

Objectives

After successfully completing this course, you will be able to:

- ✓ Illustrate how the communication process includes: sender, message, medium, receiver, filter, and feedback
- ✓ Describe the importance of an instructor maintaining a safe environment while training
- ✓ Explain the process for demonstrating a technique to students
- ✓ Assess the various types of instructional media to include the benefits and limitations of each
- ✓ Explain the fundamentals of student motivation and creating a positive learning environment
- ✓ Diagram the four stages of instructional delivery from a prepared lesson plan; these include preparation, presentation, application, and evaluation
- ✓ Recall the importance of instructor credibility by providing a well-prepared presentation and instructor appearance

Unit 1: Introduction

NFPA 1041 is divided into three certifications at the NPQ/IFSA level: Instructor I, Instructor II, and Instructor III. These levels represent the various degrees of knowledge and skills required to function as an instructor. This standard affects firefighters, company officers, chief officers and fire academy personnel (training officers).

The first level introduces student learning psychology, preparing and presenting a topic, instructor credibility, and assessment requirements. The second level addresses curriculum development and provides additional information on the requisite knowledge and skills of level one. The third level prepares the instructor for selecting instructors, proposal developments, bid specifications, in-depth training analysis and training-related investigations.

Combined, these three levels provide a natural progression for an individual to develop from entry-level instructor to chief of training.

Note: Not all 50 states have an Instructor III certification. Certifications are mostly awarded through two accreditation agencies: the International Fire Service Accreditation Congress (IFSA) and the National Professional Qualifications (NPQ), also known as Pro Board.

Unit 1: Introduction

Why Be a Fire Service Instructor?

In-service training consists of training personnel at your station or neighboring stations. This provides an opportunity to apply instructional techniques with a prepared lesson plan. This can be conducted in the presence of experienced personnel, who assist the new instructor in developing their own instructional style. It's also a chance for personnel to mentor new firefighters coming to the station. In-service training provides an opportunity to learn each other's strengths and weaknesses.

Any good supervisor has learned to guide and coach employees. As an officer prepares his or her crew for the unknown, they are taking the time to teach their firefighters. The same instructional techniques learned through being an instructor are applied here as the officer strengthens their crew.

What kind of impact can you have?

Did you have a mentor who took time to show various fire-attack techniques?

Did someone in your life take the time to provide you with life tools to be successful?

We all need assistance in our life to reach our full potential. Who can you help today?

As an instructor, you will influence and impact the lives of others by:

- Promoting positive values
- Breaking down bad habits
- Building up new knowledge and skills
- Constructively motivating

Remember, enthusiasm is contagious!

Instructor Roles

Professionalism requires specialized knowledge and long, intense preparation that includes:

- Learning – Learn new skills, stay abreast of changing technology, and study the craft of firefighting including the newest science.
- Maintaining – Sharpen your mind and body but learn to perfect your skills and knowledge.
- Committing – Committing means sharing the knowledge. Pass along your knowledge, as doing so may prevent a needless accident.

Unit 1: Introduction

Communication

What are ways which we communicate? Verbally, gesturing, expressions, and in writing are a few.

Communication is a two-way process that includes a sender and a receiver. If any part of this process fails or misinterprets the message, a negative consequence may occur.

The communication model includes the following:

Sender – Individual sending the message. Be clear and concise without overloading the receiver.

Receiver – Individual receiving or decoding the message. Listen to the message and repeat to ensure you receive the message correctly.

Message – The content of what is being delivered. In stressful situations, it is important to be extremely clear with no ambiguous statements.

Medium – The channel or means of how the message is conveyed. Face to face is always the best; however, this is not always possible which means that the other parts of communication become that much more important.

Filter (Environment) – The distractions involved in the station and throughout an incident can affect what is decoded by the receiver. Consider the individuals who do not know how to talk on their radio and you receive broken transmissions or just a muffled sound. Other distractions can be stress, noise, or emotional and psychological factors.

Feedback – This is the most important component due to the fact that this is your check and balance on how the message was perceived. Allow the receiver to provide feedback on what they interpreted and the sender should acknowledge if it was correct or needs adjustment. This is the opportunity for others to provide information which may not have been available prior to a decision being made; however, it is prior to an action taking place.

Hearing is different from listening

The following is an urban legend of communication between a U.S. naval ship with Canadian authorities off the coast of Newfoundland in October of '95.

