis Phase of the Instructional Systems Design process includes using a variety of sources to identify training needs.

The Analysis Phase starts the ISD process by laying a definable foundation that justifies the development of training.

Identified needs enable the curriculum developer to focus, design, and develop a training program.

This phase also attempts to establish what needs to be taught, to whom it needs to be presented, and the current abilities and needs of those who will attend the training.

Instructor Note:

Periodically, the MPOETC conducts police officer job task analysis (JTA) from which to identify initial training needs. Currently, academy instructors are provided Instructional Objectives based on the JTA, a course outline, and Instructor Reference Material from which to further design and develop instructional content. Instructors designing and developing courses other than MPOETC basic or in-service courses will need to independently accomplish this task.

B. Tasks Associated with the Analysis Phase

Section 2 Enabling Objective #2: Identify and develop a training need.

Display PowerPoint Slide– The Analysis Phase *Identify Training Need*

1. Identifying a Training Need Source-FLETC

Training need determination is a flexible process with a goal of ensuring that training meets current, real, and tangible, organizational needs. It is focused on the performance of individuals in their assigned duties.

The minimum outcome expected from this phase is a document that confirms the training need, identifies the audience that will be subject to such training, and lists the tasks or competencies that must be addressed.

Questions to ask may include:

- What does my target audience need to know? and;
- What does my target audience need to be able to do?



2. Identify Training Gap

Display PowerPoint Slide– The Analysis Phase *Identify Training Gap*

Course designers/developers need to identify any knowledge-set or performance gap between what is known or is capable of being performed by the participant group, and the objectives of the training program.

The training need is the gap between what the students can do and what they need to do to perform the identified job tasks. This gap is the reason why we need to develop and conduct training.

An analysis may determine that no training solution exists because the cause of the performance gap is not training related.

Instructor Note:

Poll the class for recent training gaps they've identified and how they were addressed, if at all.

Purpose: To ensure understanding of the purpose of identifying a training gap.

The instructor can write a few on the white board and use them to highlight the methods in the following section.

3. Methods of Determining Training Needs Source- FLETC

Section 2 Enabling Objective # 2 Describe ways of identifying a training need.

Display PowerPoint Slide– The Analysis Phase *Determining Training Need*

The Analysis Phase can be accomplished in several ways, either with a training needs survey, job task analysis, or by conducting working group meetings.

a. Training Needs Survey

The results from a training needs survey can form a partial basis for determining if any new training is needed or if changes in existing training are required.

Instructor Note:

Instructors can refer to the MPOETC Instructor Needs Survey conducted in 2018.

b. Job Task Analysis

A job task analysis is typically done by using prerequisite knowledge, current agency procedures, and other technical and professional references to determine knowledge, skills and abilities required to perform the job.

Instructor Note:

The MPOETC periodically conducts job task analysis for use in revising police academy curriculum and developing in-service training programs. Additional assistance may be obtained from local police training academies or the department's human resources department.



c. Position Descriptions

The use of current position descriptions or the data from the training needs analysis are used to develop a listing of tasks necessary to perform a specific job or duty.

Instructor Note:

Instructors can provide a copy of a new officer job description or a police promotional job description.

d. Needs Extrapolation Source- MPOETC CDC

An analysis of recent and current trends used by criminals, criminal organizations, and terror-related individuals and groups can provide the reasonable extrapolation of potential training needs.

Information related to these trends can be offered by fusion center products, briefings, and information.

Training needs development based on such information may provide opportunities for police trainers to stay current with the events occurring in society, and may provide an opportunity to meet anticipated training needs.

Display PowerPoint Slide– The Analysis Phase *Needs Extrapolation*

Instructor Note:

Review the mass attacks in the PowerPoint as an example of needs extrapolation. Consider the mass attacks listed below and their dates:

1966- Assailant killed 17 and wounded 30, University of Austin Tower shooting.

1974- The attack on a school in Ma'alot Israeli resulted in 22 killed.

1984- Assailant killed 21 and wounded 19 in a McDonald's in San Ysidro.

1986- Post office shooting kills 14 coworkers and wounds 6 others.

1989- Assailant kills 5 kids and wounds 29 in a school playground shooting.

1990- Assailant enters a business in Jacksonville, Florida and killed 8.

1991- The attack on the Luby's cafeteria resulted in 22 killed, 20 injured.

1991- University of Iowa graduate student kills 4.

1992- Lindhurst High School assailant kills 4 and wounds 10.

1993- Assailant kills 8 in an office building in San Francisco.

1998- Jonesboro Arkansas school shooting- 5 killed 10 injured.

All these shootings occurred before the 1999 Columbine attack.

Question: Why did it take Columbine to change our tactics? Another example is the migration from requiring active assault entry **teams** to using **solo officer** entry tactics.

e. Working Groups

A Working Group is a group of Subject Matter Experts (SMEs), police trainers, and other stakeholders who add value to the training endeavor.



This group could be responsible for assessing criminal/terrorist trends, activities, tactics, and methods to identify and extrapolate training needs.

Working group meetings can be conducted to discuss tasks/courses that should be included in the proposed training program.

Working groups can be operated on a state-wide, or regional basis.

Practical Exercise Working Group

Instructors will ensure that participants are divided into prearranged groups.

This exercise will be conducted in two parts.

Part 1. Instructors will provide participants with a handout contained in **Appendix A** titled: "Working Group." Participants will use a topical area that they teach to form a working group. Participants will:

1. Compile a list of subject matter experts to serve on a working group (These SMEs should include both law enforcement and specialized personnel as needed);
2. List resources to be used in developing, and vetting course content (e.g. Organizations, Training Entities);
3. List sources of information (research reports, recognized training websites, governmental entities, etc).

Part 2. Participants will repeat the above exercise using an assigned topical area that they do not teach.

Total time allotted for entire exercise- 15 minutes



Section 3 The Design Phase of the Instructional Systems Design

A. Description of the Design Phase Source- FLETC

Section 3 Enabling Objective #1: Describe the Design Phase.

Display PowerPoint Slide– The Design Phase

The design phase uses an organized process based on sound educational principles to provide a structure to a training program.

The design phase typically incorporates several tasks which form a structure for the training.

This structure includes:

- Setting the parameters (length and complexity of training).
 - Determining the knowledge level of the target audience;
 - Adhering to the time limits allotted to the training.
- Identifying and organizing topics.
 - What objective related topics must be addressed to support knowledge / skills?
 - In what order do these topics need to be presented?
- Using the various domains and levels of learning.

B. Identify Domains of Learning

Section 3 Enabling Objective #2: Identify the characteristics of the cognitive, psychomotor, and affective domains of learning.

