Overview

The Federal Law Enforcement Training Center (FLETC) provides training to law enforcement personnel from numerous federal, state, and local agencies. A law enforcement officer’s survival requires that he or she is able to quickly assess a situation and respond with appropriate actions in dynamic, life-threatening, time-pressured situations that are likely to be encountered in carrying out their duties. FLETC has initiated a research program to examine the extent to which stress training can better prepare law enforcement officers to perform under highly stressful conditions. Initial results from the research program have been reported in a technical report entitled the Survival Scores Research Project. Current research efforts are devoted to developing event-based stress training procedures, modeled on the stress exposure training (SET) paradigm, to optimize law enforcement officers’ performance in stressful encounters.

As an occupation, law enforcement is one of the most demanding and hazardous jobs. A law enforcement officers’ job requires effective performance under conditions that are extreme, dangerous, and highly stressful. Some examples of the types of high-stress events faced by police officers include responding to a felony in progress, participating in high-speed chases, confronting a person with a weapon, and being physically attacked. The Uniform Crime Report indicates that 58,792 officers were assaulted in the line of duty during 2008, and 41 officers were feloniously killed.

In the report, Violent Encounters, the authors note:

“It is extremely difficult to control one’s biological, psychological, and emotional reactions to life-or-death circumstances. But it is even more difficult to do so without adequate, realistic, and prior training...Training often determines which persons survive and which ones suffer injury or death” (p. 78).

A law enforcement officer’s job will always be dangerous. However, effective, realistic training can enhance the officer’s ability to perform under pressure and increase the probability of a positive outcome in violent encounters.
The objective of this handbook is to describe an approach to developing realistic stress training. It is designed as a practical and scientifically-based handbook that outlines the steps to be taken in designing, developing, implementing, and evaluating stress training. Moreover, the goal is to provide this information in a format that is easily accessible and informative to the training developer.

In the following chapters, we first discuss stress effects and the value of realistic stress training. We emphasize four tools, or four approaches, for developing effective stress training. These include (a) stress exposure training (SET), (b) scenario development, (c) the STAR approach to performance assessment, and (d) the student-centered feedback model. These training tools were developed specifically for applied settings such as law enforcement and the military. Furthermore, they are evidence-based approaches; that is, empirical evidence supports their effectiveness in stress training.


Forward

There is a compelling need to provide the best available tools and resources to those who serve our country and protect its citizens. Jobs such as law enforcement require performance under demanding and life-threatening conditions, and it is critical that training is provided to support law enforcement personnel in carrying out their duties as effectively and safely as possible.

This manual provides an instructor’s guide for reality-based stress exposure training. One goal of scientific research is to replace folklore with “what actually works.” Furthermore, it is important to provide those on the front lines who deliver training with sound, empirically based guidelines and recommendations for conducting effective training. This is particularly critical when survival can depend on effective performance.

The authors, Dr. Wollert and Dr. Driskell, have one foot in the research laboratory and one foot in the training trenches, and draw on a wealth of experience in developing these guidelines. This manual represents an impressive attempt to integrate the research literature and provide stress-training guidelines in a format that is accessible and useful to the training practitioner. This volume should be an important resource for training in law enforcement, the military, and homeland security, as well as any setting in which optimal performance is required under demanding conditions.

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The Impact of Stress
--or, What’s Stress Got To Do With It (with our apologies to Tina Turner)

It may be useful to begin by defining what we mean when we use the term stress. According to Driskell, Salas, and Johnston\(^1\), stress is defined as a high demand, high threat situation that disrupts performance. It is time-limited, events occur suddenly and often unexpectedly, quick and effective task performance is critical, and consequences of poor performance are immediate and often catastrophic. Thus, at a very general level, we use the term stress to refer to high-demand, high-risk task conditions.

To provide an illustration of what we mean by the term stress, we offer the following example:

\*\*\A law enforcement officer enters a small restaurant. He encounters an armed robbery in progress. He sees a male individual holding a female hostage, with his back to the door. This primary suspect is holding a shotgun aimed at a server. The female hostage is screaming “Don’t shoot!” while the primary suspect is shouting verbal threats. There are four other people in the room, including a waiter, two customers, and an accomplice who is standing behind a counter with a bag of money in his hand and a 9mm handgun in his waistband.\*\*

This example is in fact a scenario used by FLETC for stress training. It includes several characteristics that define a high stress or high-demand environment. First, it involves sudden and unexpected demands that disrupt normal procedures. These events rapidly evolve and demand an immediate response. Second, the individual must make quick decisions with limited information in a multiple-threat, lethal environment.
Third, the consequences of poor performance are severe to both self and others. Certainly, most would agree that this type of environment defines the term “high-stress.”

The term stress comes from the Latin stringere, to draw tight (or to strain, to exert or tax). Thus, from the early Latin, we have a strong hint of what stress means--it taxes, it strains, and it restricts. One of the earliest stress researchers was Selye\(^2\), a physician, who provided the early direction for stress research by defining stress as the "nonspecific result of any demand upon the body"\(^3\). Thus, Selye provided the first generally accepted conceptualization of stress as a reaction to noxious events, which he termed stressors.

In applied task environments, such as law enforcement or the military, we are primarily concerned with the effects of certain types of stressors on performance:

1. **We focus on acute stress.**

First, interest is restricted primarily to acute stress--stress that is sudden, novel, or unexpected, and of relatively short duration. Acute stress is represented by the prototypical "emergency" situation. Acute stress differs from chronic stressors that impact the individual over time (i.e., job stress, family stress), stressful life events (i.e., marriage, divorce, illness), and daily hassles. Clearly, these issues are important, and certainly the cumulative effects of chronic stressors can impact performance. In fact, Schaubroeck and Ganster\(^4\) have noted that chronic stress may reduce the individual's capacity to respond effectively to acute stress demands. Although chronic stress is an important topic, we are primarily interested in acute stress--stress that is sudden, novel, intense, and of relatively short duration that disrupts goal-oriented behavior and requires a proximate response.

2. **We focus on the negative effects of stress on performance.**

Second, researchers who study stress and performance are primarily interested in the negative consequences of stress. In some instances, stress can facilitate performance. For example, if the individual is under-aroused or under-stimulated, stress may energize the person to achieve a more optimal level of arousal. This is a variant of the inverted-U hypothesis, which holds that there is an optimal level of stress required for effective functioning. However, the primary emphasis in examining the effect of stress on performance is on the negative impact of stress in degrading task performance.
3. **We focus on overload conditions.**

Third, it is useful to distinguish between *overload* conditions and stressors that increase arousal versus *under load* conditions and stressors that decrease arousal. Stressors such as danger, threat, noise, and time pressure serve to arouse the individual, whereas stressors such as boredom or sleep loss serve to reduce arousal. Although both types of stressors may impact performance, in an acute stress environment, we are primarily concerned with task overload.

In summary, we think of high stress task environments as settings that impose a particularly high demand on those who work in them and in which there is a substantial potential for risk, harm, or error. People who work in these environments often perform under extreme pressures and demands. Emergency or crisis conditions may occur suddenly and often unexpectedly, and the consequences of error are severe. This perspective is relevant to many applied settings that share the commonalities of high demand, high risk performance conditions, such as law enforcement and the military.

**A Model of Stress and Performance**

The effects of stress on performance may be described in terms of an input→process→output stress model. Figure 1 illustrates this simple three-stage model of stress and performance. The input factors in this model include stressors such as noise, threat, time pressure, task load, or performance pressure. These stressors become salient and lead to the activation and operation of the appraisal process, which mediates the effects of stress on behavior and performance. Briefly, appraisal is an evaluation of whether the potential danger exceeds one's resources to respond. Individuals evaluate an event as threatening when the perceived danger exceeds the capacity to respond. Individuals evaluate an event as non-threatening when the perception of available resources exceeds the perceived threat. Stress effects or outcomes include a number of physiological, cognitive, emotional, and social consequences. Finally, in Figure 1, we consider several moderators, or factors that can increase or decrease the effects of stress on performance outcomes. Three primary types of interventions to minimize the effects of stress include selection, training, and task design.
In the remaining sections of the chapter, we will work through this model by examining each separate component: (a) types of stressors, (c) stress outcomes, and (d) the role of stress training in countering stress effects.

**Types of Stressors**

Hogan and Lesser⁵ define a hazardous environment as one in which there are significant task demands and potential for injury or harm. These hazards or demands are termed stressors. Some typical stressors that are salient in many high-demand task environments include the following.

**Time Pressure**

Time pressure is a restriction in time required to perform a task. Research suggests that time pressure may degrade performance because of the cognitive demands, or information overload, imposed by the requirement to process a given amount of information in a limited amount of time⁶. Empirical studies indicate that under time pressure, people tend to maintain or increase performance speed, but performance accuracy declines. In a classic study of pilot performance, Wickens, Stokes, Barnett, and Hyman⁷ found that under the stress of noise, time pressure, and threat, pilot judgments became less accurate, but not necessarily slower. This speed-accuracy tradeoff has been noted in other similar studies⁸,⁹.

An example of a Time Pressure event in law enforcement may include an assailant charging an officer with an edged or impact weapon. In this situation, the officer has little time to process the attack (What is the assailant’s intention? Do they have a...
weapon? What type of weapon? Etc. and then select an appropriate response.) (At what point are they justified in using force? Do they have time to draw their firearm or do they have to respond with empty hand first? Etc.).

**Task Load**

Task load is the requirement to perform multiple tasks concurrently. This term is related to a number of other terms, including multi-tasking, dual-task performance, and workload. Typically, the term *workload* refers to the individual’s perception of the work demands imposed by a task environment, although the term has also been used to describe the demands of the task environment itself in terms of the volume and pace of the work to be performed. Task load has also been investigated as divided attention or dual task performance. Most studies of dual task performance indicate that the addition of a second, concurrent task tends to impair performance on the primary task. Research further suggests that the negative effect of task load on performance is greater when the tasks performed are similar and when the tasks are novel, unfamiliar, or difficult. Multitasking has been defined as managing and executing multiple concurrent tasks or performing multiple tasks within a limited time period. Multitasking environments do not simply involve multiple tasks, but also require shifting of attention from one task to another resulting in divided attention among the tasks.

An example of Task Load may include events where an officer is forced to deal with multiple subjects. These events force the officer to shift their attention from one potential problem area to another continually. Task Load can have a dramatic effect on officers in leadership roles during a high-risk event. Incident commanders have to assess information from multiple resources such as crisis negotiators, SWAT, support units, etc. and use this information to provide appropriate direction.

**Threat**

Threat is the anticipation or fear of physical or psychological harm. Certainly, no other factor more clearly defines the lethal law enforcement environment. Evidence from a broad range of studies indicates that the threat of dangerous environments may result in impaired performance, an increase in subjective stress, and increased physiological reactivity. The effects of threat on performance have been documented in a number of task environments, including diving, parachuting, bomb disposal, police work, and firefighting.
Ambiguity

Ambiguity is a property of the task environment characterized by missing, unreliable, or inaccurate information or data, or by unclear, shifting, or ill-defined goals. Klein\textsuperscript{24} describes task ambiguity as follows: “the task itself is often unclear (ill-structured, with shifting and ill-defined goals); the available information may lead to uncertainty due to missing, unreliable, or inaccurate data or conditions that keep changing” (p. 51).

Task ambiguity is a situation in which two or more equally likely response alternatives are possible on the same task\textsuperscript{25}. Task ambiguity has also been defined as a lack of situational clarity\textsuperscript{26}. Task situations may be ambiguous because: (1) the task requires the performer to make difficult discriminations, (2) task-relevant information is missing, conflicting, or difficult to interpret, or (3) strongly established expectancies are disconfirmed\textsuperscript{27}. Lipshitz and Strauss\textsuperscript{28} describe task uncertainty in terms of two factors, (a) the types of uncertainty faced by the task performer, and (b) the sources of the uncertainty. First, they note that, under conditions of high task ambiguity, task performers may face doubts regarding the nature of the task situation, available alternatives, and possible outcomes related to these alternatives. Second, the sources of this ambiguity may be (a) incomplete information, (b) inadequate understanding of conflicting information that is available, or (c) the presence of several alternatives that are equally attractive or appealing.

A typical law enforcement example may include an event involving an Emotionally Disturbed Person who has armed themselves with a weapon and may be acting bizarre and irrationally, but not threatening towards others. This might include suicidal behavior. The officer must try to assess the intent of the individual and make decisions contrasting helping the individual with their mental issues while still protecting themselves and citizens.

On a larger scale, officers may have to assess an event that may be unfolding as a hostage taking versus one that is evolving as an active shooter event. The hostage event requires a more traditional contain and negotiate tactic, in contrast to an active shooter event that requires rapid intervention. Choosing the wrong response may place greater risk for innocent parties.