Americans:	Please divert your course 15 degrees to the north to avoid a collision.
Canadians:	Recommend you divert YOUR course 15 degrees to the south to avoid a collision.
Americans:	This is the Captain of a U.S. Navy ship. I say again, divert YOUR course.
Canadians:	No. I say again, you divert YOUR course.
Americans:	THIS IS THE AIRCRAFT CARRIER USS NIMITZ; WE ARE A LARGE WARSHIP OF THE U.S. NAVY. DIVERT YOUR COURSE NOW!
Canadians:	This is a lighthouse. You make the call.

Listening requires skills such as concentration and attention. You may hear what is being said, but are you interpreting that information?

In a 24-hour period, most people, on average, have spent 60-70% of their day communicating in some manner, be it through writing, reading, speaking, or listening. Reading may not seem like a form of communication, but it involves transferring an author's message or information from the pages (the medium) and interpreting that information for understanding.

An average of 40% of daily communication is spent listening; that percentage increases to over 50% for students in class. This suggests that listening is an essential requirement of communication.

Speaking Techniques

Learn, practice, and perfect speaking skills. Many people see public speaking as a horrific situation, but it doesn't have to be with practice. Use a mirror or video tape yourself as you practice. You will be your toughest critic.

When you are in class, focus on the students' attention span and use inflection in your voice to alter the importance of points. Using inflection also allows you to remain unpredictable to some degree; monotone equals boredom.

Recognize your own distracting techniques and get rid of them. It could be the use of a crutch word, tapping keys, clicking pen tops, chewing gum, etc.

Unit 1 Summary

The instructor position, whether formally at a fire academy or informally at the station, is one of the most influential roles in the fire service. Instructors are given the opportunity to develop and mold firefighters into desired products. However, the instructor must never stop learning and should continue self-development throughout their careers.

As an instructor, communication skills are vital to your success and ability to translate key points and details related to the training session. You will learn to communicate with various personalities that will ultimately prepare you for a role as a company officer or chief officer. An effective communication process is a series of steps: sender, receiver, message, medium, filters and feedback, which play a part and must be understood by the instructor.

Unit 2: Instructor's Role in Safety

Terminal Performance Objective:

- Examine the instructor's duties and expectations to ensure the safety of students and other instructors.

Enabling Objectives:

- The student shall examine the importance of using safety plans during training evolutions.
- The student shall review methods of preventing training-related accidents.
- The student shall examine resources available for safety guidelines and regulation implementation.

Introduction

Training is a learning environment and should be a safe place for students to obtain knowledge and skills. There is no need for senseless injuries or deaths; therefore, safety is the most important aspect to consider during any training plan.

The Safety Concept

The primary purpose of training is to learn, educate, and gain knowledge. Decisions and actions made on an incident come from training that was modeled and reinforced by instructors.

Reinforcing Safety

Safety must be emphasized at every event. For example, during a live fire training drill, safety should be stressed during the set-up, walk-through, pre-burn briefing, operations, and the critique. Instructors must prepare for the unknown. There may be situations and occurrences that you have never experienced before, like mask failures or something or someone standing up in a burn building. Knowing how you should react prior to the event is beneficial.

Students are a direct reflection of their instructors, so reinforcing the importance of safety and ensuring concern for their well-being, will translate to better-prepared and safety-conscious future instructors.

The Safety Plan

All organizations should have an established safety plan for every training event. Review the document at least annually; however, reviewing before high-hazard training is a recommended best practice.

Students should be informed of the safety plan and know what constitutes an emergency.

Unit 2: Instructor's Role in Safety

Accident Prevention and Management

What is an accident?

An accident is a sequence of unplanned or uncontrolled events that produces unintended injuries, deaths, or property damage.

Accidents are predictable and preventable at some level, although it may be difficult to foresee. The major focus is to prevent loss of personnel and time.

Managing Accidents

- **Identify** the factors which led up to similar accidents. This is best completed in a proactive state versus a reactive state. The *Jones and Bartlett Training Officer's Desk Reference* discusses the use of cause maps to assist in identifying cause and effect.
- **Investigate** any situation which may cause concern. This is best conducted in a proactive state. If you see a situation in another community which could happen in your department you should study it. You will be better prepared for an accident if not completely capable of preventing it.
- **Analyze** trends in your own department and surrounding areas. See if you notice anything common between geographical areas (rise in fires), or with a specific manufacture (equipment failure).

Accident Factors

The following factors are significant and contribute to each other.

