

RUNNING HEAD: BEST PRACTICES FOR FIRE SERVICE INSTRUCTORS

Kansas Fire & Rescue Training Institute Training Methodology:

Best Practices for Fire Service Instructors

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The University of Kansas

Lifelong and Professional Education

Kansas Fire & Rescue Training Institute

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Kansas Fire & Rescue Training Institute
TRAINING METHODOLOGY

BACKGROUND

The mission of the Kansas Fire & Rescue Training Institute is to provide accessible, comprehensive training and credentialing for fire and emergency response personnel to promote health and safety in Kansas communities. (Strategic Planning Workshop Report, November 2020)

Communities across the United States have two expectations of their local fire departments: quick response times and towering competence. The public rightly equates quick response times and towering competence with life safety. Firefighters and emergency response personnel arriving quickly and safely to an emergency incident must be competent, which results from being well-trained.

The actions firefighters and emergency response personnel take on the scene of an incident are *always* a reflection of training received upstream. At some point in time, each emergency responder had to receive training before performing the appropriate actions needed to mitigate the incident.

A logical argument can be made that training *is the job* of a firefighter. Without vigorous and ongoing training, firefighters will not meet the expectations of their community.

ABOUT KANSAS FIRE & RESCUE TRAINING INSTITUTE

At Kansas Fire & Rescue Training Institute, we believe the best training is:

- Hands-on. Students need time during training to apply firefighting practical and soft skills.
- Risk-mitigated. As the level of training realism increases, so does the potential for accident and injury. We cannot guarantee safety, but we should always manage safety, mitigate risk, and create a safe climate adhering to standard practices.
- Realistic. Instructors and students should train as they intend to perform on incidents. Students should wear and utilize relevant personal protective equipment and conduct training as if it were a genuine incident.
- Affective. Includes increasing levels of controllable, stressful stimuli as evolutions move from simple to complex. Instructors should approach training with a crawl-walk-run mentality. Start slowly, build sequentially, and add increasing elements of positive stress – lights, radios, smoke, and then fire. The end goal is mastery under emergency conditions.
- Well-planned. Good training is planned with great attention being paid to the details. Instructors must plan every detail with intention and forethought for what students are expected to do.
- Evaluated. The instructor verifies that learning has occurred through witnessing the student's observable change in behavior. Similarly, students should confidently self-assess their progress towards completing the objectives. Students should also utilize confidential digital surveys to provide meaningful feedback on course design and instructor performance for program improvement.
- Accessible. Training should reach learners where they are at emotionally, cognitively, and physically. All students arrive with different levels of education, life experience, and skill. Good instructors meet students where they are at and build them up.
- Research-based. Content and skills taught should incorporate and comply with research-based best work practices and various recognized standards such as National Institute of Standards and Technology (NIST) and Underwriter Laboratories (UL) Firefighter Safety Research Institute.
- Fun. Training can and should be fun. Instructors should set the tone and be professional, passionate, and motivated.

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INCLUSIVE LANGUAGE

The correct and inclusive language to use for persons within this profession is *Firefighter*. Fireman and firemen are terms that fail to appreciate contributions made by women in the fire service. The language of “firefighter” shall be used by instructors at Kansas Fire & Rescue Training Institute.

TRAINING PHILOSOPHY

At Kansas Fire & Rescue Training Institute, instructors inspire firefighters to train and take individual responsibility for their training and development. Kansas Fire & Rescue Training Institute contributes to the process of developing firefighters into master’s of their craft to be skilled in the art of firefighting and fire service leadership. Well-trained firefighters lead to safer communities.

Kansas Fire & Rescue Training Institute will deliver realistic, hands-on training to our state’s firefighters in a manner that builds knowledge, skill, ability, and confidence. This training will be based upon the industry’s research leaders and guiding standards, including but not limited to NIST and NFPA.

Good training should be hands-on, realistic, and include increasing elements of positive stress. Training should be repetitive, allowing firefighters the opportunity to develop proficiency. Training should mirror the job functions as closely as possible so that firefighters train as they would perform in the field.

It must be understood that *firefighter training is not synonymous with military and boot camp training*. Instructors are not breaking students down and building them back up. Students learn best when an environment conducive to learning is established and enforced by the instructors. Instructors should establish a training culture in which students may willingly make errors and learn from them without punishment, ridicule, or embarrassment. For too long, failure in the fire service training environment has been met with taunting, scorn, and punishment by instructors. Students can and should occasionally fail in the training environment. Then, through collaborative dialog, instructors can coach to students correct and improve their performance. Structure, yes. Respect for command, yes. Regimented, maybe. U.S. Marine Corps boot camp, no.

In times of stress, firefighters will not rise to their expectations but fall to the level of their training. During extreme stress, firefighters generally lose the ability to be rational. They go “below the waterline” and resort to prior learning (Mission Centered Solutions). Therefore, we must build neural circuitry and automatic responses that are correct for the intended mode of application.