Novelty

Novelty is a property of the task environment characterized by sudden, unexpected, or unpredictable task events. Predictable performance environments require close
adherence to standard operating procedures. On the other hand, some task environments are more dynamic, in which unexpected events occur suddenly and require adjustment to adapt to varying situational requirements. Matthews, Scheier, Brunson, and Carducci\textsuperscript{29} offer an attentional-processing explanation for the adverse effects of unpredictable events on performance, arguing that the amount of attention allocated to unpredictable events is greater, resulting in greater demands on the individual’s limited attention processing capacity. Berlyne\textsuperscript{30} has noted that a novel event may be completely novel in that it has never been experienced before, or it may be relatively novel in that patterns or events may be experienced that are familiar but combined or arranged in a manner that is not familiar. This type of novelty is experienced in many emergency situations.

An example may include any event that takes a radical departure from the routine event. Something as simple as a driver suddenly jumping out of a vehicle while the officer is approaching during a traffic stop may cause novelty-induced stress.

**Role Conflict**

Role conflict is an incompatibility of job demands or responsibilities required of an individual. Rizzo et al.\textsuperscript{31} refer to role conflict as being caught in the crossfire of incompatible demands. These demands may stem from several sources. Inter-role conflict refers to incompatible demands that are made on an individual occupying multiple positions or several roles simultaneously. Intra-role conflict may occur when an individual is faced with incompatible demands, orders, or expectations from others such that compliance with one demand conflicts with compliance with the other.

Suicide by cop is an example of these types of events. An individual forces the officer into a situation where the officer who wants to help the individual in crisis is forced by the actions of the individual to use force to protect the officer’s own life.

**Role Ambiguity**

Role ambiguity is uncertainty or lack of clarity regarding the duties and activities defining a role or job. Role ambiguity refers to the lack of information or uncertainty regarding how to perform one’s job. Kahn, Wolfe, Quinn, Snoek, and Rosenthal\textsuperscript{32} noted that to perform one’s job effectively, the individual must know (a) the expectations regarding the set of duties and responsibilities that comprise the job, (b) the activities required to perform the job, and (c) what the consequences are to self and others for success or failure at the job. Role ambiguity\textsuperscript{33} stems from a lack of clarity or uncertainty in any of these three areas.
“I thought that was your job?” is typically heard after these types of events. The lack of defined roles prior to the event unfolding can lead to these situations. Typically the more officers, varied ranks or varied units involved in the event, the more likely the chance of role ambiguity occurs. A typical example might involve the presence of a higher-ranking officer who is expecting the lower ranking officers to respond to a situation without the need for direction, while the lower ranking officers are waiting for the direction of the higher-ranking officers before they will act.

**Coordination Demands**

Coordination demands are the extent to which job performance requires interaction with others to accomplish task goals. At the individual task level, task behavior is enacted by one person. In contrast, tasks that require interaction among other team members or co-workers to accomplish require that activities be coordinated to achieve the team goal. Larson and Schaumann\(^34\) note that for routine tasks, coordination requirements are relatively simple--team members must coordinate their behavior to the extent required to carry out predetermined plans and procedures. However, for dynamic tasks, in which behavior is difficult to predict in advance, performance requires more complex interdependence, such that coordination can only be achieved by mutual adjustments among team members as the task is performed.

Rapid Response events or team building entry tactics are excellent examples. The team must move in a coordinated manner adapting to both the changing environment and varied threat confrontations.

**Noise**

Noise is sound that is unwanted by the listener because it is unpleasant, bothersome, interferes with task activity, or perceived as potentially harmful\(^35,36\). Noise may have several effects on performance. First, noise can directly mask desired sound. Poulton\(^37\) has argued that decrements in task performance can be a function of the masking of acoustic cues, or even the masking of the "inner speech" of a task performer. In other words, people either can't hear subtle task relevant cues in the presence of noise, or they literally can't "hear themselves think." Noise may also impose increased task load or distraction: Noise that is relevant to the task (i.e., sound that has a bearing on the task) can place an increased task load on the operator, whereas noise that is irrelevant to the task (that carries no task-related information) can serve primarily as a distraction.
High-speed chases where the siren is engaged and the dispatch radio is filled with chatter is an example of a law enforcement event where the noise may interfere with the officer’s performance. The officer is rapidly processing information during the chase and attempting to adjust to ongoing changes while the noise inside the cruiser car literally interferes with the ability to hear themselves think.

**Performance Pressure**

Performance pressure refers to the increased consequences for error in a high stress environment. This may include the consequences of harm to self, one’s partner, other team members, and innocent bystanders.

Any event that unfolds in the public eye, when being filmed or in the presence of an authority figure has a greater chance of creating performance pressure.

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Stress Outcomes

Thus far, we have attempted to define stress in a broad sense and describe some of the types of stressors that may be present in high-demand task settings. Perhaps more critical from an applied perspective is the discussion of stress effects. In other words, how does stress impact performance?

As shown in Figure 1, environmental stressors such as time pressure or threat lead to the activation and operation of the appraisal process. Primary appraisal involves evaluation of the extent of threat that an event poses. Secondary appraisal is an evaluation of perceived capacity or resources to meet this threat. Traditional models of stress presume that appraisal is a function of the degree of discrepancy between demand and capacity. In this manner, stressors become salient and are evaluated as positive (and seen as a challenge) or negative (and seen as a threat). As we will discuss later, stress training is one means to ensure that individual skills and competencies meet or exceed demand.

Stress results in a number of types of outcomes of interest, including physiological reactions, cognitive effects, emotional reactions, social behavior, and performance outcomes.

Physiological

Physiological reactions to stress have been assessed in various studies by a host of measures. The physiological effects of stress have been measured through skin conductance, pulse rate, heart rate, heart rate variability, electrocardiograph (EKG) and impedance cardiographic (ZKG) signals, pulse transit time (PTT, the interval between the EKG R-wave and rise of the finger pulse wave), salivary immunoglobulin A (IgA), systolic and diastolic blood pressure, catecholamine (e.g., adrenaline and noradrenaline) output, glucocorticoid (e.g., cortisol) output, EMG level, blood glucose level, palmar sweating, the P300 evoked potential response, muscle tension, eye blink and eye blink duration, respiration rate, and a number of other measures. In a general sense, as physiological
indicators increase, due to stress, performance will eventually decrease. However, if the stress is caused by emotional factors, the physiological indicators have not predicted the amount performance will decrease. In other words, psychologically induced heart rate increases do not support the establishment of an optimal heart rate zone for desired performance.

**Emotional**

Emotional reactions to stress may include subjective feelings of fear or anxiety, annoyance, tension, anger or frustration, and increased concern for the well-being of self and others. Measures of self-reported or subjective stress typically assess state or transitory anxiety/anger, by asking the extent to which the person in the current situation feels excited, tense, nervous, pressured, anxious, frustrated, or mad.

**Cognitive**

Cognitive effects of stress may include distraction, narrowing of attention, tunnel vision/perceptional narrowing, decreased search activity, response rigidity, longer reaction time to peripheral stimuli, increased errors, and memory deficits.

**Social**

Social effects of stress may include a reduction in the tendency to assist others, increased interpersonal aggression, neglect of social or interpersonal cues, and less cooperative behavior among team members.

**Performance**

Performance outcomes that are typically examined in the research literature include performance accuracy (usually assessed by the number of errors incurred on a task), performance speed (the time required to perform a task), and performance variability (variability in accuracy or speed).

**Big Five**

Although we can see that, there is a variety and number of potential stress effects, Driskell\(^2\) has argued that there are a limited number of cognitive, emotional, and social mechanisms through which stress impacts performance. The “Big Five” attributes of acute stress include the following:
1. Increases distraction and decreases attentional focus

One of the more well-established findings in the stress literature is that as stress or arousal increases, the individual's breadth of attention narrows\(^3,4\). Perhaps the earliest statement of this phenomenon was William James's\(^5\) belief that the individual's field of view varied, from a broader perspective under normal conditions to a narrower, restricted focus under stress. For complex tasks, in which the individual must attend to a relatively larger number of salient task cues, this narrowing of attention may result in the elimination of relevant task information and task performance will suffer.

The narrowing of attentional focus under stress may have both cognitive and social effects. As important social or interpersonal cues (such as attention to others' requests or actions) are neglected, team performance suffers\(^6\). Thus, one effect of stress is to narrow attentional capacity, and the narrowing of attention may lead to a neglect of relevant task or interpersonal cues. Related research shows that stress results in narrowing of attention or perceptual tunneling\(^7\), reduced working memory\(^8\), and performance rigidity\(^9\). Dorner\(^10\) found that individuals under stress were prone to "ballistic" decision making; making decisions without checking the consequences of their decision.

2. Increases cognitive load and demand on capacity

High stress environments often involve an increase in task load, stemming from the imposition of additional tasks (e.g., a law enforcement officer whose task suddenly expands from monitoring a single target to monitoring multiple targets while answering outside queries and requests for information). Increased task load may also result from having to attend to novel or unfamiliar stimuli (e.g., an individual may engage one target while scanning for additional threats).

Task load is defined as performing two or more tasks concurrently, and may be also referred to as multitasking or dual-task performance. Fischer et al.\(^11\) described the key components of a multitasking environment as including the following:

- **Multiple discrete tasks.** Multiple tasks must be performed that may be similar or dissimilar to one another.
- **Task shifting.** The tasks cannot all be accomplished simultaneously, but require shifting from one task to another.
- **Time limitations.** The task environment is time-limited, such that the individual does not have the luxury to delay or set-aside one task to perform another.
3. Increases negative emotions and frustration

Emotional reactions to stress may include subjective feelings of anger, annoyance, tension, frustration, and increased concern for the well-being of self and others. Effective performance under stress requires the capacity to maintain one’s composure and emotional control while remaining task-focused under demanding and threatening conditions. In past studies of military performance, Haythorn\textsuperscript{12} and Greer\textsuperscript{13} reported that emotional stability was positively related to performance effectiveness. Other researchers have claimed that emotional stability is a significant factor in any task that requires cooperative behavior\textsuperscript{14,15}.

4. Increases fear and anxiety

Evidence from a broad range of studies indicates that the threat of dangerous or novel environments may result in impaired performance, an increase in subjective stress, and increased physiological reactivity. A threatening situation is one in which dangerous, hazardous, or novel environmental events pose the potential for pain or harm.

In a classic study of military combat performance, Reid\textsuperscript{16} analyzed the calculation and plotting errors involved in measuring wind vectors by navigators on operational sorties during World War II. He found that compared to errors made over England, errors increased significantly once bombers crossed the enemy coast and increased even further as the bombers approached the target. When the bombers crossed the coast on the return journey, errors declined, suggesting that the initial decrease in performance was not attributable to fatigue, but to threat. Other investigators have examined demanding environments such as parachuting. Not surprisingly, most investigators have found increases in subjective anxiety and impaired performance either proceeding or during early jumps. Hammerton and Tickner\textsuperscript{17} found that novice military parachutists showed a decrement in performance immediately before and after their descent. Burke\textsuperscript{18} examined Army jumpmaster training in order to search for variables predictive of ability to perform under threat. He found that perceived threat was strongly and negatively related to jumping performance. Wollert and Norris\textsuperscript{19} identified that not only does perceived threat reduce performance during law enforcement encounters but also anger has a strong and negative effect on performance.
5. Increases social impairment

Social effects of stress may include a reduction in the tendency to assist others, increased interpersonal aggression, neglect of social or interpersonal cues, and less cooperative behavior among team members. For example, Mathews and Canon\textsuperscript{20} found that individuals were less likely to help or assist others when exposed to loud ambient noise. Rotton, Olszewski, Charleton, and Soler\textsuperscript{21} found that loud noise reduced subjects' ability to discriminate among people occupying different roles. Driskell, Salas, and Johnston\textsuperscript{22} found that under stress, team members were less likely to maintain a broad team-level perspective and were more likely to shift to a more individualistic self-focus, resulting in poorer overall performance.

A number of theoretical explanations have been offered to explain the tendency for stress to impact social or team performance. Social psychological explanations\textsuperscript{1} suggest that the presence of others in high-stress settings is distracting and leads to attentional conflict as the task performer allocates attention between the task and attending to others. Procedural explanations argue that it is harder to coordinate task performance in high-demand environments. Economic explanations argue that high-demand can impair performance because of an intentional withdrawal of effort by the individual. In summary, stressful, dynamic tasks often increase the demand for coordinated interaction, and at the same time, coordinated interaction can be impaired by these same conditions.


\textsuperscript{5} James, W. (1890). The principles of psychology, Vol I.