Common Factors:

- Management – mismanagement or omissions of procedures or best practices
- Situation – facilities, tools, and equipment in disrepair
- Environment – noise, vibration, and temperature extremes affecting training
- Human – individuals and their experiences

The human component may be the largest part of accident factors. The three major factors are:

- Improper attitude – being irresponsible, egotistical, obsessive, etc.
- Lack of knowledge or skill – being improperly informed or trained, resulting in poor decision-making
- Physical limitations – differences in hearing and vision acuity, limited strength, medical conditions

It's important to note that trends show a slight decrease in firefighter deaths and injuries. This decrease can be attributed to the following factors:

- Safety Conscious – We are learning more and becoming more aware of the hazards surrounding us.
- Improved Training – Training technology and experience has increased in many areas and allows us to develop content and deliver skills which many were unable to acquire years ago.
- Proper Use of Incident Command System – The ICS has given us a method to ensure accountability on the incident scene.
- Preventative Maintenance – More departments are considering maintenance programs to ensure equipment is in proper working order; this includes PPE, SCBAs, and apparatus.
- Improved Engineering – The following improvements have contributed to firefighter safety and accident reduction: PPE that withstands direct-flame impingement for 17 seconds, high-temperature lenses tested at 500 degrees, thermal imaging cameras that can be worn with a lanyard, and apparatus designed with the firefighter in mind.

There are many government agencies that play a role in developing safety statutes, guidelines, and regulations aimed at continuously improving procedures, methods, and equipment, to name a few. These resources are as follows:

NIOSH (National Institute of Occupational Safety and Health)

- Purpose is to investigate and research

OSHA (Occupational Safety and Health Administration)

- Purpose is to set and enforce regulations

NFPA (National Fire Prevention Association)

- Purpose is to develop safety standards and guidelines

NIST (National Institute of Standards and Technology) and UL (Underwriters Laboratories) – Fire Safety Division

- Purpose is to develop and apply technology, measurements, and standards

ASTM (American Society for Testing and Manufacturing)

- Purpose is to develop and research standards

How to Apply This in the Field (Please Note: “How to Apply This in the Field” sections are at the end of each unit and are for supplemental purposes only. They are not a requirement for course completion.)

Develop a Safety Plan documenting the safety precautions which need to be considered for an in-service drill at your station. Consider the common factors involved in accidents and develop methods to proactively mitigate the potential accident. As a follow-up to this exercise, research the topic, reference applicable organizations, and document the references in your safety plan. For example, students shall have completed NFPA 1001: Job Performance Requirement (JPR) 5.3.1 prior to entering a live fire-training evolution. This provides a crosswalk between your training and the applicable standards and recommendations.

Unit 2 Summary

The instructor orchestrating the training session must remember they ultimately are responsible for what occurs while on the training ground. Even in the best-case scenarios, incidents can and will occur. The key aspect for the instructor is to ensure they have properly planned for the events through the implementation of a safety plan and mitigated any concerns proactively. There are many resources available for the instructor including National Fire Protection Association Standards, Occupational Safety and Health Regulations, or the International Society of Fire Service Instructors.

Unit 3: Demonstration Techniques

Terminal Performance Objective:

- The student shall deliver a 2–4 minute demonstration of a known topic.

Enabling Objectives:

- The student shall apply the three-step procedure to a skill demonstration.
- The student shall apply the proper technique and steps within the skill demonstration.

Introduction

Students learn in a variety of methods, and it is the job of the instructor to use as many methods as possible in order to ensure the greatest number of students benefit from the training. The demonstration step is one method which includes the cognitive and psychomotor applications.

The cognitive aspect provides the knowledge or information from the instructor. The instructor may elect to use a form of multimedia, such as a PowerPoint presentation, to assist providing information. Another option is to forego the distraction of a PowerPoint and simply provide the information directly from the instructor, with a prop or tool in hand. Many times, especially when there is limited time for training, such as in a volunteer setting or a quick in-service training, it is best to create a semi-circle and demonstrate or discuss the topic.

For example, consider a scenario where the training topic is based on safe chain saw use. A PowerPoint and discussion at the kitchen table only provides a limited perspective, however, placing the chain saw in the hands of those in the training provides a much different perspective. In the second part of this example, the students can feel the weight, experience the recoil of the pull string, the noise, and the throttle reaction. These “extra” items cannot be intimately felt in the classroom or at the kitchen table, which is why the demonstration aspect is so important to our ability to learn and retain knowledge and skills.

Consider the following when developing a training session:

Prepare – The instructor must prepare the materials and ensure the resources are available for use. One aspect of this preparation for the instructor is to study the materials and ensure up-to-date knowledge on any new best practices or technologies which may be available.