Consider that 75% of training emphasis should be on basic firefighting skills leading toward proficiency. Students should be inspired to continue training outside of limited class time to attain mastery. This training prevents firefighter injury. The remaining 25% of training should be focused on reactive, “low frequency and high risk” events such as rapid intervention training (Graham). Incident Commanders choosing the correct strategy and tactics, constantly evaluating the incident action plan, and operating from sound crew resource management principles will prevent more injuries and fatalities than any other training programs Kansas Fire & Rescue Training Institute can offer. Instructors must aim to build solid strategic and tactical skills in incident commanders. As Don Abbot of Phoenix Fire Department has long stated, “Firefighters die because they are operating in an offensive position under defensive fire conditions.” Strategy, offensive and defensive positioning, is an intentional command decision.

Technical rescue and hazardous materials operations are low frequency and high risk. Yet, each year there are few if any firefighter deaths on these incidents as compared to fire incidents. Why? Technical teams approach incidents very deliberately, methodically, and with a plan A, B, and C orientation. Fire responses often are less deliberate, more aggressive, and include fewer backup plans. Fire instructors have the responsibility to develop a more methodical, deliberate approach to firefighting that may save firefighter lives.

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Most civilian and firefighter fire-related fatalities occur in residential house fires (U.S. Fire Administration, 2018). Therefore, training evolutions and evaluations should often occur within the context of approximately 2,000 square foot residential houses with basements and attic spaces. Officers and firefighters should receive training sufficient to intentionally select operational strategies appropriate for incident characteristics and benchmarks achieved.

Demanding training evolutions and scenarios where failure is possible is okay for prepared students. Instructors should occasionally design training that cannot be completed or accomplished. Not every offensive fire can be won, and firefighters must be able to problem-solve in real-time. Firefighters proficient in basic skills need these scenarios to build grit and tenacity in the face of challenging incidents in the field. However, too frequent high-intensity or unavoidable failure scenarios may fatigue or demotivate students and should be implemented sparingly.

TRAINING PILLARS

- Establish good relationships with state fire departments and firefighters.
- Use lesson plans, clearly defined outcomes, learning objectives, and reference standards-based best work practices.
- Use a variety of teaching and instructional techniques, such as case studies and analysis, to reach learners at their experience levels.
- Demonstrate the best work practices including the skills and qualities expected of the students.
- Coach students through multiple repetitions of tasks under realistic and increasingly stressful, simple to complex, training sessions.
- Coach students so that they complete correct task sequences.
- Focus on basic firefighting skills using the mastery approach to learning.
- Prepare students for high-risk, low-frequency training evolutions.
- Provide high-fidelity tactical simulations as much as possible.
- Provide the largest impact on firefighter safety by offering training at the incident command level using strategic command simulation.
- Conduct pre- and post-mortem discussions, allowing students to reflect upon and learn from both sides of each simulation.
- Include an after-action review (AAR) following each training session for participants and training staff. Ask and answer:
 - What was the plan?
 - What happened?
 - Why did it happen?
 - What would we do differently next time?
- Request students to complete end of course evaluations of instructors and the course.

SAFETY

Fire department instructors should always set the tone of training safely. They should mitigate risk in a highly calculated manner within a training environment based on risk management axioms. There are several risk management axioms in the fire service, most can be summarized as follows:

1. We *may* risk our lives a lot in a highly calculated manner to save *savable* lives.
2. We *may* risk our lives a little bit in a highly calculated manner to save *savable* property.
3. We will not risk our lives at all to save that which is already lost.

The training environment is not a place where lives are being saved, therefore training instructors must carefully evaluate the risk versus the benefit that they are seeking from a particular training evolution.

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Remember that as the level of realism in the training environment increases, so does the potential for injury.

Live fire training, especially in acquired structures, or placing technical rescue trainees in trenches or high angle systems are examples of training that MUST be well-planned and coordinated. These scenarios also require the appropriate number of qualified instructors to be present for increased safety.

Incident command, tactical worksheets, accountability procedures, and incident safety officers are to be used in high-risk, low-frequency training evolutions. Incident safety officers should be unburdened with other duties to focus exclusively on safety. Back up team (RITs/RICs) assignments should be considered when appropriate.

During live fire training, applicable National Fire Protection Association (NFPA) standards, specifically NFPA 1403, should always be followed.

EXPERIENTIAL LEARNING

Historically, the depth of fire service training has been identified by the NFPA standards technical committees. Major publishers use those NFPA standards as a foundation upon which to develop curriculum. Too often, instructors read the illustrated lectures, such as PowerPoint, while the students sit passively in a classroom. While there is a time and place for passive classroom lectures, instructors should move away from this model with respect of the unique characteristics of adult learners.

Kansas Fire & Rescue Training Institute will lean heavily on experiential learning models to deliver active learning opportunities rooted in considerations for adult learning characteristics. Instructors “coach” students. Experiential learning is an instructional method where coaches purposefully engage with firefighters in direct experiences and focused reflection (AAR) to increase knowledge, skill, ability, and confidence. It is not enough to teach through war stories, analogies, or parables. Students must be given time to reflect, which may require guided questioning, so that they can relate the lesson to the topic at hand for themselves. Experience *and reflection* are the two keywords.