Stress Training

The purpose of this section is to discuss training designed to counter stress effects. We will begin our discussion by making the following three points:

- Many task environments involve high stress or high demand conditions. Personnel may be faced with multiple tasks that must be performed under extreme time pressure and under complex and often ambiguous conditions. Furthermore, these types of critical or emergency conditions, when events "heat up," are when effective performance is most needed.
- High stress conditions exact a price on performance. Stress can result in increased errors, reduced speed of response, and narrowed attention, all of which may lead to poor performance.
- Normal training procedures do not provide pre-exposure to the stress environment nor the special skills training required to maintain effective performance under stress. The purpose of stress training is to prepare individuals and teams to maintain task performance under high-demand operational conditions.

Simply stated, stress training is a type of training (or a modification of existing training) that simulates the conditions that the trainee is likely to face in the operational environment.

Why is stress training important? First, there is a significant difference in what it takes to perform a task in a benign environment and what it takes to perform that task in a high-stress or high-demand environment. This difference is the contextual environment—the organizational, environmental, social, and task demands that are imposed upon the operator. During the learning of complex skills, the absence or presence of the contextual environment influences how effectively the behaviors are learned. For example, when testing lifeguards by using a “struggling” instructor in the middle of a pool, the contextual level for student lifeguards should be high because the context of the environment emulates an actual lifesaving event with real risks. Practicing rescue drills with classmates in the shallow end of the pool drops the context
dramatically because the context of the environment does not represent an actual lifesaving event. Consideration of the contextual factors that impinge on task performance is critical to maintaining effective performance in real-world settings.

Second, the distinction between *training* and *stress training* is the extent to which the training attends to these contextual factors. The primary goal of training is skill acquisition and retention. Most training takes place under conditions designed to maximize learning, such as a classroom setting, under predictable and uniform conditions. Thus, the primary purpose of *training* is to ensure the acquisition of required knowledge, skills, and abilities. However, many tasks must be performed in the real world in conditions quite unlike those encountered in the training classroom. For example, high stress environments include specific task conditions (such as time pressure) and require specific responses (such as the flexibility to adapt to novel events) that differ from those found in the normal task environment. This contextual environment is identified during the task analysis and reflects the application of skills under the conditions required to perform on the job. The contextual environmental is stated in the terminal performance objectives of the training program. Establishing the proper contextual environment is critical for development of emotional memory patterns and cognitive responses associated with those memories. Thus, the primary purpose of *stress training* is to prepare the individual to maintain effective performance in a high stress operational environment.

Third, the primary objectives of stress training are to provide pre-exposure to the high-demand conditions that may be faced by the trainee in the operational environment and provide the specialized skills training required to maintain effective performance under stress conditions. In law enforcement or military training, shooting a qualifying score in a training environment provides a high context (relationship) to other marksmanship activities, but would have a low context with engaging an active shooter in the real world. The environmental components in these two examples are significantly different. Although both environments can evoke high levels of stress, anxiety, and fear of failure, each will likely generate different emotions since one has the potential to result in death. While shooting qualification scores is an essential skill, it lacks the context of a real, life or death gunfight. No one is shooting back during qualification. This difference in environmental fidelity is the *contextual difference*, and training that provides a well-matched contextual environment enable the individual to feel as if they have faced the situation before and are prepared to respond accordingly. Kavanagh¹ has noted that stress training can moderate the effects of stress on performance and that attention should focus on “developing training that realistically represents the environment that the individual will be expected to perform, is targeted on particular skills, (and) builds the ability to adapt.”
In the report, “Violent Encounters,” Pinizzotto, Davis, and Miller, describe the value of realistic training:

*Fewer situations require more “thinking on your feet” than facing a drawn gun. It is well known that as anxiety and fear increase, the thought processes become vague. No officer ever wants to face a drawn firearm, much less with a cloudy mind. Although no amount of training can ever remove anxiety from such an experience, officers can diminish the degree of anxiety by being prepared.* (p. 100)

Most importantly, research shows that specialized stress training is effective in countering negative effects of stress on performance. In one recent study, Zach, Raviv, and Inbar developed a stress-training program for Israeli security officers. They argued that realistic stress training; “training that imitates stress in terms of the type and intensity to which the individual is subjected in the target state” could improve performance under stress. They developed a comprehensive stress-training program that included simulations of real events, in which the stressors increased gradually over time from low-stress to high-stress. These simulations included situations based on real-life events, such as responding to fire and overpowering an armed terrorist. The training curriculum included six stages: (1) performing the simulation under normal conditions, (2) performing the simulations under gradually increasing stress, (3) instructor analysis and feedback, (4) trainee review of performance, (5) discussion of performance with fellow trainees, and (6) repetition of actions to improve performance. The results indicated that stress training had a significant effect on performance. The researchers concluded that this type of stress training, in which stress is increased in a graduated manner to a realistic intensity, is sufficient to bring trainees to a level of performance on tasks such as combat readiness and shooting skills that is equivalent to performance under normal conditions.

According to Driskell and Johnston, an integrated stress training approach should achieve three objectives. Research at the FLETC suggests that a fourth objective be added to strengthen the stress training approach:

- *Convey knowledge of stressors and stress effects.* Training should provide trainees with basic information on potential stressors and how stress may impact performance.
- *Impart high performance skills.* Training should incorporate specialized skills training to provide the skills that are required to maintain effective performance under stress.
• **Practice skills and build competence.** Training should allow gradual exposure to the high-stress environment to promote practice of skills under realistic conditions and build trainee competence.

• **Receive student-centered feedback and build confidence.** Training must allow sufficient time for instructors to facilitate feedback sessions to reinforce learning and build student confidence.

There are a number of valuable books by Cannon-Bowers and Salas\(^7\), Driskell and Salas\(^8\), book chapters by Johnston and Cannon-Bowers\(^9\); Keinan & Friedland\(^10\), technical reports by Helmus and Glenn\(^11\); Kavanagh\(^12\); Staal\(^13\), and research articles by Morris, Hancock, & Shirkey\(^14\); Saunders, Driskell, Salas, & Johnston\(^15\) that address stress training. In the following, we will provide an overview of how to implement stress training.

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Implementing Stress Training

In the early 1970’s, the Department of Defense developed the Inter-service Procedures for Instructional Systems Development (ISD). The ISD model describes a systematic, five-step approach of: (1) job and task analysis to determine training requirements (2) training design (3) development of instructional activities (4) implementation and (5) evaluation (see Figure 2). The ISD may also be referred to as the Systems Approach to Training (SAT) or the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) model. The ISD procedure remains the most comprehensive and widely used model for the development of training.

We emphasize the ISD model because it provides the structure on which any sound training program should be based. The five stages include:

- **Analysis**: A training needs analysis should identify skill deficiencies, the tasks that need to be trained, the knowledge, skills, and attitudes (KSA’s) required to perform these tasks, who needs to be trained, and what type of training each person needs. The input of subject matter experts is critical in identifying training needs.

- **Design**: At this stage, training objectives are defined based upon the skills and knowledge required to perform the tasks, appropriate training strategies are identified, and training measures and evaluation procedures are specified.

- **Development**: Training scenarios and training materials are developed, reviewed by subject matter experts, and pilot tested if possible.

- **Implementation**: Instructors are trained and trainees receive necessary pre-briefing, training, and feedback.

- **Evaluation**: Multiple measures should be used to assess training outcome, including measures of (1) trainee affective or attitudinal reactions, (2) learning, (3) behavior, and (4) organizational impact.
Appendix A provides a more detailed checklist describing the steps to be taken in each stage of the ISD approach.

Just as we emphasize the importance of adhering to sound instructional practices in training development, it is also important to address, at a broad level, the value of a simulation-based or event-based approach for stress training.

Simulation-based training is an instructional strategy that provides trainees the opportunity to develop required competencies by training in an environment that approximates actual operational conditions. The word *approximates* is important, especially for stress training—in a simulation, we can “leave in” elements that are central to representing a realistic, high-stress operational environment, but “leave out” elements in the simulation that are dangerous, such as live weapons fire.

There are a number of principles or guidelines that have been offered for effective simulation-based training (see Salas et al.\(^1\); Salas & Rosen\(^2\)):
• Simulation-based training should include the basic building blocks of information, demonstration, practice, feedback, and remediation.
• Training should be progressive. Basic skills should be acquired before skills that are more complex.
• Clear training objectives should be established through a comprehensive training needs analysis.
• Opportunities to perform required competencies should be embedded within carefully crafted scenarios. Specifically, trigger events are embedded that represent opportunities to exhibit targeted competencies.
• Set-up the pre-training environment.
  o Develop and implement training programs for role-players and instructors
  o A simulation pre-brief should frame training goals and provide trainees with instructions required for training.
• Performance measurement is critical to training effectiveness.
  o Develop discrete and observable markers of performance.
  o Create measurement tools based on these markers.
  o These measures form the basis for performance diagnosis and feedback.
• Constructive feedback should be provided based on trainees’ performance in the simulation.
• Maintain and archive training effectiveness data.
• Consider the post-training environment
  o Maintain management support
  o Create opportunities for continuous training


Four Tools for Stress Training

The following sections describe four tools, or four approaches, for developing effective stress training. These include (a) stress exposure training (SET), (b) scenario development guidelines, (c) the STAR approach to performance assessment, and (d) the student-centered feedback model. It is important to note that these tools were developed specifically for applied environments, such as law enforcement and the military. Furthermore, they are evidence-based approaches; that is, empirical evidence supports their effectiveness in stress training.

Stress Exposure Training (SET)

Stress Exposure Training (SET) is a comprehensive approach to mitigating negative stress effects that has been developed for military and law enforcement training applications\(^1,^2\). Extensive laboratory research has documented the effectiveness of the SET training approach in reducing stress effects and enhancing performance\(^3,^4,^5,^6\).

Stress Exposure Training is an example of a simulation-based or event-based training approach. Simulation-based training is an interactive, practice-based instructional strategy, which provides opportunities for trainees to develop the requisite competencies and enhance their expertise through scenarios and feedback\(^7\). The scenarios serve as the “curriculum.” In other words, the learning objectives derived from the training needs analysis are embedded within the scenarios. The scenarios are scripted and designed to elicit the requisite competencies by incorporating “trigger” events. Afterwards, performance measures assess the effectiveness of the training.

Simulation-based training can be an optimal instructional strategy because it has many benefits. First, it is very realistic, which makes transferring skills to the job easier. Second, it allows the opportunity for training with a variety of scenarios, which facilitates and accelerates expertise. Third, training is interactive and engaging, which
enhances motivation and learning. Fourth, utilizing carefully crafted scenarios and measures facilitates the diagnosis of performance. Finally, it allows critical tasks to be practiced in a safe environment.

SET incorporates three stages or phases of training: (a) Information Provision, an initial training stage in which information is provided to the trainee regarding stress, stress symptoms, and likely stress effects in the performance setting, (b) Skills Acquisition, in which specific skills required to maintain effective performance in a stress environment are taught and practiced, and (c) Application and Practice, the final stage of application and practice of these skills under simulated conditions that increasingly approximate the criterion environment. The SET model is elaborated in Table 1.

In the following, we describe the stress exposure training approach by examining the specific activities that comprise each stage.

<table>
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<th>Table 1. Stress Exposure Training (SET)</th>
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<td><strong>Objectives</strong></td>
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<td>Phase II: Skills Acquisition</td>
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<th>Phase III: Application and Practice</th>
<th>Objectives</th>
<th>Activities</th>
<th>Outcomes</th>
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<tr>
<td>Graduated exposure to realistic stressors</td>
<td>Practice of skills under conditions that increasingly approximate the real-world environment</td>
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<td>Successful application of skills in high-stress environment</td>
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<td>Improved cognitive and psychomotor performance under stress</td>
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<td>Reduced anxiety and anger</td>
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<td>Increased confidence and competence</td>
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**SET Phase 1: Information Provision**

In the book, *On War*, Clausewitz\(^8\) wrote, “It is immensely important that no soldier, whatever his rank, should wait for war to expose him to those aspects of active service that amaze and confuse him when he first comes across them. If he has met them even once before, they will begin to be familiar to him” (p. 122). Phase 1 of stress exposure training includes two primary components: (a) indoctrination, or discussion of why stress training is important, and (b) preparatory information on stress effects.
Indoctrination. The first component of Phase 1 training is trainee indoctrination. The purpose of indoctrination is to increase trainee attention and training motivation. This is accomplished in several ways. First, trainees need to know the objectives of training and why stress training is important. This may be achieved by discussing operational incidents or case histories in which stress had a significant impact on performance. These “lessons learned” emphasize the rewards and costs of effective and ineffective performance in real-world stress environments. Indoctrination serves to ensure “user buy-in”—that is, the trainee should understand the purpose and value of stress training and how stress training can support effective task performance and positive outcomes.