Display PowerPoint Slide– The Design Phase *Domains of Learning*

1. Identify Levels of Learning

Course designers/developers must understand the various domains and levels of learning when developing the training methodology and resources needed to determine what learning will be demonstrated, and how to measure the success of the instruction.

Learning domains and levels as initially described by Bloom contained three domains; Cognitive, Affective, and Psychomotor. These domains were later revised by various researchers, but still provide an excellent way to identify various levels of participant learning. Each domain has various levels ranging from simple to complex.

In addition, various action words (verbs) are used to specifically identify what tasks are done to satisfy the specific learning domain, i.e. as the domain levels increase in complexity, so do the action/task verbs. These verbs are most notably used to aid the course designer/developer in building course objectives.



a. Cognitive Domain Levels

The cognitive domain reflects thinking and mental processes. **Source-** Bloom; and Anderson, Krathwohl, et. al

Display PowerPoint Slide– The Cognitive Domain *Remembering*

1) Remembering

Previously referred to as Knowledge, this level involves the recall of facts or the act of remembering information. *This level represents the lowest, and simplest level of learning.*

- Verbs associated with this level include but are not limited to: defines, describes, lists, identifies, matches, names, recalls, recognizes, selects, and states.

Display PowerPoint Slide– The Cognitive Domain *Understanding*

2) Understanding

Previously referred to as Comprehension, this level involves the ability to understand or explain ideas or concepts.

- Verbs associated with this level include but are not limited to: converts, defends, distinguishes, estimates, explains, generalizes, gives examples, of, infers, interprets, paraphrases, rewrites, summarizes.

Display PowerPoint Slide– The Cognitive Domain *Applying*

3) Applying

Previously referred to as Application, this level involves using a concept in a new situation or applying what was learned to a new situation.

- Verbs associated with this level include but are not limited to: applies, changes, computes, constructs, demonstrates, manipulates, modifies, operates, predicts, prepares, produces, shows, solves, and uses.

Display PowerPoint Slide– The Cognitive Domain *Analyzing*

4) Analyzing

Previously referred to as Analysis, this level addresses the separation of material or information into component parts so that its organization structure can be understood.

- Verbs associated with this level include but are not limited to: analyses, breaks down, compares, contrasts, diagrams, differentiates, distinguishes, identifies, illustrates, relates, and separates.



Display PowerPoint Slide– The Cognitive Domain *Evaluating*

5) Evaluating

Previously referred to as Evaluation and listed as the highest level of learning, this level is currently the next to highest level and is related to making judgments about the value of ideas, products, procedures, concepts, or materials.

- Verbs associated with this level include but are not limited to: Appraises, compares, concludes, contrasts, criticizes, critiques, defends, evaluates, interprets, justifies, summarizes, and supports.

Display PowerPoint Slide– The Cognitive Domain *Creating*

6) Creating

Previously referred to as Synthesis, this level includes building a concept, process, structure, or pattern from diverse elements, putting parts together to form a new whole with emphasis on creating a new meaning, process, pattern, concept, or structure.

- Verbs associated with this level include but are not limited to: Categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, and writes.

b. Psychomotor Domain Levels *Source- Dave*

This domain involves the performance of motor skills and pertains to such skill sets as firearms, defensive tactics, and driving. The levels of skills are as follows:

Display PowerPoint Slide– The Psychomotor Domain *Imitation*

1) Imitation

This level of performance involves copying the movements and actions of another by repeating the action or movements. This is the lowest level of skill performance.

- Verbs associated with this level include but are not limited to: Copy, follow, replicate, repeat, mimic, imitate and reenact.

Display PowerPoint Slide– The Psychomotor Domain *Manipulation*

2) Manipulation

This level of performance involves the reproduction of an activity or movement by following written or verbal instructions.

- Verbs associated with this level include but are not limited to: recreate, build, perform, execute and implement.



Display PowerPoint Slide– The Psychomotor Domain *Precision*

3) Precision

At this level of performance, the individual can execute the skill reliably, independent of assistance.

The movement, skill, or sequence becomes habitual and is performed with confidence and proficiency.

Individuals can demonstrate the skill, movement or procedure to other learners. Quick, smooth, accurate performance.

- Verbs associated with this level include but are not limited to: Demonstrates, completes, controls, perfects, performs, and shows.

Display PowerPoint Slide– The Psychomotor Domain *Articulation*

4) Articulation

At this level of performance, an individual can adapt, modify, and integrate the skill to fit the special requirements of a given situation. They can combine the skill with other skills and methods to meet new conditions or requirements.

- Verbs associated with this level include but are not limited to: Construct, solve, combine, coordinate, integrate, adapt, develop, formulate, modify or improve.

Display PowerPoint Slide– The Psychomotor Domain *Naturalization*

5) Naturalization

This level of performance allows the individual to perform a skill in an automatic manner without the necessity of a conscious thinking process.

- Verbs associated with this level include but are not limited to: Design, specify, manage, react.

c. Affective Domain Levels

The affective domain defines how one learns on an emotional level; how our feelings, values, appreciation, enthusiasm, motivations and attitudes influence learning.

While it is an important aspect of learning, the affective domain is seldom tested due to the difficulty of constructing valid and verifiable test items. **Source-**Krathwohl, Bloom, Masia

Display PowerPoint Slide– The Affective Domain *Receiving*



1) Receiving

This level of learning pertains to the participant's awareness of, willingness to hear or consider, and the ability to attend to selected issues.

This level is characterized by the participant's willingness to listen to others' point of view.

- Verbs associated with this level include but are not limited to: Ask, chooses, describes, follows, gives, holds, selects, relies and uses.

Display PowerPoint Slide– The Affective Domain *Responding*

2) Responding

This level involves active participation on the part of the learners; attending to and reacting to a phenomenon; learning outcomes may reinforce compliance in responding, willingness to respond, or satisfaction in responding; and active participation on the part of the student.

- Verbs associated with this level include but are not limited to: Answers, assists, aids, complies, conforms, performs, practices, presents, reads, recites, reports, selects, tells, and writes.

Display PowerPoint Slide– The Affective Domain *Valuing*

3) Valuing

This level addresses the worth or value a person attaches to a particular phenomenon, behavior or concept. This ranges from simple acceptance to a more complete state of commitment.

Valuing is based on the internalization of a set of specified values, while clues to these values are expressed in the learner's behavior and are identifiable. The student sees worth or value in the subject, activity, assignment, etc.

- Verbs associated with this level include but are not limited to: Completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, works.

Display PowerPoint Slide– The Affective Domain *Organization by Values*

4) Organization by Values

This level of learning reflects the process of organizing values into priorities by contrasting different values, resolving conflicts between them, and creating a unique value system. The student builds an internally consistent value system with an emphasis on comparing, relating, and synthesizing values.