Experiential learning is often thought of as learning by doing. Experiential learning techniques may include cooperative learning activities (company drills, evolutions, scenarios), discussions, case study analysis, simulations, et cetera. Conducting training evolutions within 2,000 square foot residential structures is excellent context for performance-based training in light that more fire fatalities occur in that environment.

INSTRUCTIONAL MODELS

Instructors need to know several instructional models to effectively adapt lessons to diverse audiences. Instructional models are frameworks for delivering the best instruction to students in a way that enhances student learning and knowledge retention. The main takeaway is to allow students to see what best work practices look like, have an opportunity to practice the work, and the work must be evaluated.

4-Step (5-Step) Method of Instruction

Instruction is widely broken down into four steps (Oklahoma State University, 2019). Kansas Fire & Rescue Training Institute expands the 4-Step Method to five steps by also identifying the essential initial activity of “Planning”.

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1. **Planning.** The instructor identifies needs such as training location, course handout production, the presence or need for lesson plans, securing required technology and equipment, as well as any other scheduling and logistics work. Planning also includes reviewing the lesson plans and understanding what the students are expected to do to attain the objectives. Practicing the presentation of the content. Great training starts with great planning.
2. **Preparation.** Preparing the learner's mind to learn is a critical step in lesson delivery. Strive to gain attention and develop curiosity about the topic. Consider the acronym ACID: Attention, Curiosity, Interest, and Desire. Often fire instructors are overly reliant upon "war stories" to generate interest in the topic. However, a good instructor will find ways to relate and anchor the topic and new information to knowledge and experiences the students already have. It is easier to expand existing neural connections than to build new circuitry from scratch. Build upon the student's foundational knowledge and skills. Review the course objectives with students while showing them what behavior they are expected to perform.
3. **Presentation.** Coach students to perform the expected behavior. Show videos, models, engage students, lecture, provide handouts, read case studies, and more. During this time, remember to reach learners where they are on knowledge and emotional levels. Vary instructional techniques.
4. **Application.** Support students as they apply the knowledge learned through skills and drills evolutions. Worksheets, table-top exercises, simulations, and training ground drills are just a few examples of application methods. Scripts or sequences are used to identify task requirements. Coaches should interrupt performances that are not perfect to prevent an incorrect sequence from being completed ("successful failure").
5. **Evaluation.** Instructors assess that learning has occurred by witnessing an observable behavior. Evaluation (Assessment) is where we get to see this. Skills check-off sheets, maximum time requirements, and rubrics are commonly used here, as are written tests and practical scenarios. Evaluation can be informal or formal. In kind, students should be coached self-evaluate when their performance fails to satisfy the course objectives.

Performance-Based Instruction

Performance-based instruction, previously otherwise known as "training in context," is an instructional methodology popularized in the fire service by Dr. Brian Crandell and Dr. John Culbertson of Montana State University Fire Services Training School. It can be applied within the classroom or on the training ground (Crandell, 2017). It is easily recognized in that instructors show a task sequence, perfectly completed, then quickly place students in a position to physically go through the movements. The instructors then coach students through performing the task sequence a high number of times until the muscle memory is perfected. As students perfect the task sequence, coaches provide knowledge and content as needed to replace the traditional illustrated lecture. Evaluation of these performance routines is often a combination of perfection of sequence within a specified time allowance, as identified by both the student and the coach.

1. **Show Examples.** Show learning examples, videos, of correctly performed best work practices modeling proper techniques and sequence. Students need to know what right looks like. This would be synonymous with "Presentation" in the 4-Step Method of Instruction.
2. **Walk-throughs.** Performed on clear, level ground with students wearing normal clothing. Learners focus on the sequence of activities using body motion. Walk-throughs equate to the

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“Application” step in the 4-Step Method of instruction. Coaches support students as they crawl, walk, and then run. Students move through the entire best work practice, verbalizing skills and actions. Without tools, students simulate actual movement they will make when fully turned-out in PPE. Coaches may use checklists to track successful sequence completion. The coach guides students, politely interrupting when mistakes are made. During these interruptions, the students are questioned to self-identify the mistake before restarting the sequence from the beginning. Students should complete the sequence error-free before moving to the next step.

3. **Low-Speed Repetitions.** Students will then complete repetitions of the sequence with tools while wearing PPE at low-speed. Students making an error should be coached to self-identify the issue, self-identify the correction necessary, execute the correction, and then restart from the beginning of the sequence. Students should continue at low-speed until they can complete sequences error-free. This step is intended to automate perfect sequence performance. Students need to know the order.
4. **Real-Speed Repetitions.** Real-speed evolutions are the produce of continual successful completions of the low-speed repetitions. Students will perform the specific techniques in the proper sequence in real-time with live agents. Students should master the technique and sequence in real-time and self-coach and correct. Coaches should observe to prevent safety issues and successful failures of sequences.