Preparatory Information. The second component of Phase 1 training is the provision of preparatory information. As we noted earlier, stress can lead to a number of adverse effects, including physiological effects (Figure 3) such as a pounding heart and sweating, emotional effects such as anxiety or confusion, and cognitive effects such as attentional deficits and loss of focus. Research suggests that preparatory information regarding a potential threatening event can less negative reactions to that event.

It is likely that preparatory information reduces negative reactions to stressful events in several different ways, by enhancing familiarity, predictability, and controllability.

- First, by providing a preview of the stress environment, preparatory information renders the task less novel and unfamiliar. Familiarity enhances self-efficacy, which has been shown to be a significant predictor of performance\(^9\).
- Second, knowledge regarding an upcoming event increases predictability, which can decrease the attentional demands and distraction of having to monitor and interpret novel events in real-time\(^10\).
- Third, preparatory information may enhance the sense of behavioral or cognitive control over an aversive event by providing the individual with an instrumental means to respond to the stress. That is, it allows the individual to understand performance errors that are likely to occur in the stressor environment and provides information on how to respond in that setting.

In general, the more information the individual has about individual reactions to stress and the likely effects of stress on task performance, the more likely the individual will be able to anticipate these effects and the less distracting these factors will be in the operational environment.
A comprehensive preparatory information strategy should provide information on the nature of the stress environment and typical physiological, emotional, and cognitive reactions to stress, how stress is likely to affect performance, and how the individual may adapt to these changes. Accordingly, Driskell and Johnston\textsuperscript{11} defined three primary
types of preparatory information that should be incorporated in the *Information Provision* phase of training.

**Sensory information** is information regarding how the individual is likely to feel when under stress, including typical physiological and emotional responses to stress. When confronted with a threatening or novel situation, the individual is likely to experience a number of unpleasant or intrusive physical and emotional reactions, such as increased heart rate, labored breathing, and feelings of fear or confusion. These are normal “fight or flight” stress reactions, but they present several problems. First, they are distracting and divert attention from the task. Second, people often tend to misinterpret or overinterpret these “normal” stress reactions as catastrophic, leading to a spiral of arousal, distress, and loss of attention. Therefore, providing personnel with accurate information regarding typical stress effects and stress reactions—on how the individual is likely to feel in a high-stress situation—will lessen the negative impact of these reactions in the operational task environment.

**Procedural information** describes the events that are likely to occur in the stress environment, including a description of the setting, the types of stressors that may be encountered, and performance effects the stressors may have. For example, procedural information for a specific task may include a description of the contextual environment in which this task may take place, other stressors that may be present, and how these factors may impact decision making.

**Instrumental information** describes what to do to counter the undesirable consequences of stress. That is, it is useful for the individual to know not only how he or she will feel when under stress and the events that are likely to occur, but also how to respond to counter these negative effects. For example, it may be valuable to know that as threatening events unfold in a particular task environment, there will be a significant increase in background noise that can be distracting and mask task-relevant information, but also it is important to know what one can do to overcome the effects of these distractions. This information has instrumental value in that it provides the individual with a means to resolve the problems posed by the stress environment.

Inzana, Driskell, Salas, and Johnston\(^{12}\) tested the effectiveness of preparatory information, examining the performance of military personnel on a decision-making task under high stress conditions. The preparatory information intervention included sensory information (e.g., “Stressors such as high task load may cause you to feel distracted or hurried.”), procedural information (e.g., “These are normal reactions, but may lead you to misinterpret specific data fields.”), and instrumental information (e.g., “Try to match the pace of the task, but pay close attention to the information in those
fields.”). Results indicated that the personnel who received preparatory information prior to performing under high stress conditions reported less anxiety, were more confident in their ability to perform the task, and made fewer performance errors than those who received no preparatory information.

**Physiological effects of stress**

*Physiological effects of stress* are initiated because of an individual’s perception of a
threat. This stimulus can be either internal or external to the individual. An internal stimulus is typically evoked through a cognitive process or an internal physical sensation. External stimuli (figure 4) are received through one or more of the peripheral nervous system sensory receptors (sight, touch, smell, sound, taste). These signals are sent via the neural pathways to the brain where they are routed to the limbic system and the cortical regions of the brain for analytical interpretation. If the cortical-limbic interpretation of the stimulus results in a perception of a threat or danger an emotional arousal is induced. It is important to note that the induced stress response is not the result of the stimulus but the interpretation or perception of the stimulus. The stress response includes over 1,400 physiochemical changes in the body. These physiochemical changes results in the activation of the Autonomic Nervous System (ANS). With activation of the ANS the Sympathetic Nervous System (SNS) stimulates the organs needed for the “fight or flight” response while inhibiting those not required. This stimulation results in increased heart rate, blood pressure, respiratory rate, and energy to handle the encounter. The physiochemical changes also results in the activation of the Parasympathetic Nervous System (PNS) which has the opposite effect of the SNS. The purpose of the PNS is to restore the body to a normal state.

An important organ stimulated by activation of the SNS is the adrenal medulla. SNS stimulation of the adrenal medulla releases a hormone cocktail of catecholamines (cortisol), adrenaline, and noradrenalin. The catecholamines intensify the adrenal effects of the SNS prolonging the effects of the stress response.

**Psychological effects of stress**

Psychological effects of stress cause emotional reactions such as anxiety (feeling of nervousness, apprehension, fear, or worry) and anger (feeling of frustration, aggression, guilt, or revenge). The degree a student perceives a given stimulus as threatening or difficult, influences stimulus effect on “State” (intensity of feelings at a particular time) emotions resulting in activation of the physiological effects explained earlier. Where the frequency a student experiences these feelings is “Trait” emotion. Therefore, according to Spielberger, the individual’s interpretation of the situation as present or anticipated danger will vary the intensity of anxiety and anger. The elevation of State-Anxiety and Anger scores also can be triggered by recall of traumatic events similar to the current situation. Spielberger indicated that intensity and frequency of State-Anxiety scores can be increased if the individual has high Trait-Anxiety.

Experts agree, state Anger (aggression) and Anxiety (fear) lead to debilitative stress that manifests first psychologically in the form of increased stress and workload and then physically through impaired performance. Spielberger indicated that
individuals with high State scores are more likely to have their emotions interfere with optimal performance. This effect was observed during the Survival Score Research Project\textsuperscript{22} and is illustrated in Figure 5 where elevations in emotional scores resulted in lower scenario scores. Spielberger also identified that individuals with elevated anger temperaments are likely to express their anger towards others. He further stated that individuals who tend to suppress their anger tend to experience anxiety more often.

<table>
<thead>
<tr>
<th>Figure 5</th>
<th>Comparison of Anxiety and Anger Emotion Scores to Non-Lethal Scenario Performance Scores</th>
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![Graph showing the comparison of anxiety and anger emotion scores to non-lethal scenario performance scores.](image)

Some individuals are more effective in making adjustments to meet the demands of novel, dynamic, or chaotic acute stress situations with limited effects on their performance. Others are severely hampered by the demands and suffer severe consequences in their ability to perform. It is when officers first encounter the novel events that they are the most vulnerable. This can result in catastrophic outcomes from the use of excessive force to freezing in place in the face of imminent threats. How an individual responds to stressors can result in serious consequences for law enforcement officers and agents. Clearly, the ability to control one’s emotion is an essential element in effectively managing performance during dynamic law enforcement encounters.
SET Phase 2: Skills Acquisition

The objective of the skills acquisition phase of stress exposure training is skill acquisition and rehearsal. The goal of training at this stage is to build high performance skills that are required to maintain effective performance under stress. A number of stress training strategies or techniques may be incorporated in this phase of training. These may include the training of general skills such as cognitive control or mental practice strategies to more task-specific training strategies such as decision-making training. Johnston and Cannon-Bowers\textsuperscript{23} have noted that these strategies may include developing metacognitive, cognitive, psychomotor, and physiological control skills.

One of the most important skills that can be trained at this stage is adaptability/flexibility. Experts have noted that one of the few universally effective task strategies is flexibility or adaptability. Flexibility has been defined as the ability to adjust one’s behavior to suit changing task conditions, or as “the ability and willingness to respond in significantly different ways to correspondingly different situational requirements”\textsuperscript{24}. Pulakos et al.\textsuperscript{25} have identified several critical dimensions of adaptive performance, including flexibility in handling uncertain task conditions, interpersonal flexibility, and flexibility in problem solving.

Research indicates that stress can lead to a loss of flexibility or to greater problem-solving rigidity\textsuperscript{26}. Rigidity refers to the tendency to approach a problem with a restricted attentional focus and expectancy that there is a single solution that does not vary. Perhaps Schroder and Rotter\textsuperscript{27} provide the clearest definition of rigidity:

\textit{Rigid behavior as here described is characterized as the approaching of a given situation with restricted attention to a given set of cues and an expectancy that there is a single pathway to...solution that does not change.} (p. 148)

However, high-stress environments require flexibility to respond to novel and varied task contingencies. A critical aspect of performance in real-world task environments is the ability to respond to changing situational constraints -- to adapt performance to novel or complex task conditions. This requires the individual to maintain situation awareness in order to identify these changes.

Certain training procedures can enhance flexible behavior. Gick and Holyoak\textsuperscript{28} argue that positive transfer (i.e., the extent to which training results transfer from the training setting to the real-world setting) is more likely when a variety of different examples were provided during training. Schmidt and Bjork\textsuperscript{29} refer to this as practice variability,
noting that intentional variation during skills practice can enhance the transfer of training. Thus, presenting training material or training activities in various contexts, from different perspectives, and with diverse examples can result in more flexible skill use under novel and variable task conditions.

SET Phase 3: Application and Practice

Effective performance requires that the skills learned in training be transferred to the operational setting. The novelty of performing even a well-learned task in a high-stress real-world environment can cause severe degradation in performance. Therefore, the final phase of stress training requires the application and practice of skills learned in training under conditions that approximate the operational environment.

The phrase “train as you fight” is a well-established military training axiom. Moreover, one law enforcement officer quoted in *Violent Encounters* advised: “Train like your life depended on it because, one day, it might” (p. 96). The question, however, is how do you develop realistic training?

Several specific issues are critical in implementing realistic stress training. The first questions that arise are: “How realistic should it be?” or “How do we simulate real-world conditions in a training environment?” Friedland and Keinan note that for complex, high-demand tasks, training that incorporates no stress and training that incorporates constant high intensity stress are both likely to be counterproductive. Training that incorporates no stress or that does not involve the contextual factors that characterize the criterion setting does not provide the trainee with pre-exposure or skills practice in this operational environment. Training that incorporates stressors of very high intensity is likely to overload all but the most experienced trainees and may interfere with skill development and lead to loss of confidence.

Keinan and Friedland have found evidence to support the effectiveness of phased training as an approach to manage training for complex, high stress environments. Phased training is an approach to maximize training effectiveness by partitioning training into separate stages: Initial training events or simulations present moderate demands, and the intensity and complexity of stressors gradually increase to a high-intensity level in the latter stages of training.

Graduated exposure to real-world stressors in the application and practice phase of stress exposure training provides several advantages. First, it serves as a complement to the preparatory information provided in phase 1 of training. Whereas the goal of phase 1 is to provide knowledge regarding the stress environment, one goal of phase 3 is to
allow pre-exposure to these conditions. This reduces anxiety and uncertainty regarding this environment, enhances a sense of individual control, and increases confidence to perform in this setting. Second, graduated exposure to stress events in training allows the individual to become more familiar with relevant stressors without being overwhelmed, and is less likely to interfere with the acquisition and practice of task skills than would exposure to intense stress. Finally, allowing skills practice in a graduated manner across increasing levels of stress increases familiarity with the types of performance problems that can occur in this setting. Trainees can experience errors, receive guidance and feedback, and have the opportunity to bring performance back to baseline levels using the skills learned in phase 2 of training.

In summary, stress exposure training provides a comprehensive model of stress training. It incorporates three stages. In Phase 1, trainees receive preparatory information regarding stress, stress effects, and stress reactions. In Phase 2, trainees acquire specific skills required to maintain effective performance in high-stress environments. In Phase 3, trainees have the opportunity to apply and practice these skills in an event-based scenario that approximates the criterion environment. Research indicates that this stress training approach can reduce negative reactions and enhance performance under stress33.

Lessons Learned: Guidelines for Implementing SET

Driskell and Johnston34 provide the following guidelines for implementing stress exposure training (SET):

- **High demand, high stress conditions disrupt performance.**

  Stress affects physiological, cognitive, emotional, and social processes, and these effects may have a direct impact on task performance. Performance effects may include increased errors, slowed response, and greater variability in performance.