Tip: make a point to review materials a week in advance to refresh your memory, and jot down any recent learned events or experiences that may be relevant and will supplement the training. It’s best to have a well-focused mind on the topic to be presented.

Plan – The instructor should develop a plan or “road map” of what is to be accomplished during the training. Even a 2–4 minute demonstration should include an introduction, objectives, content, a summary, and questions.

Tip: jot down topics to be discussed and keep it handy for quick reference; it will keep you on task and ensures all intended content is shared.

Practice – All instructors should practice their topics whether it is a lecture or demonstration. The instructor must present themselves with a skill set at a mastery level. Remember, “Perfect Practice Makes Perfect.” Completing the task or drill one time does not equal perfection. In the world of advanced decision-making skills, perfection is measured by how well an individual can adapt to a situation. This ability to adapt can only come from perfecting your craft through knowledge and skill development.

Technique

Once all the preparation work, planning, and practicing is complete, the next step is to perform the demonstration during the learning session. When you are conducting the demonstration, there are a few techniques to remember that will assist the students in retaining the knowledge and skill.

- Perform the demonstration in real time from start to finish. This allows the student to analyze the expectation of how the skill should be completed in a real setting. For the instructor, this does not mean to conduct the demonstration as fast as you possibly can.
- Next, repeat the demonstration in a slow-motion version. This may need to occur multiple times for the students to grasp the concept. One consideration here is to take the demonstration in steps, for example, think about tying a knot. First, you make a bight. Second, you run the running end around the standing end. Third, you pull the running end through the bight. This creates a figure-eight knot. This can be applied to any demonstration.
- It is very important to ensure distractions are absent during this learning phase. As well, the steps must be completed accurately with no mistakes.
- This is an opportunity for the instructor to offer suggestions, guide actions, and coach the student.

Student Application

Once the student has begun to work through the skill, they should demonstrate to the instructor just as the instructor originally did for them. This is a three-step process from start to finish for any demonstration:

- 1) The instructor shows and tells the student.
- 2) The instructor shows as the student tells the instructor.
- 3) The student shows and tells the instructor.

How to Apply This in the Field

Develop a 2–4 minute topic to be delivered in the station with your crew. This may be longer if you choose. The key is to prepare your materials, plan the demonstration, and practice the skill set. Once you are ready to deliver the demonstration, select a place and time. Make sure to follow the three-step process for application.

Unit 3 Summary

The demonstration step is typically used in the application stage of the presentation and incorporates the ability of the student to be able to apply the cognitive domain of learning (knowledge). The instructor must ensure they are competent in the skill being demonstrated by preparing, planning, and practicing the skills beyond the level of perfection. When the instructor actually performs the skills, they should be shown in real time first and then slowed down to show the various stages or steps within the skill. Students should be given the opportunity to practice the skill multiple times with the instructor coaching the student as needed. The three-

step process for demonstration technique includes the instructor showing and telling, the student telling while the instructor shows, and the student telling and showing the instructor.

Unit 4: Instructional Media

Terminal Performance Objective:

- The student shall apply three different visual aids to the demonstration from Unit 3.

Enabling Objectives:

- The student shall understand the purpose and need for instructional media.
- The student shall examine how to properly select instructional media.
- The student shall examine factors pertaining to non-projected and projected instructional media.

Introduction

A picture is worth a thousand words. Consider describing a spiral stair case with words only and no picture. You may say there are steps every eight inches which curve to the right around a center piece from the first to second floor with railing on both sides of the stairs. Then, there is the type of products used (wood, iron, brick, etc.), and you must consider how intimately the student must be with the description. Is this simply awareness or are they expected to know the internal workings? We can say all of this and even write several pages, however, a simply picture can perform the same function. Now, the words become ancillary materials and supplement what the picture is saying.

Consider the following: Have you ever attempted to describe to a friend or family member what it is like going inside a burning building? Most would agree it would be so much easier just to show them.

Retention

Using multiple types of instructional media assist in increasing the retention rate of students. The key focus is to touch as many senses as possible without harming the students. The more senses involved, the higher the retention rate. Similarly, the more realistic the training, the more vivid the experience will be ingrained in the student's memory.

Consider the following data on retention rates. We retain:

10% of what is read

20% of what is heard

30% of what is seen

50% of what is seen and heard

70% of what is described in our own words from seeing and hearing
90% of what is described while performing a task
100% of what is experienced

As you can see, the more senses an instructor can relate to during a training event, the better the student will recall the information at a later date.