- Verbs associated with this level include but are not limited to: Alters, adheres, arranges, combines, compares, completes, defends, explains, formulates, identifies, integrates, modifies, organizes, prepares, relates, and synthesizes.

Display PowerPoint Slide– The Affective Domain *Characterization by Values*

5) Characterization by Values

This level is the highest level in the domain and is characterized by having a value system that controls a participant's behavior.

The behavior is pervasive, consistent, predictable, and most importantly, characteristic of the learner. Internalization of values occurs when individuals develop a characteristic "lifestyle."

This lifestyle that demonstrates a committed value system is often developed through self-study and learning from mistakes, but mentoring and coaching can often contribute to it.

- Verbs associated with this level include but are not limited to: Acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves and verifies.

C. Tasks Associated with the Design Phase Source- MPOETC CDC

Section 3 Enabling Objective #3: Describe the tasks that must be addressed in the Design Phase.

Display PowerPoint Slide– The Design Phase Tasks *Graphic*

There are several tasks associated with the Design Phase, including but not limited to: Compiling Objectives; Defining the Scope of the Training; Compiling a Tentative Outline; Selecting Instructional Methods; and Compiling Preliminary Testing Items.

1. Course Design Matrix

Source- Office for Victims of Crime Training and Technical Assistance Center

A variety of forms can be developed and used to organize and design curriculum. One such document is the Course Design Matrix.

This document contains the name of each module and its presentation order, the instructional objectives and topics to be covered in each module, the anticipated delivery method, sources of information, and time estimates for each module.

Display PowerPoint Slide– Course Design Document



Instructor Note:

See **Appendix B** for an example of a Course Design Matrix. Instructors will provide an overview of the Matrix.

2. Compile Objectives

Instructor Note:

Commission Basic Instructors are provided course objectives from which to further design and develop instructional content. Instructors designing and developing courses other than MPOETC basic or in-service courses will need to accomplish this task.

Instructional Objectives can be written in various forms, in various learning domains, and to varying degrees of learning.

A Common way to write objectives is to use two basic types; Terminal Objectives, and Enabling Objectives.

Display PowerPoint Slide– Compile Objectives

a. Terminal Objectives Source- FLETC

A terminal objective is a statement in specific and measurable terms of what a student needs to be able to do by the end of the training.

Terminal objectives are written at the target level of learning and contain three parts or clauses; namely a performance, a condition, and a standard.

1) Performance Clause

Display PowerPoint Slide– The Performance Clause

The performance clause describes an action or a task which the students will perform. Performances are stated in terms that are based on job-related tasks, knowledge, or attitudes.

Performances use verbs (actions) such as "investigate," "write," "arrest," "drive," "demonstrate, and" interview" are specific and both observable and measurable.

Performances may reflect a body of cognitive information, a set of psychomotor skills, or an affective demeanor.

Instructor Note:

The "action words" used in writing the performance objectives should be those words which are open to the fewest possible interpretations.

Try to avoid words that are open to interpretation and are not observable and measurable.



a) **Examples of Performance:**

- "will prepare an affidavit for a search warrant.. ."
- "will execute a search warrant... "
- "will arrest a non-compliant suspect... "
- "will conduct an interview of a witness.. ."

2) **Condition Clause**

Display PowerPoint Slide– The Condition Clause

This part of the Terminal Objective identifies under what conditions the students must do something. It describes the job-related tools, environments, or situations that will be encountered or used.

The condition identifies what they will be given, or allowed to be used and what they will be denied, or not be allowed to use.

The job-related conditions should be simulated as closely as possible when evaluating the accomplishment of the objectives.

a) **Examples of Condition:**

- "Given a simulated crime scene . . ."
- "During an interview situation..."
- "While handcuffing a suspect..."
- "Given a case study..."

Instructor Note:

CONDITIONS TO AVOID: phrases that seem to fit any situation, but fail to describe the job-related circumstances present at the time of the performance.

3) **Standard Clause**

Display PowerPoint Slide– The Standard Clause

This part of the Terminal Objective states "how well," (to what level of proficiency, or percentage of accuracy) and perhaps how quickly the students must be able to perform.

Addresses the minimum level of performance needed to be successful.

a) **Types of Standards**

There are three types of standards:

- In accordance with...
- Degree of Proficiency.
- Operational Procedures.



A typical Terminal Objective might be worded in the following way:

Display PowerPoint Slide– Terminal Objective Example

- Given role players and a mock arrest scenario, the participant will effect a lawful arrest in accordance with the PA Crimes Code and Rules of Criminal Procedure.

Lastly, terminal objectives are usually written at a higher level of learning (usually application or higher) than Enabling Objectives.

This practice not only allows, but it promotes the practice of developing test question or skills assessments that use a variety of levels of learning.

Practical Exercise Objectives

Participant will refer to the Pre-Course handout titled “Domains” and **Appendix C** titled “Objectives.”

Participants will use the verbs contained in the handout to write **two** Terminal Objectives related to their primary area of instruction. The wording must reflect the Condition, Performance, and Standard paradigm.

Participants will write **two** Terminal Objectives for their non-related topic of instruction as indicated in the “Working Group” exercise.

When completed participants will exchange papers and use **Appendix D** Titled: “**Practical Exercise Rubric**” to assess the structure of the objectives.

Total time allotted for entire exercise- 20 minutes

b. **Enabling Objectives** Source- MPOETC CDC, FLETC

Display PowerPoint Slide– Enabling Objectives

1) Nature and Purpose

An Enabling Objective is an objective that supports the Terminal Objective.

The Enabling Objective is student-oriented, and describes what the student will be able to do, or learn in order to achieve the Terminal Objective.

Enabling Objectives are stepping stones used to carry out the task described in the Terminal Objective.

Each Enabling Objective must be vital to the performance or accomplishment of the Terminal Objective. When taken together, Enabling Objectives provide the skill, or knowledge to perform the Terminal Objective.

If a student cannot accomplish the Terminal Objective after performing each Enabling Objective, then at least one Enabling Objective is missing.



Consider the following guidelines:

- To test the validity of an Enabling Objective, consider the effect on the Terminal Objective if the Enabling Objective were to be eliminated.
- If the Terminal Objective could be accomplished even if a specific Enabling Objective was deleted, then that Enabling Objective should be eliminated.
- When constructing enabling objectives, performances such as "know," "understand," "be familiar with," are neither observable nor measurable and should be avoided.

2) Structure

Enabling Objectives can be written more simply than Terminal Objectives.

If needed, Enabling Objectives can include a Condition, Performance and Standard.

However, in most cases they can be written as a simple statement using a verb relating to an appropriate level of learning.