- **Technical skill is a necessary, but not sufficient condition to support effective performance in a high-stress environment.**

  Preparing personnel to perform under high stress conditions requires that the task performer be highly skilled, familiar with the stress environment, and possess the special knowledge and skills necessary to overcome the deficits imposed by high stress or high demand conditions.

- **The 3-stage SET training model is an effective approach to enhance performance under stress.**
The SET approach is defined by a 3-stage training procedure: (a) an initial stage in which information is provided regarding stress and stress effects, (b) a skills training phase, in which specific cognitive and behavioral skills are acquired, and (c) the final stage of application and practice of skills learned under conditions that increasingly approximate the criterion environment. It is likely that each phase of training contributes to overall training effectiveness.

- **Preparatory information regarding the nature of the stress environment can lessen negative stress effects and enhance performance in the operational environment.**

  One objective of the first phase of SET to provide information on the nature of the stress environment and how stress may influence performance. Research has shown that those given preparatory information prior to performance in a stressful environment made fewer errors, were less likely to feel stressed, and were more confident in their ability to perform.

- **Stress Training should focus on developing cognitive and behavioral skills required to maintain effective performance under stress.**

  During the second phase of SET, trainees acquire and practice high-performance stress skills to enhance the capability to respond effectively in the stress environment. The type of skills training implemented varies according to the specific training requirements.

- **One crucial aspect of maintaining effective performance in a stressful environment is providing practice and exercise of tasks under operational conditions similar to those likely to be encountered in the real-world setting.**

  The final phase of training provides the opportunity to apply and practice task skills in a setting that approximates the real-world stress environment. Providing skills practice in a graduated manner across increasing levels of stress (from moderate stress exercises to higher stress exercises) is an effective approach to incorporate realistic stress demands without overwhelming the trainee.

- **Stress exposure training should be presented as a component of initial technical training and as a part of recurrent or refresher training.**

  If stress exposure training is presented as a component of initial technical training, it should be introduced after basic technical skills are developed. The introduction of stress exposure training too early in the training curriculum may interfere with initial skill acquisition. If stress exposure training is presented as a component of refresher
training, the trainer should ensure that trainees have the opportunity to practice basic skills before stress training exercises are presented.

- **Absolute fidelity in training is not necessary.**

  Fidelity refers to the degree to which characteristics of the training environment are similar to those of the criterion setting. Trainees are generally aware that they are in a "safe" training environment. However, a well-designed training simulation can "feel" like the real thing without imposing extreme or dangerous levels of stress.

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Encounters: A Study of Felonious Assaults on Our Nation’s Law Enforcement Officers.

perceptions of controllability. *Journal of Personality and Social Psychology, 63*(6), 923.


Implications for individual and team training*, 191-217.

Scenario Development

A key component of a stress training exercise is the scenario. A scenario is a script or outline of a series of carefully crafted events. The scenarios must be structured to call-out or trigger the actions or competencies to be performed.

Developing an effective training scenario is a challenging task. In a traditional training design approach, a task analysis is performed to define the task and identify the characteristics of the work and of the worker required for successful performance. These identified knowledge, skills, abilities, and other attributes (KSAOs) form the basis for the training curriculum. Event-based scenarios are unique in that the event itself is the curriculum. An event is defined as a specific task procedure (e.g., response to active shooter) with corresponding performance conditions (e.g., organizational, environmental, social, and task demands). Events may be discrete and singular, or multiple events may be connected into a series representing a longer scenario. In event-based scenarios, embedded training events support desired training objectives and provide the opportunity for trainees to apply skills in an environment representative of real-world operational conditions.

Incorporating the elements of realism into scenario design ensures SET prepares students for real encounters. In order to observe the effects of acute (response to an immediate threat) stress on performance, there must be a “suspension of disbelief” or a mental state where one becomes so immersed in the action that the “simulated environment” becomes a “believable, real environment.” Developing stress-evoking scenarios that create a suspension of disbelief requires an understanding of stress and scenario design.

Multidimensional Nature of Stressors

Stressors can occur in many dimensions, for example: reduced time to perform (time pressure), increased number of activities to be accomplished (task load), increased
anticipation of physical or psychological harm (threat), unwanted sounds (noise), unexpected or unpredictable events (novelty), reduced energy (fatigue), and increased consequences for error (performance pressure). A scenario can use a single stressor or any combination of stressors depending on the objectives of the scenario. Simply stated, stress results when an individual’s perception of the demands exceeds one’s resources. Stressful scenarios contribute to developing skills that become more resilient with practice. However, by introducing realism and variability in the desired environment, the student is better able to perform the motor program automatically based on the mental model developed in memory.

**Boyd’s Loop**

Colonel John Boyd² described the steps that all human beings go through before making a decision on a course of action. These progressive steps (called Boyd’s Loop) include Observe, Orient, Decide, and Act (OODA). Boyd’s OODA loop was developed to explain fighter pilot combat in terms of four distinct activities. The first activity, Observe, involves identifying unique elements within the environment. As an example, seeing an individual wearing clothing that is inappropriate for the weather. The second activity, Orient, refers to positioning oneself, to have a position of advantage. The Decide activity involves making a decision about an appropriate action to take. The fourth and final activity is, Act, which involves implementing what has been decided, for example, pressing the trigger. The challenge occurs during high-risk dynamic encounters when each of these activities must be performed at a high speed and with the potential of severe consequences. When the officer or agent lacks the experience, from either real life or training, they often are stuck between the observation and orientation steps. Because they do not have, any programmed responses to draw upon they become disoriented and cannot proceed through the decision phase, which is critical prior to selecting the appropriate action. This disorientation often manifests itself in increased reaction times, delayed or inappropriate decisions.

**Contextual Environment**

Establishing the proper contextual environment (conditions associated with an actual event) is critical for scenario development. For example, when testing students by using a “non-compliant” role-player in the middle of a busy restaurant where the student must arrest and handcuff a suspect, the contextual environment for student officers should be high because the environment emulates an actual arrest event with realistic risks. Practicing handcuffing skills on classmates in a matted room is essential training, but by itself, does not provide the contextual linkage to performance in the real world. The proper contextual environment is critical for developing emotional memory.
patterns and cognitive responses associated with those memories used by individuals to execute motor programs (control rapid, discrete movements). This does not mean that training should eliminate handcuffing in matted rooms; but it does mean that training must eventually incorporate performance in a high context environment. This also means that testing should be conducted using the proper contextual environment. During the learning of complex skills, the absence or presence of the contextual environment greatly influences how effectively behaviors are remembered for future use on the job.

In the area of firearms training, shooting a qualifying score in a training environment provides a high context (relationship) to other marksmanship activities, but would have a low context with the act of engaging an active shooter in the real world. The environmental components in these two examples are significantly different. Although both environments can evoke high levels of stress, anxiety, and fear of failure, each will generate different emotions and thought patterns because of the numerous elements that are strikingly different between the two. During qualification shooting, the environment (the range) should be very familiar to the shooter and the events (firing positions) are predetermined and sequential; allowing the mind to focus on technique and block out other distractions. In the situation of an active shooter, the brain’s attention is divided between actions of the active shooter, tactics of the officer, and scanning the environment for critical cues that are constantly evolving and require prioritization and contingency planning. The brain’s operational ability is further divided when communicating with a partner, team, or dispatch; all while suppressing the emotional fear of serious injury or death. Although shooting a qualification score is an essential firearm skill, it lacks the contextual challenge (mental / emotional processing) of a real, life or death gunfight. Training that provides a well-matched contextual environment prepares individuals to feel as if they have faced the situation before and are prepared to respond accordingly in the real world. Scenario designs that incorporate realistic contextual elements enable students to attend to critical cues, improve decision skills, and ability to respond with the correct motor program. Failure to train the brain and its processing ability under conditions that match the contextual environment (the real world environment) can produce indecision and result in being stuck in the “Orientation” phase of the OODA loop.

The primary reason for most training scenarios is to provide an opportunity for performers to demonstrate their knowledge, skills, and abilities in reference to some real-world (contextual) situation. For the scenario experience to be a meaningful, memory enhancing experience, the scenario should also be comprehensive - which means it includes a realistic beginning, the primary task, and continues to a natural conclusion.
Comprehensive Scenarios

Learning a new skill starts with performing the basic elements of the skill under a controlled and somewhat sterile environment. As proficiency is developed, more and more skills can be incorporated into combinations that are more complex. Mental and emotional components should be added to the training so that ultimately the task can be successfully performed under stressful conditions. When designing a scenario to be stressful, it is important to use plausible, common (versus extraordinary) problems that students are most likely to encounter on the job. The purpose of training is to build skills and memories in preparation for the job. Using situations that officers rarely encounter is counterproductive to making students street-ready.

In order to prepare students for real-world encounters, scenarios must incorporate the cues and trigger events that are found in the real world. Consequently, comprehensive scenarios must include a mechanism to introduce students to the situation (dispatched, patrol, or spontaneous) and those activities required to render the scene safe (control of suspects, witnesses, and victims). This information may be part of the scenario briefing as it establishes how or why the student would be responding to the situation. The anticipated benefit from comprehensive scenarios is the ability to observe the totality of the student’s decisions and ramifications of those decisions. When scenarios are short, students have fewer opportunities to demonstrate competency and explain their thought process to the trainer. Scenarios should begin in a typical manner (such as a call from dispatch) to give trainers an opportunity to observe the student’s ability to assess and respond to the situation. Stopping scenarios too early or skipping steps like handcuffing, limits training opportunities and leads to a false sense of competence. If it is not observed, it cannot be evaluated. If it is not evaluated, competence cannot be determined.

In addition to introducing the student to the scenario, scenario designers must identify what is required to render the scene safe. Scenario designs that allow students to proceed to a natural conclusion are critical to reinforce proper tactics and control of the crime scene. FBI reports on officer-involved shootings indicate that it is during the post incident control of suspects, witnesses, and victims when officers overlook critical elements. Typical errors include improper handcuffing, searches, and securing the scene to protect evidence and make it safe for other personnel. Observations during the SSRP indicated that students can articulate what should be done to control the scene but are unsystematic in their approach to rendering the scene safe.

The outcome of the scenario should depend on students respond to the visual and auditory cues provided in the scenario. Therefore, if students make the correct
decisions and limits the suspect’s behavior, then the scenario could end quickly and without violence. If students fail to respond appropriately to the cues, then the problem should escalate. As in the real world, poor decisions often have serious consequences like those identified in Violent Encounters. On the other hand, good decisions should be recognized with successful scenario outcomes. Having the scenario outcome predicated by the student’s response to scenario cues establishes memory patterns critical to motor program development. This also makes the scenario more realistic.

Adding unpredictability to the scenario during training increases the student’s attentional demands, enhances cue recognition, and adaptability in the memory representation of the motor program. Unpredictability in scenario design means that the student does not know what is going to occur. For example, whenever students are dressed out in FX safety gear, the scenario cannot always be a shoot situation. Predictable scenarios limit the development of decision-making skills, and opportunities for trainers to determine whether students possess shoot/no-shoot decision-making ability. Unpredictability does not mean that role players take it upon themselves to deviate from the scenario’s role-player script or lesson plan. The purpose of unpredictability is to provide novel experiences for students and opportunities for skill assessment. This means the scenario must be a novel encounter for the twentieth student as well as the first. Unpredictability in scenarios includes conditions of task ambiguity, where students may face doubts regarding the nature of the task situation, available alternatives, and possible outcomes related to these alternatives. These scenarios include task environments that are more dynamic, in which unexpected events occur suddenly and require adjustment to adapt to varying situational requirements. This unpredictable paradigm leads to changes in the behavior because students must adapt their actions to match the changing situation. Unpredictability challenges students to develop their situation awareness, cue recognition, and decision skills because they are unaware of when or where the threat may occur, the speed that conditions can change, or other changes required to perform the skill. In addition, incorporating unpredictable challenges like weapon failures, bystanders with cameras, unfriendly crowds, and other realistic distractions is reflective of real-world encounters. When students focus their attention on critical aspects of the skill, they are able to determine which actions result in the best outcome.

Scenarios should also require students to apply lethal, less than lethal, and verbal control techniques. Not every law enforcement encounter ends up in a shoot situation; not all training scenarios should either. Students need to practice their control techniques on non-compliant suspects. Students need to be challenged with making shoot-do not shoot, hand control-OC spray, and arrest-do not arrest decisions.
Creating scenarios where it is impossible for the student to win is counter to the graduated approach of SET. This does not mean that the scenario should be easy, but if the student performs as a reasonable trained officer, they should be able to complete the scenario successfully. Students appreciate challenges, but dislike being setup for failure or being used for instructor entertainment.

To achieve levels of stress that suspend disbelief and create the desired level of stress, scenario developers also need to address scenario fidelity\(^7\)\(^8\)\(^9\)\(^8\) for believable scenarios.