Selecting Instructional Material

Consider the following:

Behavioral objectives and content – Ensure the instructional media supports the objectives and content of the learning session. For example, using a PowerPoint through an entire workshop on team building without having the students performing team-building exercises may not be the best use of instructional media. As well, watching a video on chain saw operations may be initially beneficial, but it cannot take the place of holding on to a real chain saw.

Required learner performance – Determine if this an awareness course or expectation of master performance. If this is an awareness course, a simple video, PowerPoint, or walk-through may suffice. However, if the expectation is mastery performance, the student will need to be placed in a realistic situation, such as a live fire drill or hazardous materials incident while wearing a Level A suit. Ensure that all applicable job performance requirements from NFPA or other regulations are included in the performance level required for successful completion.

Class size and interaction – Determine how intimate the session will be. If there are 200 people in an auditorium, the use of a flip chart may not be appropriate. However, using the same topic and placing it inside the fire station for 15 people may be very appropriate. The use of a flip chart is a lost technique; however, it can elevate your presentation through your ability to articulate the information in a visual format while discussing the materials. It is also important to consider the amount of interaction you wish to obtain during the presentation. If the intent is to have a large amount of interaction, a smaller group (station level) may be more appropriate than addressing the entire department. Individuals tend to be more open in smaller settings, which may provide you with better feedback and healthy discussions.

Media equipment flexibility – Simply stated, if you need to conduct training on the drill ground to convey a clear perspective of the drill, a projector is not appropriate. Consider your environment when selecting the appropriate media and necessary equipment.

Pace of learning – Instructors should consider the pace of learning and how fast or slow individuals will learn based on numerous factors. These factors could include

experience, education, background, and geographical location of upbringing. When considering the various factors that may impact the pace of learning, develop instruction to include as many senses as possible. Provide ancillary materials in addition to the standard class, especially if personnel have a lesser amount of experience with the topic.

Practice factors – Depending on the intent and objectives of the class, make sure to consider the amount of time needed for adequate practice. Refer to the demonstration discussion and, if possible, always include an application time. This is where the student can manipulate the props and add to their experience level. If application requires a sufficient or necessary level of competency, then media in the form of props is best suited for the class; consider the chain saw example provided earlier.

Integration of multi-media

As discussed earlier, the more senses included in the instruction, the higher the students' retention of the information. However, integrating multiple media aids into a session requires preparation and planning. Students should be able to focus on one media aid at a time. If the instructor is using a prop, they should show the prop and then put the prop away so students are not distracted by looking at multiple aids or props.

Types of multi-media

There are various types of multi-media aids or props available; each has advantages and disadvantages for use. The instructor must determine which type best suits the students and the environment where the media aid will be used. We will discuss several of the common types and their application. It is important to remember that the instructor should attempt to use various types to provide different learning opportunities for the various students. Instructors should not become dependent on one specific type of media, such as PowerPoint. While PowerPoint can be a useful tool, it can be overused, and instructors tend to read slides versus explaining the topic contents. Instructors should be able to adapt if the PowerPoint or any other type of media aid was to malfunction during a training session.

Chalkboard – The chalkboard is inexpensive and can be reused repeatedly. However, the materials cannot be saved and cannot be transported (in most cases). As well, the chalkboard is usually limited by how many students can see the board.

Dry-erase board – The dry-erase board is similar to the chalkboard but with the benefit of more color availability (markers) and less cleanup required. Smaller boards can be transported to various locations and can be relocated to meet the needs of the students. One area of concern is to ensure markers work prior to class. Be careful with the use of yellow and orange, as they may be difficult to see if there is glare from lighting.

Easel pad – The easel pad or flip chart uses the same principles as the dry-erase board; however, it typically can be transported easily and reused. The easel pad or flip chart is a very inexpensive media aid, yet highly effective when used in an appropriate manner.

Illustrations and display boards – These are pre-designed boards which display processes or breakdowns of complicated equipment. This can be useful for showing the internal workings of a hydrant or engine parts. They can be reused multiple times and can be very beneficial when attempting to show working parts.

Duplicated materials – Students typically rely on handouts or ancillary materials to recall information after class. These duplicated materials assist in reinforcing key points from the course.

DVD and Videos – These materials can be used to briefly show further demonstration or provide more explanation of the topics discussed. They can also offer credibility to an instructors' presentation by showing experts discussing the topics.

Interactive Media – Using simulation software can be expensive, however it offers valuable learning. Interactive media has been used successfully in preparing for promotional exams, developing experience, recreating past incidents, and training for adaptability.