Practical Exercise Enabling Objectives

Participants will Appendix C titled "Objectives" to write two enabling objectives for each of the terminal objectives previously written. These enabling objectives must support the terminal objectives. Enabling objectives will be written at a lower level than the terminal objective.

When completed, participants will exchange papers and use the Rubric in Appendix D to assess the structure and composition of the objectives.

Total time allotted for entire exercise- 20 minutes.

3. Define Scope of Training

Referencing the level of knowledge, training, and experience of the target audience, decisions must be made as to the following issues:

- Selection of relevant topics;
- Assessing the length, scope, and complexity of instructional material; and
- Determining ways to meet the desired standards.

4. Compile a Tentative Outline

Instructor Note:

Commission Academy Instructors are provided a course outline from which to further design and develop instructional content. Instructors designing and developing courses other than MPOETC basic or in-service courses will need to accomplish this task.



Course developers will need to:

Display PowerPoint Slide– Compile a Tentative Outline

- List topical areas that provide adequate knowledge or skill sets to meet the objectives;
- Develop a sequence of topics; and
- Compile a tentative outline.

Practical Exercise Topical Outline

Participants will use **Appendix E** titled: “Topical Outline” to compile a course outline.

When completed, participants will exchange papers and use the **Rubric in Appendix D** to assess the outline. **Time allotted for exercise- 10 minutes**

5. Select Instructional Methods

Make a preliminary selection of instructional methods. These methods do not need to be fully developed at this time, but they should be strategically placed in the outline to provide additional direction during the Development Phase.

Display PowerPoint Slide– Select Instructional Methods

- Video, PowerPoint, Lecture, Scenario Debriefs, Structured/problem solving exercises, etc.
- A variety of instructional methods using different senses should be identified at this phase. Using a variety of instructional methods adds to the interest of a training program, and is necessary when considering generational learning styles.

6. Determine Allotted Time

Topical sections are allotted time frames to assist in determining the length of a course, the amount of content to include, and the types of instructional methods used.

Initially, these time frames may be tentative and will be finalized upon conducting a pilot or actual presentation.

Practical Exercise Time Allotment, Instructional Methods

Using **Appendix F** (a blank copy of the “Course Design Matrix,”) participants will: 1. Record a terminal objective and all supporting enabling objectives addressing one segment of training taken from **Appendix C “Objectives;”** 2. Make a partial list of topics to be taught; 3. Determine allotted time, and 4. List instructional methods. Debrief the process as needed. **Time allotted for exercise- 20 minutes.**



7. Preliminary Evaluation / Assessment Items

Display PowerPoint Slide– Preliminary Evaluation / Assessment Items

The Design Phase is traditionally the time in which evaluation methodologies, test questions, and physical skill assessment items and criteria are developed.

Both advantages and disadvantages exist for developing tests and assessments at this phase.

Advantages include: Assessment items can help guide the content development that occurs in the Development Phase.

Disadvantages include: All information required to formulate final-form assessment items, distractors, or criteria may not be available at this phase.

a. Alternative Placement

Alternatively, test questions, distractors, skill assessment items, and assessment criteria can be developed near the completion of the Development Phase.

b. A Blended Approach

A compromise practice can be used at this phase by developing a list of general evaluation items which will serve as a guideline for content development, while allowing these items to be modified into a final form once full content is developed in the Development Phase.

Sometimes referred to as Knowledge Checks, these questions would be general in nature and should address broad issues. They not only serve as a guideline to focus content development, but they can be refined into more specific final-form test questions.

Examples might include:

- What are the duties of a first responder to a crime scene?
- What types of information would an officer need to obtain from a witness to a crime?
- How can officers de-escalate an individual experiencing a crisis?
- How should officers conduct traffic stops?

Practical Exercise

Using **Appendix F** "Course Design Matrix (blank)," participants will write preliminary test questions for the terminal objective and each enabling objective. **Total time allotted for entire exercise- 15 minutes.**



Section 4 Development Phase of the Instructional Systems Design

A. Description of the Development Phase

Section 4 Enabling Objective #1 Describe the Development Phase.

Display PowerPoint Slide– The Development Phase Overview

The Design Phase can be viewed as the structure or framework of the course. The Development Phase builds upon the Design Phase by filling in the information that makes the body of the course.

In the development phase, information pertaining to course topics is researched, analyzed, and synthesized into course content. Other course materials, instructional aids and methods are compiled and refined.

B. Tasks Associated with the Development Phase

Section 4 Enabling Objective #2 Describe the tasks that must be addressed in the Development Phase.

The following tasks are associated with the development phase: **Source-** MPOETC CDC

1. Identify, Research, Analyze, and Synthesize Information into Course Content

Display PowerPoint Slide– Development Phase *Compile Content build*

It is not acceptable to develop a law enforcement lesson plan based solely on an instructor's field experience.

Instructor Note:

Ask: How can an instructor adequately defend teaching a lesson plan that is solely based on his own field experience? What if that instructor's field experience includes decisions that would NOT be generally accepted as appropriate?

For a lesson plan to be professionally and legally defensible, they must be developed based on defensible police experience, **and** an acceptable foundation of current, relevant sources.

a. Use reputable and credible sources to research topical areas

- Identify an appropriate body of knowledge to use as reference material.

A body of knowledge is a set of generally accepted sources of professional information and published references.

This body of knowledge should form the foundation upon which to build lesson plan content and should reflect currently accepted information, practices, and tactics.

b. Document sources of information and published references; and



- c. **Ensure that information is relevant to the goals and objectives of the course as well as to the tasks of the target audience.**

2. Develop a Lesson Plan

Display PowerPoint Slide– Development Phase *Develop Lesson Plan build*

To provide a standardized course presentation, instructors should develop, use, and when needed, revise a lesson plan.

Display PowerPoint Slide– Development Phase *Lesson Plan Development build*

A lesson plan is a document that contains the following components:

- A set of preliminary pages containing a list of the goals, and objectives of the course, special notes, a Table of Contents, Time Allotment etc.;
- Course content arranged in an outline format;
- Instructor notes detailing procedures for delivering such content;
- A selection of instructional methods to be used with detailed processing notes;
- A list of references; and
- Appendices containing supplemental instructor material, handout material, and any other material needed to conduct the training.

Practical Exercise

Participants will refer to **Appendix A** “Working Group” exercise and review their list for any additional individuals and training organizations they can use to vet the lesson plan content, receive critical input from, and receive revision recommendations.

Participants will also revise the list if needed to include any additional entities or SMEs who may provide assistance in vetting course material. **Approximate time 5 minutes.**

3. Develop Instructional Aids

Display PowerPoint Slide– Development Phase *Instructional Aids build*

a. Visual Aids / PowerPoint

Develop Visual Aids- PowerPoint, visual aids,

b. Suggestions for PowerPoint presentations

- **Less is More-** A common mistake made by many instructors is to develop too many slides by placing the majority, if not the entirety of their instructional content onto a PowerPoint slide.
 - Slides should generally have not more than 6 lines of content. Although this is not a firm rule, it should serve as a guideline.