**Scenario Fidelity**

There are several considerations key to the design of effective scenarios. A scenario is a simulation of reality, therefore to be realistic it must “feel right” to the user. The scenario designer must make decisions as to what real-world features can be omitted to ensure safety while still achieving the training objective. Scenario fidelity is how accurately the scenario reflects realistic conditions. Scenario fidelity can be categorized into three dimensions; equipment, sensory, and psychological.

The equipment dimension concerns the degree to which the gear duplicates the appearance and feel of the real equipment used in the field. The use of firearms with live ammunition during a force-on-force scenario would achieve high equipment fidelity but for obvious safety reasons, would never be used. On the other end of the spectrum, the use of a rubber “safe” gun during a force-on-force scenario is the safest but it provides a low amount of fidelity. A “blank fire” weapon is an improvement in fidelity with the “Stressvest™” system or a “FX” marking weapon providing a higher level of fidelity.

Compromising equipment fidelity can have unintentional consequences. For example, a non-functioning rubber radio that requires students to pretend they are communicating with dispatch reflects low equipment fidelity. Observations during the SSRP indicated that 66 % of the students demonstrated weakness in communication skills when requesting backup and other verbal communication. More specifically, 21 % did not identify themselves when requesting backup and EMT or failed to press the microphone button when making the call. Without pressing the microphone button, the request for assistance is never heard. Because the rubber radios did not have working buttons, the correct radio procedures could not be practiced or observed during training which likely contributed to this performance error under stress.
The sensory fidelity dimension is the extent the simulation duplicates motion cues, visual cues, and other sensory information from the task environment. Sensory components include visual, auditory, and olfactory stimuli, people, movement, and any other cues that prepare the individual for performing the desired task in its natural environment. A primary consideration during the design of a scenario is identification of the amount of stress created by sensory components. A scenario could be defined as high or low in sensory fidelity depending on how well the role-players’ motion and visual cues represent realistic situations and behaviors. For example, a scenario that incorporates a “struggling” role-player in a busy restaurant where the student must arrest and handcuff the suspect is higher in sensory fidelity than having students handcuff each other in a matt room. Creating training scenarios that have high sensory fidelity requires incorporating the contextual environment where the real task will be performed. This degree of fidelity is essential for effective motor program development and enhanced decision making during stressful encounters. When training does not have a contextual environment, the proper gross neuromuscular pathways are lacking critical visual, auditory, and olfactory cues necessary for imprinting effective stimulus response behaviors to control rapid, discrete movements. Without these motor programs, spatial (perceiving relationships) errors increase leading to ineffective decisions and increased response times.

The physiological fidelity dimension involves the replication of the physiological demands the real world encounter would require. High or low physiological fidelity involves how closely matched the physical exertion required by the student approximates a real event. If we visit the previous example of the “struggling” role player in the restaurant, we recognize that during a real encounter the officer may need to apply physical force that may continue over an extended period to gain control of the subject. The resistance of the role player can ensure the officer experiences muscular exertion, ATP depletion, elevated heart rate, increased respiration, sweating, etc. that is a result of physical exertion and not necessarily a result of a hormonally induced stress response.

The psychological fidelity dimension concerns the degree to which the student perceives the scenario to be a believable substitute for the trained task. This is particularly significant because it reflects the student’s perspective. Ideally, it is the emotional match between the student’s performance during the scenario and their expected emotions during a real encounter. A SET scenario is high in psychological fidelity if the student suspends disbelief and interacts as much they would in an actual law enforcement encounter. Although the three fidelity dimensions are inter-related, suspension of disbelief is the most essential requirement to induce stress during
Without suspending disbelief, students are unlikely to experience stress levels similar to an actual encounter. Accounting for elements of multidimensional elements of stress, contextual environment, comprehensive scenarios, and fidelity scenario designers can be more effective in creating stress-evoking scenarios that achieving the desired training outcomes.

**Event-Based Scenarios**

Developing event-based training is a multi-step procedure. The first step is the identification of training requirements, tasks, and competencies, based on a traditional needs analysis. This information is used to determine training objectives. The next step is the development of specific events (“trigger” events or scenarios) to be embedded into the training. These events are based on training objectives and may be derived from critical incident data or on input from subject matter experts. In brief, key events are defined to act as cues that trigger essential actions or behaviors, and provide the basis on which the trainee is instructed and evaluated. These events create opportunities for performance measurement, and therefore performance measures are established and trainee performance is observed, evaluated, and incorporated into feedback.

There are several advantages of the event-based approach for scenario development. First, events can be defined to represent real-world events and contextual demands. In fact, events that are realistic, allow the trainee to respond in multiple ways, and that unfold over time can engage the trainee in a “real-world” scenario without actually requiring perfect fidelity. Second, in a complex task or training environment, not all behaviors have to be observed, just those pre-defined behaviors that are reactions to scripted events. Thus, instructors use knowledge or experience that they already have in order to make a judgment or decision when “trigger” events occur and key behaviors are exhibited. Finally, training events can be varied so that they require different responses under different conditions, enhancing flexibility of response and adaptability. Events can be scripted to trigger errors so that trainees can experience likely sources of error under realistic conditions. Multiple events can allow a progression through graduated levels of intensity in a multi-event scenario.

**SET Scenarios**

A SET scenario is a script or outline of a series of carefully-crafted events. The first step in creating scenarios is the identification of training requirements, tasks, and
competencies, based on research of field incident reports and adjudicated cases. This information determines the scenario objective. Documenting the objective on a Scenario Worksheet (Appendix B) along with a brief description of the scenario provides general guidance for the scenario development team. This is followed by identifying specific behaviors to be assessed during the scenario. Each behavior is identified in the behavior column of the Scenario Objectives Worksheet (Appendix B), the applicable enabling objectives and lesson plan title is identified under the performance objective column, and the performance standards are listed under the performance measure column. The next step is development of specific events (“trigger” events or sequences) to be embedded into the scenario. These events reflect the identified training behaviors and are derived from critical incident data and input from subject matter experts. Each event is described in the scenario cue column of the Scenario Script Worksheet (Appendix B) and desired performance is listed under the expected performance column. The expected performance associated with the event reflects the training standard and must be consistent with adjudicated cases. In brief, key events are defined to act as cues that trigger essential actions or behaviors, and provide the basis on which the trainee is instructed and evaluated. These events create opportunities for performance measurement, and therefore performance measures are established and trainee performance can be observed, evaluated, and incorporated into feedback.

Fowlkes and Burke\textsuperscript{12} provide an overall approach to developing event-based training scenarios:

**Step 1. Identify Training Objectives**

The SMEs first step in creating scenarios is the identification of training requirements, tasks, and competencies, based on research of field incident reports and adjudicated cases. This information is used to determine the scenario objective. The training objectives drive the development of scenario events as well as the performance assessment and feedback provided to trainees. To construct a plan for measuring our students’ success starts by identifying a “Terminal Performance Objective” or statement of the student’s learning goal, identifying the level-of-performance and subject of the scenario. Objectives represent the specific testable behaviors that represent the level-of-learning we want to test and the real-world activity that corresponds to the specific tasks. The objective describes performance in terms of student outcomes that are “results driven,” goal-oriented, and student-centered. The terminal objective is recorded in the Terminal Performance Objective block of the “Scenario Objectives Worksheet” (Appendix B). The supporting behaviors are recorded in the Behavior blocks of the “Scenario Objectives Worksheet” (Appendix B). Each behavior is then linked to the specific lesson plan objective where the knowledge or skill was taught.
This ensures that the desired behaviors were taught and provides supporting documentation for the performance measures developed later.

Selection of the appropriate technique or tactic must also include the selection of the appropriate approach to ensure the skills can be performed under stress.

There are three approaches to achieving the desired performance of skills while the student is performing under stress:

1) **Stress Mitigation Approach**: This approach is designed to lower the level of stress in the individual to lessen the negative effects higher levels of stress can have on performance.

2) **Stress Congruent Approach**: This approach accepts the effects the stress will have on the student’s performance, but involves identifying and accepting the innate response of the individual.

3) **Overlearning Approach**: This approach involves repetition of the desired technique, tactic until the individual reaches the state of unconscious competence, or the student is able to automatically perform without conscious thought.

These three approaches have both advantages and disadvantages. It is the job of the instructor to identify the most appropriate approach for the selected technique or tactic.

**Stress Mitigation Approach**

Stress mitigation works extremely well for events that unfold slowly or that involves time before the height of an event to experience anticipatory anxiety or combat anxiety. This anxiety is a result of the arousal that occurs when the individual cognitively evaluates the potential for an event to be highly stressful.

At the onset of the anxiety, self-talk and tactical breathing can assist in stress mitigation. However, Task Oriented Focus and Self Efficacy are the two most successful methods of stress mitigation for both pre event anxiety and during the high stress event.

Task Oriented Focus involves teaching the students to focus on performing the skills they have been taught.

Self-Efficacy is the ultimate goal and may not occur until they have experienced a positive training experience in a dynamic environment. The more success the student has with the desired skill, the more self-efficacy that will be created. Negative feedback or debriefs are one of the quickest ways to prevent development of self-efficacy.
**Stress Congruent Approach**

Stress Congruent approach should be utilized for spontaneous events that occur in close proximity, suddenly and unexpectedly or when little time is allowed to train utilizing one of the other two methods. This approach generally is the best for situations that have time constraints or novel stressors that typically do not allow time to mitigate or prevent the activation of the Sympathetic Nervous System.

Since this approach involves accepting the stress and allowing for use of techniques and tactics that can be performed under acute stress, it takes little time to train this approach. The instruction taps into existing reflexive responses, he/she can quickly insert the responses into the training environment. Unfortunately, the typical responses are usually limited to “caveman tactics,” tactics that are fast, simple and gross in nature.

**Overlearning Approach**

The term overlearning describes the deliberate overtraining of a performance beyond the level of initial proficiency (Driskell et al., 1992). Overlearning is the only approach that can be used when an instructor desires to teach a technique or tactic that is not congruent with performance under stress and would have to be performed in an environment where there is a low likelihood that the student would be able to mitigate the stress. This strategy is commonly used in the military. This approach involves exposing the individual to enormous amounts of repetition to ingrain the desired skill to the level of habitual responses. One major downfall to this approach is it requires an incredible time investment and ongoing, recurrent training.

One should be cautious when employing overlearning that they do not create such rigidity in response that other solutions are not considered or recognized.

A simple example of a situation that may require overlearning is the clearing of a phase II stoppage under stress. The action is series motor skills that are dramatically affected by stress.

**Step 2. Develop Scenarios and Events**

Scenarios and trigger events are developed to allow the performance and evaluation of the competencies targeted for training.

- Events should present realistic situations.

It is important to develop a realistic scenario that “feels right” to an experienced user. A training simulation is, by definition, an abstraction, or imitation of reality. In a simulation, certain features of the real world are
omitted because they are deemed irrelevant or because the purposes of the simulation (e.g., training) can be achieved more readily in their absence. Because the scenario is a simulation, the designer must make decisions as to what real-world features can be omitted to ensure safety while still achieving the training objective.

There are several other key considerations in developing effective scenarios. For example, scenario designers can be more effective in creating stress-evoking scenarios by incorporating multidimensional elements of stress, establishing a contextual environment, making the scenario comprehensive, and adhering to the fidelity dimensions.

- Events should provide multiple opportunities for demonstrating targeted competencies.

A key consideration for effective SET scenarios is to develop scenario events to facilitate transfer to the real-world. Training transfer is enhanced for complex tasks through greater variability of practice. Gick and Holyoak\textsuperscript{13} found that positive training transfer is more likely when a variety of different examples are provided during training. Schmidt and Bjork\textsuperscript{14} refer to this as practice variability, noting that varied practice examples or experiences may enhance the transfer of training to novel task conditions. Thus, presenting material or training activities in different contexts or different perspectives can enhance the flexible use of that skill and increase transfer to the real-world environment. For complex tasks, that may have to be performed under a variety of real-world conditions, varied practice is better than rote drill and practice.

- The timing and nature of events should be precisely scripted.

A SET scenario is a script or outline of a series of carefully-crafted events. The scenarios script must specify single or multiple officer/agent response to the situation. These events must be based on training objectives and should be derived from critical incident data and input from subject matter experts. Each event describes critical cues associated with role player behavior and student decisions or actions. These activities are documented in the scenario cue column of the Scenario Script Worksheet (Appendix B). The student’s expected performance is listed under the performance column. The expected performance associated with the event reflects the training standard and must be consistent with adjudicated cases. The scenario design must to be winnable.
however; the events should include multiple opportunities for students to make mistakes. Each mistake should escalate the risk factors associated with the scenario. In brief, key events act as cues that trigger essential actions or behaviors, and provide the basis on which the trainee is instructed and evaluated. These events create opportunities for performance measurement, and therefore performance measures are established and trainee performance can be observed, evaluated, and incorporated into feedback. A narrative summary of the scenario is documented in the scenario overview block of the Scenario Worksheet (Appendix B).