Coaching is a critical element of the performance routine noted above to ensure students develop self-identification of success and error. If a student is performing a skill, technique, or sequence wrong, the coach should pause the sequence to interject as follows:

1. “Stop.” Have the student stop.
2. Ask the student, “What’s Going On?”
3. Ask the student, “What’s Your Plan?”
4. Have the student “Fix It.”
5. Ask the student to “Finish the Drill.”

EDGE

Boy Scouts of America have also developed a performance-based instructional model for skills instruction. The EDGE acronym is used in the development of their skills coaches. Using EDGE, instructors should:

- Explain to students the knowledge and/or skill.
- Demonstrate several repetitions of the skill at different speeds.
- Guide students and groups through the skill, allow for repetition of best work practices.
- Evaluate the skills with check-off sheets.

Seminary Leadership Coaching

Popularized by David Watson Cunningham (1981) and later by Michael Breen (2017), sequenced coaching is also a theme in seminary adult and youth leadership development. This coaching methodology is summarized by four phrases. In the first, the teacher demonstrates the task as in the previously described presentation step. In the second, the student applies new knowledge by assisting in the demonstration. The third phase places the student as the lead while the teacher assists. Both phases 2 and 3 relate to the application step. Finally, the fourth phase allows the student to build confidence in

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repeating the task independently, but under the watch of their teacher. In the fourth phase, the teacher is freed and able to evaluate the student’s progress.

- I do, you watch.
- I do, you help.
- You do, I help.
- You do, I watch.

See One, Do One, Teach One

Although the origin of this traditional teaching technique is unknown, it is widely used in medical schools and surgical residencies. This method imparts experience and observation in students while requiring them to think and act through deliberate practice (Kotsis & Chung, 2013). A quality mentor is a critical component of this instructional style.

- See an activity.
- Do an activity.
- Teach the activity.

COMPARING THE INSTRUCTIONAL MODELS

4/5 Step Method of Instruction (IFSTA)	Performance Routine Model (MFSTS)	EDGE (Boy Scouts)	See, Do, Teach (Unknown)	Seminary Leadership Coaching
Planning				
Preparation		Explain		
Presentation	Show Examples	Demonstrate	See one	I do, you watch
Application	Walk-throughs Low-speed repetitions	Guide	Do one	I do, you help
				You do, I help
Evaluation	Real-speed repetitions	Evaluate	Teach one	You do, I watch

CHARACTERISTICS OF ADULT LEARNERS

Instructors should recognize and leverage how adult firefighters learn. The adult learner (firefighter) is not as capable of developing new neural circuits and retaining random, novel information in the same way children are. Instructors can help firefighters more quickly receive and apply information by relating it to the knowledge they already know. The instructor can, and should, adapt the coursework to meet firefighters at their knowledge or proficiency level and then relate the new knowledge and skills to what they already know. Instructors should progressively “knit” new information to older established information.

Firefighters learn through three domains of application –by physically doing (psychomotor), by being emotionally impacted (affect), or by mentally processing (cognition) information. The recall or application of this information is largely restricted to the specific domain in which it was learned. For instance, an over-achieving recruit firefighter may possess the requisite knowledge to correctly perform psychomotor skills on the training ground, but they may fail a written exam for lack of practice applying that knowledge in the cognitive domain. To train a firefighter to be proficient in various recall methods,

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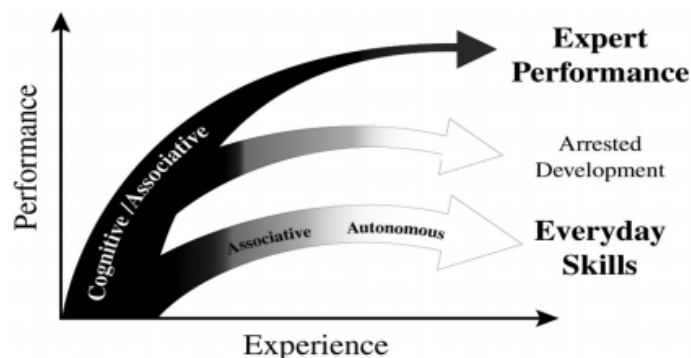
the information presented must be taught and evaluated in all domains of learning- psychomotor, emotional (affective), and cognitively.

Firefighters do not learn effectively through passive instruction such as having presentations read to them. Hearing and seeing information may allow firefighters to remember, or even to understand. However, active experiential learning by doing and reflecting upon the experience will greatly solidify information in a way that firefighters can use in analysis, evaluation, and creation. Through repetitive use and testing of information, firefighters can develop a strong command of their learning, resulting in everyday use of information and skills (Brown, 2014). When active learning is paired with a “more knowledgeable other” coach or mentor, firefighters can perform high-quality repetitions of information and skills (McLeod, 2019).

A key takeaway is that firefighters learn best when performance and reflection is paired with coaching and mentoring.