- **Slide Design**

- Use diagrams, figures, well selected photos, etc. to tell the story rather than a predominance of bulleted slides.
- Be careful of using color combinations that cause difficulty in reading slides.
- Use no less than 24-point fonts.
- Light colored lettering on darker backgrounds is easier on the eyes.

c. **Select videos**

Videos should be used to reflect the content being taught, explain content further, and provide opportunities for participation and feedback.

d. **Handout Material**

Develop handout material that complements the instructional content but does not replace it.

Careful attention must be paid to the course objectives, best practices, and organizational requirements.

Handout material must:

- be relevant to the goals and objectives of the course;
- provide current information related to the topics;
- be economically feasible to reproduce,
- be capable of dissemination.

4. **Develop Instructional Methods**

Display PowerPoint Slide– Development Phase

Instructional Methods Build

Fully develop the instructional methods selected in the Design Phase. This will require that specific instructional content be developed along with procedural requirements on how to conduct the instructional method.

To develop a structured exercise, for example, an initial set-up would need to be developed that would explain the purpose and scope of the exercise.

Specific objective-related content must be developed to serve as a basis of discussion or exploration.

Procedures would need to be developed regarding how to present the exercise, what answers are desirable and acceptable, and what type of answers would be inaccurate.

Time limits would need to be set, and some method of assessing successful completion of the exercise would need to be developed.



5. Develop Academic / Performance Assessments

Display PowerPoint Slide—Development Phase *Preliminary Assessments build*

As mentioned in the latter part of the Design Phase, initial test question/distractor and physical skill assessment items / criteria can be developed during the Design Phase and modified here into a final form.

Alternatively, such evaluation process can occur in this phase after most of instructional content has been developed. Both advantages and disadvantages exist in waiting until this phase to develop evaluations.

Advantages include: A more complete course content exists from which to phrase test questions and distractors.

Disadvantages include: The possibility exists that the content may have drifted off course from the stated objectives, making valid evaluation items difficult without further revision.

6. Multiple Choice Questions

Instructor Note:

An in-depth discussion of writing test questions and skills performance assessments will be provided in the Commission's Instructor Development Course titled: "Developing Academic & Performance Assessments."

a. **Structure of Multiple-Choice Test Items** Source- FLETC

Display PowerPoint Slide— Multiple Choice Questions

Good multiple-choice test items contain one stem and four alternatives.

The four alternatives consist of one correct answer and three incorrect answers, or distracters.

1) **The Stem**

- Must be linked to one specific Instructional Objective.
- Contain one complete central problem.
- Be open (:) or closed (?)

2) **Alternatives**

- Be plausible
- Have parallel structure, all numbers or all words. .
- Be about the same length
- Follow a logical sequence, i.e. Ascending or descending
- Avoid "both a and b," answers etc.
- Avoid absolutes such as "always" or "never".
- If a word or phrase is repeated in each alternative it should be included in the stem.



7. Conduct Linkage Analysis Source- MPOETC CDC

Verify linkage of test questions to instructional objectives and course content.

Display PowerPoint Slide– Development Phase *Conduct Linkage Analysis build*

8. Perform Formative Evaluation

While developing lesson plan content, curriculum writers need to authenticate, validate, and when needed, revise their content by soliciting and using the input of other subject matter experts, trainers, and training entities.

Display PowerPoint Slide– Development Phase *Formative Evaluation build*

This process includes but is not limited to:

- Adding or revising instructional objectives when needed to ensure that all knowledge sets, skills, and abilities are addressed so that the participant can perform the Terminal Objectives;
- Revise the topical outline;
- Add or expand topical areas which are needed to provide adequate treatment of the subject;
- Limit or eliminate topical areas which are not needed to provide adequate treatment of the subject; and
- Update and correct course content.

Practical Exercise

Participant will use their subject of instruction to select five final-form test questions from their topic's **test bank**.

Participants will use the **Rubric** on page 2 of **Appendix D** to assess the test questions. Criteria for assessment will be: Questions contain a Stem; One correct answer; Three plausible distractors. Test Questions are related to an objective.

Approximate time 15 minutes.



Section 5 Implementation Phase of the Instructional Systems Design

Instructor Note:

Commission Basic Instructors designing and developing basic courses may not be able to conduct a pilot course for their programs. In such an event, instructors may be able to use their fellow instructors to review courses and provide recommendations on improvement.

Instructors designing and developing programs outside the Commission's basic or in-service programs, may be able to provide a pilot program to identify and correct issues needing attention and revision.

A. Description of the Implementation Phase Source- MPOETC CDC

Section 5 Enabling Objective #1 Describe the **Implementation** phase.

Display PowerPoint Slide– The Implementation Phase Overview

In this phase, instructors must make the preparations needed to conduct a pilot program.

The purpose of a pilot program is to identify last minute issues which need to be addressed and to assess the effectiveness of the presenters, course content, and instructional methods.

If it is not feasible to conduct a pilot program, an alternate review process should be conducted prior to presenting the training to the target audience for the first time.

B. Tasks Associated with the Implementation Phase

Section 5 Enabling Objective #2 Describe the tasks that must be addressed in the Implementation phase.

Display PowerPoint Slide– Pilot Program

1. Conduct a Pilot Program Source- FLETC

The Implementation phase is the application of the courses created in the Design and Development phases. The entire course or program should be conducted from beginning through completion. In this phase, the instructional materials are deployed first in a pilot program.

When possible, a pilot program should be conducted for all newly designed programs or existing programs that have undergone significant revisions.

a. Target Audience

The target audience for the pilot program is the individuals who will receive the training and perform the required job skills.

Instructor Note:

Have participants provide a list of types of individuals who should attend a pilot program as well as an explanation as to why these individuals should be in attendance.



The pilot participants should also include police instructors and Subject Matter Experts (SMEs) to determine if the program addresses the goals defined in the Analysis phase. The SMEs should also evaluate the accuracy and validity of the materials, instructors, and methodologies.

Fellow instructors should be present to assist in evaluating the course.

b. Logistics

A variety of logistics may need to be addressed depending on the type of course, its requirements, the location, and the availability of resources.

The location of the training must be selected and arranged, scheduling of personnel, support services (lunch etc.), equipment requirements, etc. all must be addressed prior to the delivery of the courses.

c. Presentation of Course

The content and delivery methods of a pilot training program should be exactly as detailed in the course, and as they were intended to be delivered to the target audience.

Time limits must be adhered to, and a complete presentation of the course must be conducted if relevant data is to be obtained and used.