How to Apply This in the Field

Using your presentation developed in the previous units, insert at least three media aids. Consider the various senses that can be influenced and impacted by the addition of media aids for your particular topic. For example, if you are providing an in-service session on forcible entry, remove the tools from the apparatus, use a YouTube video displaying forcible entry, and use the station door as a prop to simulate forcing in a real environment.

Unit 4 Summary

The use of instructional media can aid in the retention of student learning if used properly. Instructors should explore the use of various types and use a blended approach. For example, the *International Society of Fire Service Instructors: Live Fire Credentialing Program* uses a flipped-classroom methodology. The students review the text book along with computer-based training and must successfully complete a final assessment prior to the actual class. Once students arrive at the class, instructors review key topics and facilitate discussion based on the local environment (resources,

staffing, standards, etc.) and complete hands-on training. This flipped-classroom method allows the student to learn the cognitive portion (knowledge) at their own pace and then apply the psychomotor portion (skills) during the training session in the presence of trained instructors. As with all media aids and props, there are advantages and disadvantages to each; the instructor should test the media aid and prop to determine if it is suitable for the learning environment prior to the training session.

Unit 5: Instructional Delivery

Terminal Performance Objective:

- The student shall apply instructional delivery techniques in a training session.

Enabling Objectives:

- The student shall apply the four-step training development process.
- The student shall describe the various types of deliveries.
- The student shall demonstrate the use of questioning techniques.

Introduction

The delivery of the presentation is where all your hard work reveals itself to the audience. You have prepared your presentation, researched the topics, formatted your delivery, and developed key questions to provoke thoughts. All of this work is completed prior to ever stepping in front of the audience. There are a few items to remember in order to create a well-structured delivery. These items include creating a positive environment, using the four-step training process, using various types of deliveries depending on the environment, and the use of questioning techniques.

Positive Environment

The instructor should create a positive environment by following a few simple recommendations. If the students are turned off, they will not be willing to learn, or will be incapable of learning due to the distractions.

- Use enthusiasm rather than theatrics. Students want to have fun but learn as well.
- Follow lesson plans to establish sound teaching methods.
- Ensure that the objectives are discussed in the beginning to provide a roadmap of what will be accomplished.
- Interject humor at appropriate times or tell funny stories. It is even acceptable to tell stories about yourself in a humble manner; however, stray away from stressful topics such as religion and politics.
- Add appropriate “stories” which will enhance the learning outcomes and provide a visual for the students to understand the application of the topic.

- Students will learn more from a full class discussion and sharing experiences than from simply lecturing. Involve the students as much as possible by asking questions and asking the students to share their knowledge.

Delivery Process

The delivery process includes four steps which will guide you in delivering a training session. The four steps include: Preparation, Presentation, Application and Evaluation.

Preparation

Instructors should prepare their materials, ensure the resources are available, and practice the training prior to the actual training session. The instructor should review the classroom arrangement, multi-media set ups, and determine the best delivery approach. Experienced instructors will learn to adapt their presentation style to their environment with little to no rearrangements.

Presentation

The presentation portion is the actual presentation of the course materials. Instructors should always practice their presentation, make notes, and ensure they know the time required for parts of instruction. At the beginning of the presentation, be sure to grab the student's attention with a motivational statement, cover the objectives, and ensure everyone understands the expectations to successfully complete the course.

Application

The application portion includes the demonstration unit discussed earlier and provides the students the opportunity to practice or experience the skill. For example, this could be using candles as a fire behavior experiment or tools during a forcible-entry drill. There should be an application stage integrated into each presentation that allows students to be involved as much as possible. The students will have the opportunity to learn the skill and it will provide motivation for continued learning.

Evaluation

The evaluation portion uses a variety of methods to check for student understanding. This can be in the form of assessments (written or practical) or the use of questioning techniques. The use of questioning can be an informal and effective method of checking for student understanding. It provides immediate feedback to the instructor who can then alter the presentation based on the feedback received.

Questioning Techniques

Questions can be used for various reasons to include: provoking a thought, stimulating discussion, checking for understanding, clarifying an idea, and maintaining interest. The questions should always be respectful and never to criticize to student. A simply method of asking the question includes the following: Ask, Pause, and Call.

Ask the question and then allow a 5–10 seconds pause for the students to process the question and formulate any opinions or follow-up questions. Last, call on a student or ask the class to discuss openly.

Types of Questions

Direct Question – A question directed at a student with a desired response.