Instructors should recognize firefighter proficiency is not an indication of mastery. Being able to complete a task without thinking about it is a sign that firefighters have achieved a common performance level. This is often misjudged that they have attained an expert skill level. The firefighter likely has not achieved mastery or an expert performance level unless they can perform the task both quickly without thinking about it and very slowly while describing the steps (Ericsson, 2014).

It is understood that in a typical firefighting class, instructors will not have sufficient time to mentor or coach all firefighters through the high volume of practice necessary to achieve mastery. However, it is expected instructors will encourage firefighters to continue practicing independently after the conclusion of the class. Firefighters need to identify a mentor or training partner with more knowledge than themselves to help continue coaching them until they reach or exceed their performance goals.



LESSON PLAN DEVELOPMENT AND ADAPTATION

Needs Analysis

Before a course can be developed or adapted for delivery, the instructor should identify which observable in behavior are sought from the firefighters to which the course will be delivered. A need analysis can be conducted by analyzing the job compared to standards, policies, procedures, and subject matter experts. The difference between the department’s or student’s capacity to consistently attain those related items identifies the needed areas for observable in behavior.

Job Task Analysis

Instructors developing or adapting courses should identify needed areas for observable behavior and then conduct a job task analysis (JTA). The JTA breaks the observable behavior down to step-by-step

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sequences of tasks to bridge the gap identified by the needs analysis between the current capabilities and the related standards. JTA results may include skill sheets, rubrics, or other measurement tools.

Learning Objectives

The observable behavior established by the needs analysis serves as the foundation for the learning objectives. Good learning objectives help instructors plan and deliver appropriate instruction, design valid assessments, and ensure that instructional efforts are aligned with learning objectives. Objectives are written in consideration for the level of learning to which observable behaviors should change within the course as identified within the JTA. The objective also determines the domain (cognitive, psychomotor, affective) to which we primarily train.

As a guideline, each training session should have between 3-5 learning objectives. This keeps training sessions focused. Learning objectives should be stated to students before learning begins. This organizes student efforts toward accomplishing the desired behavior (instructors observe, then assess).

The ABCD method of writing learning objectives (Mager, 1962) answers:

- A. Audience: Who will be doing the behavior?
- B. Behavior: What should the learner be able to do?
- C. Condition: Under what conditions do you want the learner to perform?
- D. Degree: How well must it be done? Or, in what timeframe?

Example of learning objective:

Given a simulated 1st Alarm assignment, students will demonstrate establishing an initial ICS structure 100% of the time.

A = students

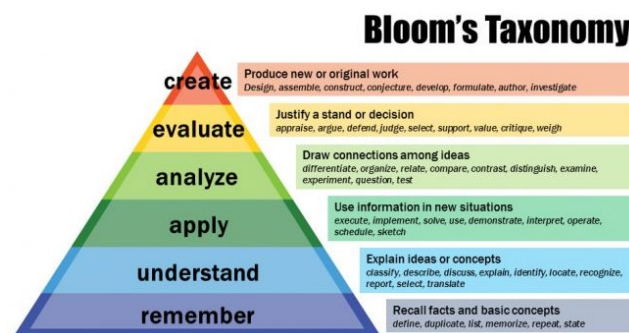
B = demonstrate establishing an initial ICS structure

C = given a simulated 1st Alarm

D = 100% of the time

The level of learning to which behavior should occur is indicated by the selection of the verb within the course objective. These verbs are frequently selected based on the work of Benjamin Bloom. Bloom's Taxonomy is a framework correlating the levels of expertise such as remember, understand, apply, analyze, evaluate, and create with representative verbs.

In this sample objective above, the verb, "demonstrate," is drawn from Bloom's Taxonomy at the "Apply" level of learning. To demonstrate this objective, students will remember previously learned knowledge, understand the scenario they are given, and apply both together to solve a problem.



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The levels of learning build progressively upon each other. Remember and understand are lower levels of learning as a student just needs to recognize (remember) and comprehend (understand) the information. Whereas a student must remember and understand before they can solve a problem (apply). As such, application (apply) and analysis (analyze) of information are medium levels of learning. Progressively, the highest levels of learning include being capable of evaluating the quality of material or actions and putting parts together to form (create) a new whole.

Another, modified way of writing learning objectives is to use the 3-step Mager model (Mager, 1962):

1. Establish Performance: What the learner will be able to do.
2. Establish Conditions: Under what conditions do you want the learner to be able to do?
3. Establish Criteria for Success: How well must it be done?

Under simulated fire conditions, firefighters shall advance an 1 ¾" attack line down an interior hallway to the seat of the fire within two minutes.

Student Assessments

An assessment, or evaluation, instrument will help the instructor conclude if the firefighter can demonstrate the intended observable behavior at the conclusion of the course. This assessment must be designed to measure the behavior to the degree specified by the objective. Consider the course objective to be the following:

Under simulated fire conditions, firefighters shall advance an 1 ¾" attack line down an interior hallway to the seat of the fire within two minutes.