A method of collecting data will need to be established to evaluate the effectiveness of the pilot course.

2. Alternative to Pilot Programs Source-MPOETC CDC

Conducting a pilot program might not be feasible in every situation. When a pilot program is not permissible, SME's and instructors teaching similar topics can be selected to review and assess the course design, content, presentation, and evaluation methods.

Review efforts can be directed towards correcting issues with content, timing, presentation methods, chronology, logistics, etc.

A review rubric or other feedback mechanism should be provided to pilot program participants or review personnel.

Multiple pilot programs can be delivered as needed.

3. Present Course to Target Audience

If a pilot course or SME/instructor review is not feasible, the first few times the course is presented to the target audience the participants become an opportunity to conduct reviews of the above items. This option is less desirable than conducting a pilot program.



Section 6 Evaluation Phase of the Instructional Systems Design

A. Description of the Evaluation Phase Source- MPOETC

Section 6 Enabling Objective #1 Describe the **Evaluation** phase.

During the Evaluation Phase, course developers should use the opportunity to assess the participant's reaction to the training. This participant feedback may be useful in modifying parts of the training to ensure greater receptivity and clarity.

In addition, the effectiveness of a training program can be partially gauged by reviewing how well participants scored on the course evaluation.

Finally, the course evaluation metric, (academic test or skills performance assessment) must be evaluated to identify issues related to test questions and distractors, or skills items and criteria. For evaluation metrics to be defensible, they must have validity (connection to instructional objectives and course content) and reliability (producing similar results under similar presentations with similar audiences).

B. Tasks Associated with the Evaluation Phase

Section 6 Enabling Objective #2 Describe the tasks that must be addressed in the **Evaluation** phase.

Display PowerPoint Slide– Evaluation Phase

1. Evaluate Participant Reactions to the Training Source- FLETC, MPOETC CDC

To determine pilot course participant's reactions to a training program, a Level 1 Evaluation can be developed and issued to participants.

A Level 1 evaluation is a mechanism that provides participants with an opportunity to provide their immediate feedback, attitudes, and reactions to a training program.

A Level 1 Evaluation (also referred to as a Kirkpatrick Level 1) consists of a set of statements or questions regarding the nature, conduct, effectiveness, and quality of a training program, coupled with a structured response scale.

The Evaluation Phase also provides an opportunity to evaluate participant's performance on course assessments and to analyze the assessment instruments.

a. Areas To Address

Level 1 questions/ statements can be designed to address any aspect of the training program, and can include but are not limited to:



Display PowerPoint Slide– Areas to Address

- The topics;
- Structure of the course;
- Presentation methods;
- Instructor qualifications and performance;
- Relevance of the course or specific topics;
- Quality of the training environment, etc.

Examples of common Level 1 statements / questions include:

Display PowerPoint Slide– Common Statements / Questions

- Please indicate your level of satisfaction with how this training was presented. (Used with a satisfaction scale)
- This training will enable me to perform my duties more effectively. (Used with an agreement scale)
- To what extent will this training be helpful to you in performing your duties? (Used with a Helpfulness scale)

a. Likert Scales

Display PowerPoint Slide– Likert Scales

A Likert Scale is an answer format that offers an inclusive range of options. This range flows from one extreme to the other, and has various options within the range.

Typically, this range has an odd number of options, usually five, so that there is a neutral point in the middle of the two extremes.

However, in cases where it may be advisable to force participants to move off a neutral response, scale developers may choose to exclude the neutral response by having only four responses.

Although Likert scales can be composed of a variety of topical responses, three common response ranges include:

Display PowerPoint Slide– Common Responses

1) Satisfied vs. Dissatisfied

- ___ Very satisfied
- ___ Somewhat satisfied
- ___ Neither satisfied nor dissatisfied
- ___ Somewhat dissatisfied
- ___ Very dissatisfied



2) Agree vs. Disagree

- Strongly agree
- Agree
- Neutral
- Disagree
- Strongly disagree

3) Helpful vs. Not Helpful

- Extremely helpful
- Very helpful
- Neutral
- Not very helpful
- Not at all helpful

A four-response scale would simply eliminate the neutral option.

Practical Exercise Level 1

Participants will use **Appendix G** to compose a 5-item list of Level 1 evaluation items and use or construct a Likert scale for each item.

Instructors should debrief the purpose, function, and composition of the Level 1 evaluation. This debrief should include the types of questions asked, and the nature and structure of the Likert Scale.

Participants will use the **Rubric** on page 2 of **Appendix D** to assess the Level 1 survey.

Approximate time 15 minutes.

2. Evaluate Participation Performance on Test/Assessment Source- MPOETC CDC

Instructors / course developers should evaluate the participant's learning by examining their performance on program evaluations. This is done to identify potential areas of the program that may not have been adequately learned, or clearly presented.

Program tests, assessments (evaluations) are examples of Level 2 evaluations.

Overall participant performance should be assessed by noting the range and distribution of grades, and the areas of the curriculum which produced the most incorrect answers.

3. Test Item Analysis

A final analysis can be conducted by analyzing each test item and gauging its difficulty.

Questions that all or mostly all participants answer correctly should be reviewed to determine whether the level of difficulty is too low. If the difficulty of such question is too low, an attempt should be made to increase the difficulty either by compiling more difficult distractors or replacing the question.



a. Exceptions to Revision

An exception to this practice might allow the test item to remain unchanged if it represents a core principle or concept that all participants are expected to know.

Since test questions are must be directly related to instructional objectives and course content, and objectives must represent training needs, all participants should be expected to obtain mastery of all questions.

However, since few if any training programs will produce total mastery with every participant, a test written at a level of difficulty that produces no, or extremely rare incorrect responses, is not academically defensible.

An additional check of questions answered incorrectly may reveal problems with distractors or confusing wording.

Instructor Note:

Additional information on conducting a test item analysis will be presented in the Commission's "Developing Academic and Performance Assessments" program.



Section 7 Revision Phase of the Instructional Systems Design

A. Description of the Revision Phase Source- MPOETC CDC

Section 7 Enabling Objective #1 Describe the **Revision** phase.

The Revision Phase allows course developers to examine the experiences and Level 1 results of any pilot presentations or actual course presentations. Lessons learned can allow revisions to produce a better training program.

Additionally, an examination of any Level 2 results may provide opportunities to improve course evaluations, and identify possible problems with content, instructional methods, or presentation style.

B. Tasks Associated with the Revision Phase Source- FLETC, MPOETC CDC

Section 7 Enabling Objective #2 Describe the tasks that must be addressed in the Revision phase.

1. Use Data from a Pilot Program as a Basis for Revision

A continuous effort is required to improve program content, and methods.