Rhetorical Question – An answer is not expected; typically used to provoke thought. A rhetorical question can be an effective manner of transitioning topics or speaking points.

Instructor Question – These are the questions students ask you for clarification.

Group Question – These questions are provided to the group to start discussion and check for overall understanding. This is also an excellent opportunity for the class to reinforce key points.

Handling Questions

Always restate the question to check for understanding from both parties. If both parties agree to the question, briefly answer with direct responses that tie back to the content being covered. Be careful not to jump off track and waste valuable time necessary to complete the training session.

Planning for Questions

Attempt to determine what questions you will be asked or what parts of the presentation may need additional clarification. Be sure to write down class questions at the specific point in the presentation where they will make a point or clarify an understanding. Questions can be

strategically placed to perform all of the various methods discussed above: provoking a thought, stimulating discussion, checking for understanding, clarifying an idea, and maintaining interest.

How to Apply This in the Field

Further developing your presentation from throughout this course, use the four-step process to polish your delivery (preparation, presentation, application and evaluation). Develop several questions which can provoke a thought, stimulate discussion, check for understanding, clarify an idea, and maintain interest. Ensure that you develop answers to your questions.

Unit 5 Summary

The instructor should use the four-step training process to develop their training session: preparation, presentation, application and evaluation. It is important to format the delivery to provide a positive learning environment that translates into the student being able to learn. For example, using the facilitated-discussion method may not be the best choice in an auditorium with 200 firefighters. However, the facilitated-discussion method with 10 firefighters in the station may work perfectly. The use of questioning and its benefits can assist the instructor in adapting the presentation to fit the needs and pace of the students. These well-thought-out and prepared questions, which are strategically placed for the reasons discussed above, will provide direct and immediate feedback to the instructor on student understanding and motivation levels.

Unit 6: Testing and Evaluation

Terminal Performance Objective:

- The student shall develop an evaluation method for measuring the successful completion of a training session.

Enabling Objectives:

- The student shall examine the various methods of evaluation: prescriptive, progress, and comprehensive.
- The student shall discuss the various formats of evaluating a student: written, oral, and performance.

Introduction

The purpose of evaluating students is to formally check the level of student understanding; it provides information in comparison to a standard. These standards can be set by agencies, such as the National Fire Protection Association, where they establish consensus standards as the minimum expectations. Evaluations can also be used internally for promotional exams.

Types

There are two types of evaluations that can be used depending on the intent of the evaluation. Criterion-referenced and norm-referenced evaluations are used in the fire service.

Criterion-referenced – This type measures performance against a set of standards. This would be similar to state agencies using state assessments certified by agencies such as the National Performance Qualifications (NPQ) and International Fire Service Accreditation Congress (IFSAC).

Norm-referenced – This type discriminates against learners in order to determine a ranking. This would be similar to a local department conducting a promotional exam.

Purpose

There are various evaluation methods to consider: prescriptive, progress, and comprehensive.

Prescriptive – These assessments are typically referred to as pre-test, which can be used to determine placement or readiness. In order to check for understanding prior to attending the “relief driver course,” a department may provide an assessment to ensure the students are adequately prepared (prior to the course). This can also apply in a physical manner such as during a hiring assessment.

Progress – These assessments check for understanding throughout a training session. These could include questions and quizzes that provide feedback to the instructor on the student’s level of understanding during the course. The instructor can alter the class time depending on this feedback to provide additional clarification.

Comprehensive – This type of assessment is generally referred to as an exam or mid-term where a multitude of information is assessed at one time. This can be a state assessment for your Firefighter I exam or your Emergency Medical Technician (EMT) state licensing.

Format

Evaluations can be given in various formats such as oral, written, or based on performance.

Oral – These assessments are usually given one on one and require a board of experts to assess the answer. There must be a series of key points documented prior to the assessment. This format is typically used for “hot seats” during a promotional assessment. A well-trained

facilitator can adapt their responses based on the student's response to ensure the student has a competent level of understanding.

Written – This type of assessment can come in various methods; examples include true or false, matching, essay, and short answer. Written assessments check for understanding to ensure the student can recall and/or recognized the information. These types of assessments can be difficult to construct and require good distractors (false answers). The assessment should never provide the answer in the question, and there should never be two correct answers or trick questions.

Performance – This type of assessment displays the ability of the student to perform the skill in an environment that may closely relate to a realistic scenario. The performance assessment requires the student to manipulate the prop, tool, or apparatus to demonstrate competency. The use of performance-based assessments requires key actions to be documented for an answer sheet, to provide consistency from assessment to assessment.