A reasonable assessment for this course would be to put the firefighter under simulated fire conditions with access to an 1 ¾" attack line and an interior hallway. The instructor would need to ensure the firefighter followed the sequence or skill sheet resulting from the JTA and taught in class to execute the tactic within the designated time of two minutes. Firefighters failing to correctly perform this tactic within the time frame would not pass the course.

Lesson Plans

Lesson plans are very useful for instructors as they help shape the learning process. Even if not done in exacting detail, a rough sketch lesson plan with well-written learning objectives will be very useful for instructors in delivering high-quality training. The lesson plan is the instructor's roadmap to teaching the students how to perform the steps resulting from the job task analysis. Once the lesson plan is completed, students should be able to easily pass the end of course student assessment that verifies the course objectives were met.

Below is a sample lesson plan template that follows both the 4-Step Method of Instruction and performance routine instructional models.

**Kansas Fire & Rescue Training Institute
Fire Service Instructor Lesson Plan Template**

Title:	Location:
Author:	Time Frame:
Date:	Audience:

Planning

What have you done to plan your lesson? This might include securing equipment, locations where training will take place, scheduling the training, researching the topic, coordinating with others, watching similar training, and generally preparing your lesson to go very well.

What are your Learning Objectives?

Learning objectives are outcome statements that capture specifically what knowledge, skills, or attitudes personnel should be able to exhibit following training. What learning domain are you in (cognitive, affective, psychomotor, or a combination)? What level of Bloom's Taxonomy are you wanting to be?

- 1)
 - 2)
 - 3)
-

Preparing the mind to learn the material

Establish relevancy by introducing topic. (ACID: Attention, Curiosity, Interest, Desire) This *could* include war stories. Get the students interested about the learning they are about to undertake, share why it is important.

Presentation and Examples

What are you going to present through lecture or other learning mediums, so students have an idea of the content and what they are supposed to be learning? Do you have video or real-life examples?

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Application: Low-Speed Reps (with no gear) and Real-Speed Reps (with gear).

- **Coaching: Stop, What's Going on, Fix it, and Move on**

Students begin to apply what was learned in Presentation and Examples, usually through low-speed no gear evolutions, and then to real-speed evolutions with gear, all while being coached.

Evaluation

How will you evaluate student learning has occurred and that students can now do the skills you want them to do? Go back to your learning objectives. How will you assess? How do you know that they know the material and learning has transferred?

Lesson Summary

Restatement of important information presented.

Safety Considerations

Are there safety considerations, such as Safety Officers, Rehab, or PPE to consider?

Materials

What materials or resources are needed?

NFPA/OSHA/SOP References:	Other References (video, handouts, examples, links, websites, articles):
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INSTRUCTOR CODE OF PROFESSIONAL CONDUCT

Kansas Fire & Rescue Training Institute instructors must adhere to high ethical standards. The training instructor is vested by the public with a trust requiring professionalism. The public expects towering competence from the fire service, and this is facilitated by the instructor during training.

This Instructor Code of Professional Conduct indicates the minimum ethical standards required of instructors associated with Kansas Fire & Rescue Training Institute. This list is not exhaustive but provides general guidance.

Kansas Fire & Rescue Training Institute Instructors:

1. Create a positive learning environment for all students.
2. Treat all students with dignity and respect.
3. Manage safety and mitigate risk within the training environment.
4. Promote an environment free of inappropriate racial, ethnic, religious, political, or sexual comments or jokes.
5. Are prudent in their use of language.
6. Maintain student's privacy and confidentiality (FERPA).
7. Teach courses to meet the course objectives and learning outcomes set by KFRTI.
8. Keep up to date on the topics they are registered to teach.
9. Report to KFRTI any negative or harmful classroom dynamics that occurred during the delivery of a KFRTI class.
10. Always support the mission of KFRTI and serve as a positive ambassador of KFRTI.

FIREFIGHTER CODE OF ETHICS (STUDENTS)

Just as instructors have a code of professional conduct, so do students. The Code of Ethics listed below was developed by the National Society of Executive Fire Officers (2012):

I understand that I have the responsibility to conduct myself in a manner that reflects proper ethical behavior and integrity. In so doing, I will help foster a continuing positive public perception of the fire service. Therefore, I pledge the following:

- Always conduct myself, on and off duty, in a manner that reflects positively on myself, my department, and the fire service in general.
- Accept responsibility for my actions and the consequences of my actions.
- Support the concept of fairness and the value of diverse thoughts and opinions.
- Avoid situations that would adversely affect the credibility or public perception of the fire service profession.
- Be always truthful and honest. Report instances of cheating or other dishonest acts that compromise the integrity of the fire service.
- Conduct my personal affairs in a manner that does not improperly influence the performance of my duties or bring discredit to my organization.
- Be respectful and conscious of each member's safety and welfare.