- **Create scenario briefing.**

  Because this is a simulated event, the briefing provides excluded details so the student can form essential parameters for the totality of circumstances. The briefing should be a canned statement created by the scenario developers and read by the instructor so each student receives the same information. This briefing is documented in the “Briefing” block of the Scenario Script Worksheet (Appendix B).

- **Determine scenario logistics.**

  Scenario logistics are the various administrative documents used to specify training site requirements, role player characteristics, role player equipment, student equipment, safety officer equipment, and other agency specific documentation. Each requirement is identified on the Scenario Logistics Worksheets (Appendix B).

- **Determine scenario difficulty.**

  The SMEs use scenario design documents to estimate and adjust scenario stress based on a consensus of scenario difficulty. Scenario difficulty is typically based on:

  1. the amount of information provided to the student about and during the situation
  2. the number and type of immediate threats incorporated into the scenario
  3. the number and type of secondary threats and when they occur
  4. the force options required to control the immediate and secondary threats
  5. the number of victims and witnesses that must be controlled during the scenario
6. the resources (backup, visibility, etc.) available to the student during the scenario

A more precise assessment of scenario difficulty can be calculated to determine a combined or “overall” stress score using Spielberger’s STPI/STXI emotion inventory. An overall stress for the scenario can be determined by combining the scores for state anxiety and state anger while controlling for trait scores. This process of combining the anger and anxiety values produces a “perceived stress score” and allows for the comparison of stress levels between scenarios. The perceived stress score also serves to reinforce the concept that stress is determined by the performer, and although the scenarios are designed by SMEs, only the students can determine how prepared (or unprepared) they were to perform as law enforcement officers in a scenario. The Scenario Stress Index (Figure 6) provides a mechanism for which scenario stress levels can be scored, compared, and classified for future use in training.

\[
\text{Stress Index} = \frac{\sum (S_{\text{anxiety}} - T_{\text{anxiety}}) + (S_{\text{anger}} - T_{\text{anger}})}{n}
\]

where
- \( S_{\text{anxiety}} \) = State Anxiety Percentile
- \( T_{\text{anxiety}} \) = Trait Anxiety Percentile
- \( S_{\text{anger}} \) = State Anger Percentile
- \( T_{\text{anger}} \) = Trait Anger Percentile
- \( n \) = number of subjects

**Determine how and when stress will be introduced**

There are numerous methods to create stress during the scenario. No different than the actual scenario itself, the manner in which stress is introduced during the scenario can be scripted to create a specific challenge to the student. This includes introducing scenarios that cause spontaneous high stress conditions, to others that build or diminish stress conditions over the span of the scenario. The Scenario Stress Templates (Appendix B) assist in selecting the desired stress challenge.

**Step 3. Develop Performance Measures**

Performance measures provide the link between training objectives and performance diagnosis and feedback. Performance measures capture what constitutes good and bad performance in terms of the events embedded in the scenario.
To determine whether learning has taken place requires identifying very precise specific and measurable supporting behaviors or objectives. Select traits or factors that are critical, observable, distinguishable, specific, differentiating, and limited in number to determine the success or failure of the student performing the scenario. Clearly defined performance measures make it possible to differentiate between those who are effective and those who are ineffective during the scenario. Documented performance measures also reduce evaluator errors and promote evaluation consistency. The performance associated with the cue, must reflect the training standard and be consistent with adjudicated cases, is listed under the expected performance measure column of the Scenario Script Worksheet (Appendix B).

**Step 4. Develop Tools to Support Performance Diagnosis and Feedback**

Tools such as the Scenario Training Assessment and Review (STAR) scale provide a means for the instructor to evaluate training performance, and provide detailed information for trainee feedback/after-action review. Evaluation instruments (Appendix B) must support the systematic assessment of performance associated with the identified critical tasks and competencies. Depending on the specifics of the scenario, a variety of evaluation techniques may be required. While skill-based tasks (i.e., handcuffing) may allow the use of procedural checklists, the activities associated with a comprehensive dynamic scenario limits the use of standardized checklists. Dynamic scenarios typically require customized assessment instruments designed specifically for the scenario. With properly developed assessment instruments, performance can be documented, analyzed, and packaged and used to support feedback that specifically focuses on the critical competencies required for effective performance. AARs should include feedback related to both outcome and processes.

**Step 5. Link Exercise Data to Historical Database**

Capture and maintain data for future training evaluation and comparison. This data is archived in a way that trend analysis can be performed to identify normative patterns to support the development of lessons learned and future exercises. The systematic linkage continues by tying feedback topics to the performance measures, which in turn are linked to the events and learning objectives. This approach provides structure and control to training and ensures internal consistency.
The Importance of Role Players

The single most important determinant of success during scenario training is the ability and performance of the role player(s). Even the most perfectly designed scenario can be reduced to utter disaster by ineffective role-playing.

Choosing Role Players

Not everyone is made to be a role player. There are phenomenal instructors who because of various reasons should never be allowed to role-play. When you are looking for role players, look for these traits:

1. **Disciplined**: This is probably the most important trait. The role player must be able to follow instructions to the letter. Failure to do so can steer the learning environment in a completely different direction. Individuals who become bored quickly and begin to deviate from given instructions can destroy the scenario.

2. **Animated/Expressive**: When using non-lethal training ammunition an incredible amount of protection is required to keep everyone safe from injury. Unfortunately, masks and padding also remove the ability to read the role players body language or hear what they are saying. This can be overcome by having role players that over animate their actions and are highly expressive with their emotions. It can also assist in triggering stress responses in the students who will feel more threatened by the emotional outpouring from the role player.

3. **Physically Fit**: Use of force dynamics can be very physically demanding. The role player will be required to perform throughout the entire day. This can be very taxing on the body. Less fit role players may be more susceptible to injury or fatigue.

4. **Knowledgeable on Use of Force Laws/Policy**: The role player needs to understand what actions may evoke the desired response from the student. If they have a clear understanding of what criteria is required for the student to be justified in their actions, they can create a clear representation of the required threat.
Look for Losers

The job of the role player is going to be to lose repeatedly. This can be very conflicting for some trainers, as they have conditioned themselves never to lose. This is very important, as the role player must be completely dedicated to the development of the student. This behavior does not simply manifest itself in the role player failing to lose when required, but is more often seen when a role player ensures they get their own shots in before finally losing. Typically, the more confident and secure the role player is in his or her own abilities, the less likely they will have problems having to lose to a student in the training environment.

If First You Don’t Succeed, Die, Die Again

The role player must ensure when it is time for them to die, they do so in a realistic manner. If the role players are always told to simply fall to the ground and feign death when they are shot, during the scenario, the student will develop the same expectation for the real world.

In the real world, bad people do not always fall down and stop moving when police shoot them once. Your scenarios should reflect this. Some of the best stress scenarios occur when the role player is struck by rounds but continues to be conscious. It does not mean that they continue to fight, but having the role player drop their weapon and begin walking around holding an apparent wound can take the scenario to a different level for students who now have to deal with an injured assailant who is still conscious.

Depending on the scenario and primary objective, the designer of the scenario may instruct the role player to die:

- Die only if shot a certain number of times.
- Die if only shot in a place other than the torso (body armor drill).
- Die only when given a signal.
- Do not die.
• Go to ground displaying serious injury.
• Go to ground displaying a non-serious injury.
• Do not go to ground display a serious injury.
• Do not go to ground display a non-serious injury.

In the real world, very few if any suspect ever dies in the perfect handcuffing position. Some people fall face down, some roll face up, some on their sides, there is no one position that will replicate how a person dies. The role player should collapse to the ground based on the natural flow their body. This will force the student to have to move the role player manually to properly handcuff.

**Role Player Safety**

Role players are most vulnerable to potential danger during scenario-based training. The simple fact is that they are going to be on the receiving end of all types of force. Add to this the stress that students are experiencing and inadvertent applications of high levels of force can occur. Therefore, it is critical that a safety officer be present during the scenario. Here is the challenge; we know that having an instructor/safety officer during the scenario alters the student’s performance. To get around this issue dress the safety officer as a role-player and place them in a wheelchair. This provides the safety officer with a vantage point without interfering with the student’s performance.

To ensure role player safety, the appropriate safety equipment must be utilized during scenario training. There will always be tradeoffs between environmental fidelity and safety but, better to be safe than sorry. This may include:

• Full Face, throat and groin protection.
• Full body padded protective suits.
• Padded environments
• Safe replica weapons
Role players should have the same power to call a stoppage to action at anytime that they observe a dangerous situation.

**Role Player Responsibilities**

Role players should ensure the following:

1. **Remain hydrated:** The physical demands of role-playing are extremely high. Role players should ensure they continually remain hydrated throughout the day by taking in water between scenarios.
2. **Remain limber:** The beginning of the role player day should start with a warm up and full body stretch. They should concentrate on problem areas and especially the shoulders as handcuffing can take a toll. Stretching should continue throughout the entire training day.
3. **Clean Up:** After each scenario, the role players should clean up and reset the scenario environment. Something as simple as a spent casing on the floor can cause the scenario to take a radical departure from the desired flow. If possible wipe any marking agents so that new “hits’ can be identified during the next scenario.
4. **Inspect Safety Equipment:** Ensure that personal safety equipment has not become damaged or dislodged.
5. **Get Feedback:** Constantly inquire as to how the role can be improved to enhance the scenario.

**Tell Them, Show Them, Make Them**

When setting up the scenario with the role player always use the following format to ensure you will get precise behavior from your role players:

**Tell Them:** Verbally describe what actions you want from them and what you are hoping to achieve from the actions. This may include giving them a prepared script and discussing what aspects of their performance is crucial.
**Show Them:** Then physically show them what you want them to do and say. Until they are shown, they will only have their own interpretation of what it is they are being asked to do.

**Make Them:** Finally, have the role-players perform a walkthrough. You should always watch from the perspective of the student to ensure that the role-players actions are achieving the desired effect.

**Lessons Learned: Guidelines for Scenario Development**

- A job analysis should identify who should be trained, the tasks to be trained, and what competencies are required to perform these tasks.
- Development of an effective scenario is a cooperative task requiring input from subject matter experts and training personnel.
- Scenarios should be based on realistic encounters that may be drawn from field reports and real-world cases such as those described in *Violent Encounters* \(^{15}\).
- Events embedded in the scenario should trigger key behaviors that are identified in the overall training objectives.
- These trigger events provide opportunities for performance measurement.
- Carefully script the roles of other participants in the scenario and train them to play these roles.
- Follow milestones for scenario development:
  - Assemble the scenario development team (subject-matter experts, training developers, and other required organization input, such as legal).
  - Research and identify scenarios (field incident reports/adjudicated cases)
  - Define training objectives
  - Develop scenario outline (identify sequential events and outcomes)
  - Develop evaluation sheet (describe acceptable and unacceptable performance)
  - Develop scenario briefing
  - Develop role-player scripts to obtain controlled repeatable performance
  - Pilot-test and revise as necessary


The STAR Approach to Performance Assessment

Event-based training (also called scenario-based training or simulation-based training) is based on what is known regarding sound instructional practice. That is, training should build from providing information, to demonstration, to practice, to feedback and remediation\(^1\). However, even if training procedures conform to this ideal structure, training is likely to be ineffective without a sound means of performance measurement. As shown in Figure 7, performance measurement provides the link between trainee practice and feedback, and provides the foundation for the evaluation and diagnosis of performance. Without an effective performance assessment system, a training exercise becomes just an exercise—an experience where some may learn the right things, some may learn the wrong things, and some may learn nothing.

<table>
<thead>
<tr>
<th>Figure 7</th>
<th>Components of Event-Based Training (from Salas et al., 2009)</th>
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<td><img src="image" alt="Diagram" /></td>
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The Training Research Branch at FLETC initiated a research program to examine the extent to which stress training can better prepare law enforcement officers to perform under highly stressful conditions. Initial results from the research program have been reported in a technical report entitled the *Survival Scores Research Project*\(^2\).
This research measured trainee performance during a series of scenarios involving lethal and non-lethal encounters, varying threats and stressors, and specific performance elements provided during training at FLETC. The scenarios were created to replicate real-life situations that required assessment and response to rapidly evolving events. In order to clearly identify a student's ability to use sound judgment and win a threat encounter, a new assessment tool, the Scenario Training Assessment and Review (STAR) scale, was developed to measure performance effectiveness and risk in the research scenarios. By creating a scoring model that can accurately reflect an officer's likelihood to survive a force on force encounter, both trainer and trainee can use the information to improve reactions and responses that may well save lives in the future.