Using data from the Pilot Program as well as input from other instructors, SMEs, and participants in actual presentations will enable instructors to have a documentable basis upon which to make revisions, improvements, and corrections to their programs.

Display PowerPoint Slide– Revision Phase *First build*

a. Use of Information from Pilot Program

Review information pertaining to:

- Course and section timing;
- Effectiveness of instructional methods;
- Instructor presentations
 - Was all material covered?
 - Was information covered effectively?
- Were course objectives met?
- What content, activities, or functions need to be added or deleted?
- Is there a need to replace a presenter?

b. Use Level 1 data

Display PowerPoint Slide– Revision Phase *Second build*

Level 1 data can be used to produce changes in instructional personnel, instructional methodologies, course content, written handouts, videos, multi-media and evaluation items.



c. Use Level 2 (Course Test) data **Source-** FLETC

Level 2 data can be reviewed on the Test Item Analysis report generated after scoring multiple-choice examinations.

Display PowerPoint Slide– Revision Phase *Third build*

Identify items that have a high number of students answering the test item correctly or incorrectly. Examine these items to determine if the correctly answered items are too easy, and whether the incorrectly answered items are too difficult or worded in a problematic manner.

1) Identify problematic test items.

- Identify the method of instruction and instructor consistency.
- Ensure that the material was taught.
- Ensure that there were no conflicts with handouts or other content provided to students.
- Instructor error (misspoke in class).
- Error in the lesson plan.
- Badly written test-item (ambiguous distracter, change in terminology, etc.).

2) Practical exercise results.

- Evaluator consistency.
- Material covered during class.
- Ensure role-players are following instructions.

Course Summary

The ADDIE-R method presented in this training program is one way to design / develop a training program. However, it is not the only way.

As with any method of creating curriculum, the ADDIE-R process has its weaknesses. A curriculum developer seldom has all necessary information needed to create a new program, and if they do, it is quite possible that the benefit of newly acquired information may be overlooked or un-used if rigid adherence to a developmental paradigm is maintained.

This Commission developed course is intended to provide a systematic, logical and intuitive process to design and develop training programs, while maintaining the flexibility needed for instructors to create effective programs.

The approach of this program is systematic in that it provides a structured and sequential process by which to design and development materials.

It is logical in that the essential functions flow from one to another.



Finally, it is intuitive in that when creating curriculum, it “makes sense” to perform certain essential functions and to do so in a particular sequence.

The material presented in this course has been modified from the traditional ADDIE process to meet the needs of the Commission and its instructors.

Likewise, the phases in the ADDIER process should not be considered stand-alone modules with distinct beginnings and endings which are exclusive of adjacent phases.

To function effectively, this process must be fluid and adaptable, while maintaining a logical process by which to accomplish the needed tasks.

It is the Commission’s intent that instructors will use this and other courses contained in its Instructor Development Initiative to provide a usable but adaptable structure for improving the quality of their service.

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6. MPOETC CDC- Municipal Police Officers’ Education & Training Commission, Course Development Committee.
7. Office for Victims of Crime Training and Technical Assistance Center, Office of Justice Programs. 9300 Lee Highway, Fairfax, VA 22031–6050



APPENDIX A

Working Group

Topical Area	
Subject Matter Experts (Law Enforcement)	<ol style="list-style-type: none">1.2.3.4.5.6.7.
Subject Matter Experts (Specialized)	<ol style="list-style-type: none">1.2.3.4.5.
Resources, Organizations, Training Entities	<ol style="list-style-type: none">1.2.3.4.5.6.7.8.9.10.
Sources of Information (Research Reports, Recognized Training Websites, Governmental Entities- [BJA, Dept. Justice, CDC] Etc.	<ol style="list-style-type: none">1.2.3.4.5.6.7.8.9.10.
Other	



APPENDIX A Working Group

Topical Area	
Subject Matter Experts (Law Enforcement)	<ol style="list-style-type: none">1.2.3.4.5.6.7.
Subject Matter Experts (Specialized)	<ol style="list-style-type: none">1.2.3.4.5.
Resources, Organizations, Training Entities	<ol style="list-style-type: none">1.2.3.4.5.6.7.8.9.10.
Sources of Information (Research Reports, Recognized Training Websites, Governmental Entities- [BJA, Dept. Justice, CDC] Etc.	<ol style="list-style-type: none">1.2.3.4.5.6.7.8.9.10.
Other	



APPENDIX B Course Design Matrix

Course Name- Invisible Wounds		Module / Section Name- Traumatic Brain Injury- Nature		
Instructional Objectives: At the end of this course, participant will be able to: Recognize; Identify; List; Discuss; Differentiate between; Comprehend; Analyze; Synthesize; Evaluate.				
1. Recognize the nature of Traumatic Brain Injury.				
2. Discuss the role of physical injury in TBI.				
3. Discuss the prevalence of TBI in various populations.				
Topics to be considered	Time allotted	Instructional Methods	Sources of Information	Assessment Strategy
1. Nature/ cause physical trauma -> changes in structure and function of brain, cognitive, behavioral effects.	30 Min.	Video- encounter with person/ TBI F- facilitate possible problems, anticipated risks, possible resolution issues. CB nature / causes of TBI Brain structure / function		Course Exam
2. Prevalence in Combat Vets / police/ etc.	5 Min.	CB- Statistical information	Center for Disease Control	“
3. Prevalence in. jail / prison populations	5 Min.	Same as above.	“ “	“
4.				
5.				
6.				
7.				
Provisional Assessment Questions: How many people are affected by TBI? How does TBI affect people? How can I recognize a person with TBI?			Instructional Support: (videos, simulations, structured exercises, PPT, etc.)	
Notes: CB- Concept Briefs L- Lecture SE- Structured Exercise F- Facilitation Video				



APPENDIX C

Objectives Topical Area

Topical Area	
Terminal Objective 1	
Enabling Objective	
Enabling Objective	
Terminal Objective 2	
Enabling Objective	
Enabling Objective	
Non-Related Topical Area	
Terminal Objective 1	
Enabling Objective	
Enabling Objective	
Terminal Objective 2	
Enabling Objective	
Enabling Objective	