BEST PRACTICES FOR FIRE SERVICE INSTRUCTORS

- Recognize that I serve in a position of public trust that requires stewardship in the honest and efficient use of publicly owned resources including uniforms, facilities, vehicles, and equipment and that these are protected from misuse and theft.
- Exercise professionalism, competence, respect, and loyalty in the performance of my duties and use information, confidential or otherwise, gained by virtue of my position, only to benefit those I am entrusted to serve.
- Avoid financial investments, outside employment, outside business interests, or activities that conflict with or are enhanced by my official position or have the potential to create the perception of impropriety.
- Never propose or accept personal rewards, special privileges, benefits, advancement, honors, or gifts that may create a conflict of interest, or the appearance thereof.
- Never engage in activities involving alcohol or other substance use or abuse that can impair my mental state or the performance of my duties and compromise safety.
- Never discriminate based on race, religion, color, creed, age, marital status, national origin, ancestry, gender, sexual preference, medical condition, or handicap.
- Never harass, intimidate, or threaten fellow members of the service or the public and stop or report the actions of other firefighters who engage in such behaviors.
- Responsibly use social networking, electronic communications, or other media technology opportunities in a manner that does not discredit, dishonor, or embarrass my organization, the fire service, and the public. I also understand that failure to resolve or report inappropriate use of this media equates to condoning this behavior.

INSTRUCTORS

Kansas Fire & Rescue Training Institute aspires to be the best of fire service instruction and so strives to utilize instructors who represent the best of the best.

The following characteristics, taken and modified from Fire Service Training, Ohio Trade and Industrial Education Service (1962) are the kind of characteristics Kansas Fire & Rescue Training Institute expects to see demonstrated by instructors.

- Instructors must be available to instruct.
- Instructors are dependable. Assignments will be carried out to the best of their ability.
- Instructors present with a good appearance and are well-groomed and professional.
- Instructors have a pleasant personality. They are courteous and understanding.
- Instructors are interested in the job of firefighting and instructing others.
- Instructors must have initiative.
- Instructors must be cool, level-headed, and be able to use common sense.
- Instructors must have an aptitude for training and learning.
- Instructors should have leadership ability.
- Instructors must be in good health and condition to perform the essential function of fire service instruction.

BEST PRACTICES FOR FIRE SERVICE INSTRUCTORS

A 2020 survey (McCoy) asked firefighters to identify the qualities of the best instructors. The following is a list of high trending descriptors that were important. Not only does this list speak to impactful experiences students have had with instructors – but it also illustrates qualities students look for in their instructors.

- Are relatable
- Are ethical, without bias
- Are friendly and nice
- Are engaging; gets involved with students
- Are supportive and provides feedback
- Are focused and present; not easily distracted
- Organized with a plan
- Has realistic expectations
- Has passion for their topic
- Has experience, but is not a know-it-all
- Demonstrates a positive attitude
- Creates a positive learning environment
- Gives specific instructions
- Motivates and inspires students
- Shares occasional stories that relate to content
- Understands and applies adult learning theory
- Fosters creative thinking
- Respects that students have a life
- Does not assume that students know basics
- Lets students fail and positively coaches through failure
- Varies their instructional pace and style
- Allows for application and hands-on learning
- Takes an interest in students
- Calls on students by their name
- Does not scream at students
- Asks questions of and encourages questions from students

INSTRUCTOR QUALIFICATIONS

- Lead Instructors shall have the following minimum qualifications:
 - ✓ IFSAC and/or Pro Board NFPA 1041 Fire Instructor I & II certifications
 - ✓ IFSAC and/or Pro Board Certification in the subject(s) to be taught, if applicable.
 - ✓ NFPA 1403 Live Fire Training Evolutions (if instructing live fire)
 - Live Fire Instructor 3-day program- International Society of Fire Service Instructors, or
 - KFRTI and/ or Garden City Community College, KS Live Fire Instructor course
 - ✓ Incident Safety Officer (ISO) certification through Fire Department Safety Officer Association (FDSOA), National Fire Academy, or KFRTI
 - ✓ Successful Completion of Kansas Fire & Rescue Training Institute Training Methodology: Best Practices in Firefighter Instructors workshop/continuing education (CE)*
 - ✓ Three years with KFRTI as an adjunct, contract Associate Instructor teaching a minimum of 40 hours each year.
 - ✓ Consistent record of positive course and instructor evaluations from students.
 - ✓ One formal instructor observation on file from KFRTI instructional program manager.
 - ✓ Good references: one professional, one character reference.
 - ✓ Physical ability to perform the tasks associated with the training.
 - ✓ Preferred: associate or bachelor's degree.
- Associate Instructors shall have the following minimum qualifications:
 - ✓ IFSAC and/or Pro Board NFPA 1041 Fire Instructor I certification
 - ✓ IFSAC and/or Pro Board Certification in the subject(s) to be taught, if applicable.