Combination of Assessments

Commonly various types of assessments are used together to ensure that the student is assessed from a cognitive (knowledge) and psychomotor (skills) perspective. This combination provides a true assessment of what the student can achieve.

Tips for Evaluations

- Assessments should always be given in the environment where the student was trained.
- The objectives should tell the student how to study and directly reflect the assessment. For example, if the objective says to demonstrate, the assessment should include the student demonstrating the objective.
- Avoid providing clues to answers in other questions or distractors (false answers).
- Ensure the directions and questions are clear and concise. Remove ambiguous terminology or language not typical to the individuals being assessed.
- All objectives do not have to be assessed, however an adequate spread of questions from the entire content should be used to properly assess the student.

How to Apply This in the Field

Develop an assessment using the information discussed above to check for student understanding. If your presentation is designed around an in-service training, the use of specific questions can be used, such as direct questions for student understanding or group questions for provoking thought and sharing experiences. If your presentation is more formal, develop

simple multiple-choice or true/false questions. Ensure that your questions are not designed with multiple correct answers or are ambiguous in nature.

Tactical Decision Games

Tactical decision games were developed by Dr. Gary Klein for the military after studying fire-ground commanders as a method of training soldiers without the use of high hazard (real bullets) and costly alternatives. Dr. Klein worked with the incident commanders on the fire ground to observe how they reacted to each emergency. His goal was to document and develop a process which could be translated into the most meaningful training possible. This process of studying people performing their jobs in the real world (not a laboratory) developed the terminology we refer to as Naturalistic Decision Making and eventually gave birth to what is now known as Recognition-Primed Decision Making, or RPDM.

Dr. Gary Klein's Decision-Making Framework consists of the following.

- Diagnose the Situation (Size-Up)
- Is Situation Typical?
- Recognition of Cues, Clues, and Expectancies
- Mental Simulation
- Make a Decision
- Implement Course of Action
- Evaluate Actions
- Repeat

Here is an example of how to use a tactical decision game in the station to check for understanding with the use of a one-page lesson plan. The facilitator places the paper face down in front of the firefighter and tells them they have 30, 60, or 90 seconds to review the photo and answer the questions; the time depends on the complexity of the scenario and the Knowledge, Skills, and Abilities (KSAs) of the audience. This is also an excellent format to practice and discuss situational awareness, which is based on three items – 1) Identify the issue, 2) Comprehend what it is, and 3) Predict what is going to happen. In this example, the facilitator only acts as the timekeeper and reviews the key points of the exercise. In class, ask the students to discuss and compare their answers so they can learn from each other. This is an excellent tool to use for training in place of a PowerPoint to cover the same information. Www.FireServiceSLT.com provides multiple, free one-page lessons and tactical decision games.

Unit 6 Summary

The use of evaluation techniques can range from the formal written question with a specific answer expected, to the informal questioning of students to check for understanding. There are benefits to each technique, and each has a place inside the fire service. For example, the use of questioning as an evaluation tool in the station can lead to healthy discussion and understanding of expectations on specific tactics. The use of a formally written assessment can provide a promotional board the ability to rank candidates based on knowledge. It is also important to remember that one type of assessment is seldom adequate, and a combination of assessments should be used in order to provide a clearer picture of any individual's capabilities.

Fire Service Instructor I Course Conclusion

We have discussed the multiple phases within the NFPA 1041 Standard which will assist your development as an entry level instructor. The key is to use this new knowledge by applying it in multiple settings. For the firefighter just beginning their instructor development, you are encouraged to review the station training plans, select a topic with which you are comfortable, and develop a training session. Remember to follow the four-step process of preparing, presenting, applying, and evaluating to ensure your course is designed with the student in mind. Preparing means that you have researched the topic, acquired media aids or props, and developed the training session. Presenting is the actual delivery of the instruction which includes the cognitive (knowledge) aspect of the training. Included in the presenting stage is your technique for delivering the training and the format which you decide to use such as lecture, PowerPoint, or demonstration. The application stage is where the instructor follows the three-step process of showing and telling the student, the student tells while the instructor shows, and the student shows and tells the instructor. The application stage is also referred to

as the skills, or psychomotor, portion of the course, where students apply their new knowledge. The evaluation stage is where the instructor checks for student understanding through use of questioning or formal written questions. The end result is to provide a positive learning environment for the student, which includes their ability to retain as much information as possible. This retention leads to knowledge and skills applied at the incident scene.