APPENDIX D Practical Exercise Rubric

Page 1

Objectives		
Terminal Objective 1	Yes	No
Contains action verb Application (Precision) or higher		
Contains Condition		
Contains Performance		
Contains Standard		
Enabling Objective	Supports Terminal Objective Yes / No	Lower than Terminal Objective Yes / No
Enabling Objective 1		
Enabling Objective 2		
Terminal Objective 2	Yes	No
Contains action verb Application (Precision) or higher		
Contains Condition		
Contains Performance		
Contains Standard		
Enabling Objective	Supports Terminal Objective Yes / No	Lower than Terminal Objective Yes / No
Enabling Objective 1		
Enabling Objective 2		
Non-Related Topical Area Objectives		
Terminal Objective 1	Yes	No
Contains action verb Application (Precision) or higher		
Contains Condition		
Contains Performance		
Contains Standard		
Enabling Objective	Supports Terminal Objective Yes / No	Lower than Terminal Objective Yes / No
Enabling Objective 1		
Enabling Objective 2		
Terminal Objective 2	Yes	No
Contains action verb Application (Precision) or higher		
Contains Condition		
Contains Performance		
Contains Standard		
Enabling Objective	Supports Terminal Objective Yes/ No	Lower than Terminal Objective Yes/No
Enabling Objective 1		
Enabling Objective 2		
Topical Outline		
	Yes	No
Outline includes all topics needed to support objectives		
Outline has a topical sequence		
Outline is complete		



APPENDIX D Practical Exercise Rubric

Page 2

Test Questions				
	Question contains a stem	Question contains one correct answer	Question contains three distractors	Question relates to an objective
Question 1	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Question 2	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Question 3	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Question 4	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Question 5	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Level 1 Evaluation				
	Addresses a component of training	Item allows participant to provide feedback	Likert scale has a response range	Likert scale has odd # of responses
Item 1	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Item 2	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Item 3	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Item 4	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>
Item 5	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>	Yes <input type="checkbox"/> No <input type="checkbox"/>



APPENDIX E

Practical Exercise Topical Outline

Develop a course outline that contains all topics needed to support the stated objectives, and has an appropriate topical sequence.

Course Title

Topics to be included

Topical sequence

Use an outline format to list topics in an appropriate sequence.



APPENDIX G

Level 1 Evaluation

Compose a five-item list of Level 1 Evaluation items. Construct a Likert Scale for each item. Continue on reverse side.

Item 1-

Likert Scale

Item 2-

Likert Scale

Item 3-

Likert Scale



APPENDIX G

Page 2

Item 4-

Likert Scale

Item 5-

Likert Scale



APPENDIX H

Cognitive Domain	Psychomotor Domain	Affective Domain
<p>Remembering Defines, describes, lists, identifies, matches, names, recalls, recognizes, selects, and states.</p>	<p>Imitation Copy, follow, replicate, repeat, mimic, imitate, and reenact.</p>	<p>Receiving Ask, chooses, describes, follows, gives, holds, selects, relies and uses.</p>
<p>Understanding Converts, defends, distinguishes, estimates, explains, generalizes, gives examples, of, infers, interprets, paraphrases, rewrites, and summarizes</p>	<p>Manipulation Recreate, build, perform, execute, and implement.</p>	<p>Responding Answers, assists, aids, complies, conforms, performs, practices, presents, reads, recites, reports, selects, tells, and writes.</p>
<p>Applying Applies, changes, computes, constructs, demonstrates, manipulates, modifies, operates, predicts, prepares, produces, shows, solves, and uses.</p>	<p>Precision Demonstrates, completes, controls, perfects, performs, and shows.</p>	<p>Valuing Completes, demonstrates, differentiates, explains, follows, forms, initiates, invites, joins, justifies, proposes, reads, reports, selects, shares, studies, and works.</p>
<p>Analyzing Analyses, breaks down, compares, contrasts, diagrams, differentiates, distinguishes, identifies, illustrates, relates, and separates.</p>	<p>Articulation Construct, solve, combine, coordinate, integrate, adapt, develop, formulate, modify, and improve</p>	<p>Organization by Values Alters, adheres, arranges, combines, compares, completes, defends, explains, formulates, identifies, integrates, modifies, organizes, prepares, relates, and synthesizes.</p>
<p>Evaluating Appraises, compares, concludes, contrasts, criticizes, critiques, defends, evaluates, interprets, justifies, summarizes, and supports.</p>	<p>Naturalization Design, specify, manage, and react.</p>	<p>Characterization by Values Acts, discriminates, displays, influences, listens, modifies, performs, practices, proposes, qualifies, questions, revises, serves, solves and verifies.</p>
<p>Creating Categorizes, combines, compiles, composes, creates, devises, designs, explains, generates, modifies, organizes, plans, rearranges, reconstructs, relates, reorganizes, revises, rewrites, summarizes, and writes.</p>		



APPENDIX I





APPENDIX J

Kirkpatrick Model of Training Evaluation

The Kirkpatrick model of training evaluation contains four levels of assessments.

The first two levels are of immediate interest to the course designer/developer in that they provide an immediate feedback on the course and its effectiveness.

Level 3 is important to determine whether a training program is having a positive influence on the behavior of the participants who have taken the training.

Level 1: Reaction

This level addresses the degree to which participants find the training favorable, engaging and relevant to their jobs. This assessment occurs immediately after the conclusion of the course and its testing procedures, and aims to assess the participant's reactions to the program.

Level 2: Learning

This level addresses the degree to which participants acquire the intended knowledge, skills, attitude, confidence and commitment based on their participation in the training. The assessment item in this level is the test or assessment contained in the training program.

Level 3: Behavior

This level addresses the degree to which participants apply what they learned during training when they are back on the job. This level can be assessed by using course follow-up surveys gauged to assess the degree to which a participant in the training program has used the information or skills in their duties.

Level 4: Results

This level assesses the degree to which targeted outcomes occur because of the training program. Stated differently: to what extent, if any, has an organization altered its procedures or operations.



APPENDIX K

Content Validity Analysis

The following table is a test content validity analysis for “Instructional Systems Design.”

This table uses the following format: **Test Question Number** followed by the number of the **Terminal Objective** and **Enabling Objective**, to which the question relates, followed by the **Lesson Plan Page Number** where the test question information is found.

Example:

- Test question 1 reads: **T1E1:1**. This means that test question 1 relates to Terminal Objective 1, Enabling Objective 1, and the answer is found on page 1.

Lastly, an Instructional Objective Count is provided that indicates the number of questions that test each objective.

Instructional Systems Design	
1. T1E1:1	11. T3E2:7
2. T2E1:3-4	12. T4E1:19-21
3. T2E2:5-6	13. T4E2:19-21
4. T2E2:4	14. T1E1:2
5. T2E2:5	15. T5E2:24-25
6. T3E1:7	16. T6E1:26
7. T3E3:13,16,17	17. T6E2:26
8. T3E3:13	18. T4E2:23
9. T3E3:15	19. T7E2:28
10. T3E3:15-16	20. T7E1:30

Instructional Objective Count

IO#	T1E1	T2E1	T2E2	T2E3	T3E1	T3E2	T3E3	T4E1	T4E2	T5E1	T5E2	T6E1	T6E2	T7E1	T7E2
Tested	2	2	3		1	1	4	1	2		1	1	1	1	1