- ✓ Successful Completion of Kansas Fire & Rescue Training Institute Training Methodology: Best Practices in Firefighter Instructors workshop/continuing education (CE)*
- ✓ Demonstrated willingness to stay apprised of current, relevant NIST data and evolving best practices for subject areas
- ✓ Minimum of 2 years of experience as a full-time firefighter; or 3 years of experience as an active volunteer firefighter
- ✓ Good references: one professional, one character reference.
- ✓ Physical ability to perform the tasks associated with the training.
- ✓ Preferred: one 1 year instructing, coaching, and/or teaching experience in personal, civic, religious, and/or professional contexts
- ✓ Preferred: college coursework, NFA coursework, certification courses through Kansas Fire & Rescue Training Institute or another state fire training program

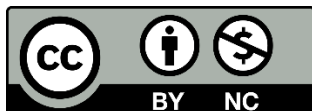
*Will be offered upon acceptance into Kansas Fire & Rescue Training Institute Instructor Cadre

RECOMMENDED READING LIST FOR INSTRUCTORS

1. *Test Your Crew's Skills by Training in Context*, Homer Robertson, Fire Rescue, Issue 9, Volume 3
2. *Big Picture Firefighter Training Drills*, FireRescue1.com, Bruce Borge, July 6, 2020
3. *Rapid Intervention Isn't Rapid*, Fire Engineering, Issue 12, Volume 156. Rene Hinkle 12/01/2003
4. *Crew Resource Management – Part I: The Nuts and Bolts of CRM*, Firehouse.com, Dennis Rubin
5. *Crew Resource Management – Part II: Human Factors of Fireground Injuries and Fatalities and Breaking the Error Chain*, Firehouse.com, Dennis Rubin
6. *Crew Resource Management – Part III: Communication Under Stress*, Firehouse.com, Dennis Rubin
7. *The Rule of Air Management*, Firehouse.com, Bernocco, Phillips, Jose, July 1st, 2004
8. *Fire Dynamics: The Science of Fire Fighting*, Madrzykowski, International Fire Service Journal of Leadership and Management, Volume 7, 2013, Fire Protection Publications/IFSTA
9. *Top 20 Tactical Considerations from Firefighter Research*, Kerber, Director of UL Firefighter Safety Research Institute, 2014
10. *The Zone of Proximal Development and Scaffolding*. January 25, 2021, Mcleod, S. (2019).

REFERENCES

- Boy Scouts of America. (n.d.). The Trainer's EDGE [PDF]. (n.d.). Irving, TX: Boy Scouts of America. Retrieved from: <https://filestore.scouting.org/filestore/pdf/26-242.pdf>
- Breen, M. (2017). Building a discipling culture: How to release a missional movement by discipling people like Jesus did. Greenville, SC: 3DM Publishing.
- Brown, P. C. (2014). Make it stick: The science of successful learning. Belknap Harvard.
- Crandell, Brian. (2017) Improving Fire Fighter Performance. Great Falls, MT. Montana State University Fire Services Training School.
- Cunningham, W. D. (1981). *Discipleship*. London, England: Hodder and Stoughton.
- Ericsson, K. A., Krampe, R. T., & Tesch-Römer, C. (1993). The role of deliberate practice in the acquisition of expert performance. *Psychological Review*, 100(3), 363–406. <https://doi.org/10.1037/0033-295X.100.3.363>
- Graham, G. (2020, December 17). Gordon Graham Risk Management Thank You. Retrieved from <https://www.cordico.com/2020/11/30/gordon-graham-risk-management-thank-you/>
- Kansas Fire and Rescue Training Institute. (November 2020). Strategic Planning Workshop Report. Lawrence, Kansas: Public Management Center, The University of Kansas.
- Kotsis, Sandra V. M.P.H.; Chung, Kevin C. M.D., M.S. Application of the “See One, Do One, Teach One” Concept in Surgical Training, *Plastic and Reconstructive Surgery*: May 2013 - Volume 131 - Issue 5 - p 1194-1201 doi: 10.1097/PRS.0b013e318287a0b3
- Mager, R. F. (2012). Preparing instructional objectives: A critical tool in the development of effective instruction. Carefree, AZ: Mager Associates.
- McLeod, S. (2019). The Zone of Proximal Development and Scaffolding. Retrieved January 25, 2021, from <https://www.simplypsychology.org/Zone-of-Proximal-Development.html>
- McCoy, K. (2020). Survey of Fire Science Students on Best Instructors. Billings, Montana, USA.
- Mission Centered Solutions, I. (n.d.). Fire Service Leadership: Principles and Techniques for Building and Leading Cohesive, Adaptive, Resilient Fire Companies. In M. C. Solutions.
- National Wildfire Coordinating Group. (2020, May 5). After Action Reviews. Retrieved from <https://www.nwccg.gov/wfldp/toolbox/aars>
- Oklahoma State University. (2019). Fire and Emergency Services Instructor (9th ed.). Stillwater, OK: Fire Protection Publications.
- Trade and Industrial Education Instructional Materials Laboratory, O. S. (1962). Fire Service Training. Columbus, Ohio: Trade and Industrial Education Service.
- U.S. Fire Administration. (n.d.). Firefighter Code of Ethics [PDF]. Emmitsburg, MD: National Society of Executive Fire Officers. U.S. Fire Administration. (2018). U.S. Fire Statistics. Retrieved 2021, from https://www.usfa.fema.gov/data/statistics/reports/fius_2008-2017.html



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