The overall goal of the Survival Scores research was to validate training that is measured by a "survival score" that can provide a more realistic predictor of an officer's readiness for the real world. One objective was to create an evaluation tool that could determine how well students perform their law enforcement skills within the context of multiple, reality-based training scenarios. Another objective was that the evaluation instrument provides the performance assessment in real time.

Establishing STAR Performance Domains

The FLETC research team, consisting of law enforcement trainers and subject matter experts from the various training divisions, first identified 97 performance elements that were taught across various FLETC training programs. It was apparent that most of the elements were a combination of several training areas and, in fact, were universal in design and could be applied to any of the training disciplines (i.e., behavioral science, tactics, counterterrorism, vehicle operations, firearms, intermediate weapons, etc.). Additionally, the team conducted an extensive review of literature from law enforcement publications, Office of Personnel Management (OPM) competency statements, lessons learned from assaults on officers, reality-based training, and research on decision making under stress. Using the information from these multiple sources combined with the universal nature of the 97 performance elements, the subject matter experts regrouped the 97 elements into eight factors. The eight factors represent "survival factors" associated with reality-based training scenarios, and each performance element expected of the students falls into one of these eight factors.

- **Situation Awareness** (Involves being aware of what is happening around you to understand how information, events, and your own actions will impact your goals and objectives, both now and in the near future)
• **Threat Identification** (Threats and non-threats are accounted for, properly prioritized, effectively communicated, and appropriate response is efficiently planned)

• **Initial Response** (Strategy to counter threat or emergency situations including position of advantage, tactics, or other corrective actions)

• **Scene Control after the Initial Response** (Strategy to maintain control of the situation including evidence, crime scene, threats, victims, and witnesses)

• **Application of Force** (Application of appropriate/timely force options and articulation consistent with Constitutional Standard)

• **Arrest/Processing Techniques** (Initiation of correct procedures during an arrest including position of disadvantage, handcuffing, and search)

• **Communication** (Information exchange between entities through correct/timely verbal commands, non-verbal behaviors, and written accounts)

• **Articulation/After Action Review (AAR)** (Providing factual/accurate information during a scenario debriefing session)
For continuity of instruction, the student should become familiar with the eight performance factors and begin to think of their responses within this framework. Thus, entering a building to clear it (taught by Enforcement Operations Division), the student should mentally rehearse and execute "situation awareness.” Additionally, when responding to domestic disputes (taught by Behavioral Sciences Division) officers should utilize situation awareness such as engaging the victim and others from a safe vantage point. The task of removing a suspect from a vehicle with multiple occupants (taught by Driver and Marine Division) requires situation awareness and other factors as well. The conceptual nature of the eight survival factors should enable students to readily adapt and apply them in real world situations.

The next step was to use the STAR model as the basis for scoring and evaluating performance to determine a student's ability to win a threat encounter. A new "survival index" was created to more accurately capture the spectrum of performance ranging from unacceptable to desirable. The new scoring index would also provide a more accurate and objective basis for feedback and mentoring of students and reflect the student's likelihood of winning a threat encounter. The survival index is based upon the comparison of risks associated with the performance, and how the student's actions reduced the likelihood and severity of harm. Establishing an objective scale for risk assessment is a formidable task because each individual interprets risk levels differently. A general definition of risk assessment for this study was "the determination of quantitative or qualitative value of risk related to a concrete situation and a recognized threat.” Clearly defined actions and responses were used as indicators of decision-making, perception of the level of threat, individual vulnerabilities, potential consequences, and the resulting degree of anxiety.

In developing a risk assessment scale, subject matter experts thoroughly reviewed each scenario and identified those objects, situations, individuals, etc. that could cause harm, particularly to the officer/agent. After identifying each risk, the team determined how likely and severe the risk was, and then weighted the measures appropriately. For example, while one type of position may have been the ideal cover given the scenario, the position used was still effective. In this manner, a more precise system of scoring was created that also provided more complete and detailed feedback to the student, and rendered a more realistic "survival score".

The resulting risk-based scale can awards points for less than perfect performance as well as differentiates between the various levels of risk-based performance. The assessment scale for scoring student performance used a "0 to 4" Likert scale. Table 2 identifies each rating and provides a brief description of applicable student actions.
An example of this type of rating would award the student with a "4" (Desirable) if they successfully and timely performed a "Tap, Rack" during a weapon malfunction requiring a primary immediate action procedure. They would receive a "3" (Acceptable) if they cleared the malfunction in a timely manner but failed to "Tap" before racking the slide. They would receive a "2" (Least Desirable) if they failed to recognize the weapon malfunction in a timely manner or took an extended amount of time to clear the malfunction. They would receive a "1" (Not Acceptable) if they required multiple attempts or failed to clear the weapon. The elements of the scenario performance checklist generate the training factors associated with the STAR model.

Using the eight factors of reality-based scenario performance, the STAR model provides an effective tool for evaluation and feedback/After Action Review (AAR) for law enforcement students participating in realistic training scenarios. Perfect performance and a perfect score are not requirements for a successful outcome. However, it is essential that students demonstrate critical knowledge and skills associated with scenario performance objectives. The STAR is an effective way to measure these essential competencies.

Overall, our research findings suggest that the adoption of the STAR Model will provide comprehensive training evaluations and will produce better-prepared officers and agents. Effective implementation of the STAR model will require training in these techniques. This training would extend to instructor training programs that address student assessment techniques during scenario-based training.

### Training Instructors to Assess Student Performance

As an instructor, your job includes determining whether student have acquired the skills, knowledge, and attitudes to function as a law enforcement officer or agent. There are two purposes for assessing student performance during reality-based training. The first is to diagnose if and where a student is having problems. This is typically accomplished during the lab exercises. The second is to determine if the training

<table>
<thead>
<tr>
<th>Rating</th>
<th>Description</th>
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<tbody>
<tr>
<td>0. Not Applicable</td>
<td>does not apply or is not observable</td>
</tr>
<tr>
<td>1. Not Acceptable</td>
<td>actions are not consistent with legal standard, creates serious risk, or did not perform</td>
</tr>
<tr>
<td>2. Least Desirable</td>
<td>actions generally acceptable but create identifiable risks</td>
</tr>
<tr>
<td>3. Acceptable</td>
<td>actions are consistent with training but not most effective method or tactic</td>
</tr>
<tr>
<td>4. Desirable</td>
<td>actions demonstrate sound and effective tactics</td>
</tr>
</tbody>
</table>
objectives have been accomplished. This occurs during the practical examinations. The evaluator directly influences the success or failure of the training.

Unlike written tests, assessing student performance during scenarios is more subjective and requires the instructor to observe student behavior and then make a judgment as to the acceptability of that behavior. To reduce the potential variability during these assessments instructors must be trained to ensure the reliability and validity of their evaluations. The pass/fail decision made on each student should be based on what the student not by differences among the instructors in what value they place on what they observed. The critical point here is that if the instructors are inconsistent in their evaluations then the test cannot be valid.

For professional and legal reasons instructors need to make accurate and consistent evaluations of student performance. Therefore, training instructors to evaluate students should include factors for effectively assessing student performance during reality-based training scenarios and proven techniques on evaluator training. In addition, this simple model can be used in training evaluators.

1. Bring together a group of instructors with expertise in the knowledge and skills being assessed.
2. Use these instructors to classify videos of live performance or simulation demonstrating all of the attributes of the desired performance, videos that present a clear non-performance is demonstrated, and additional videos illustrating a range of performance between the two extremes.
3. During training, the new evaluators should be presented with one performance at a time. Typically the desired performance video would be shown first. The new evaluators would use the check sheet to record their observations.
4. Show the next video, usually the clear non-performance, and again record their observations.
5. The ratings for each item on the check sheet is then tabulated as a percentage of agreement and presented to the group. Areas with low percentages of agreement should be reviewed and discussed until a consensus is reached. The video can be used during these discussions so that evaluators can discuss specific behaviors.
6. The process identified in step 5 is repeated until a high degree of consistency is achieved.

The amount of time required to conduct this training is dependent on the complexity and length of the scenario. This procedure is establishing the reliability of both the
evaluator and the check sheet at the same time. It is recommended that multiple evaluators should observe and evaluate a single student on a periodic basis. If the consistency of the evaluators has dropped below an acceptable level then the evaluators should attend refresher training. New evaluators can be trained using the same videos with their results compared with the original group of evaluators.

Lessons Learned: Guidelines for Scenario Training Assessment and Review (STAR)

- Practice alone is not sufficient to foster learning; without assessment and feedback, learning may not take place.
- Performance measurement tools should describe, evaluate, and diagnose performance.
- Performance diagnosis provides information about the causes of effective and ineffective behavior.
- Performance diagnosis provides a basis for feedback and remediation.
- When specific skills are not viewed by trainees as broader concepts applicable to a wide range of situations, they remain isolated pieces of information. The conceptual nature of the eight STAR survival factors should enable students to readily adapt and apply them in real world situations.
- The STAR model provides an effective process for evaluating trainees’ selection of appropriate responses and their execution during realistic, stressful, and dynamic encounters.
- Effective implementation of the STAR model requires training in these techniques. This training should be incorporated into instructor training programs that address student assessment techniques during scenario-based training.


Student-Centered Feedback

Feedback or knowledge of results is critical to support both learning and motivation\textsuperscript{1,2,3}. Feedback serves several important functions in training. First, it conveys information to trainees regarding the correctness of their performance, thereby allowing them to make the necessary adjustments in their subsequent behavior. Second, accurate, and timely feedback maximizes the motivation to learn. Third, it allows the setting of specific goals for maintaining or improving performance. Finally, feedback regarding successful task performance promotes self-efficacy and expectations of competence.

Wollert and Norris\textsuperscript{4} have provided a comprehensive review of the feedback process as it relates to training effectiveness. A key part of any training program is the incorporation of feedback as part of the learning process. Well-defined and delivered feedback increases learning and provides an accurate assessment of performance in a training scenario. Although feedback is typically addressed in the preparation and training of new instructors, the training focuses on "why" information should be "feedback" to the student, but little guidance is provided on the delivery process or "how" the information should be shared with the student.

When a student hears "out of role" and the training scenario comes to an end, what takes place in the next few minutes will have a tremendous impact on the future capabilities of the student. Motivation, interest, achievement, understanding, relevancy, and numerous other factors are impacted in this short period of time. In order to capitalize on this window of opportunity, feedback should be timely, positive, specific, and at a level that will foster reflective thinking and dialogue between student and instructor. When feedback takes place soon after the training experience, it optimizes its effectiveness by capturing the greatest amount of detail related to decision-making, actions, and attitudes that were exhibited during the scenario performance.
One of the best ways to begin the feedback session is for the instructor to begin with an open-ended question such as "how do you think you did?" When feedback begins in this manner, students immediately become active participants and the instructor has a much better idea of how students perceive their competency. This initial step is essential to building on the student's existing body of knowledge and recalling information for similar situations, which may confront students in the future. When feedback starts on a positive note, students realize they can build on their previous experiences and this prepares them to solve a wider range of complex problems and issues in the future. Additionally, by keeping students actively engaged, there is a better chance they will retain these abilities and experiences than if they receive the information through a more passive method of instruction.

The technique of using open-ended questions or statements to determine a student's level of comprehension is not a new one and is generally referred to as the Socratic Method of instruction. Paraskevas & Wickens\textsuperscript{5} describe the Socratic Method as a form of structured discourse using systematic questions, inductive thinking, and the formulation of general definitions with more emphasis on the process and less on content. The Socratic Method is quite adaptable to providing training feedback. According to this approach:

1. The student is asked to start by identifying his or her own strengths
2. The trainer reinforces these and adds further strengths
3. The student is asked to identify areas for improvement
4. The trainer reinforces these, adding further areas if necessary.

Wood\textsuperscript{6} has provided some additional guidelines for this type of open-ended feedback:

1. Comments should be based on observable behavior and not on assumed intentions or interpretations.
2. Positive comments may be provided first to give the learner confidence.
3. Feedback should emphasize the sharing of information; both parties contribute.
4. Feedback should be given at an appropriate time and place.
5. Feedback should include specific, subjective data but not so detailed or broad as to overload the learner.
6. Feedback should deal with behaviors the learner can control and modify; it should deal with decisions and actions.
7. Learners should be asked to verify feedback.
8. Feedback requires preparation and the ability to tolerate discomfort and criticism.
A Student-Centered Feedback Model

According to traditional training practice, feedback is provided in the form of a critique. The critique method of feedback was a passive approach in which trainees gathered after training to receive a debriefing on the negative and positive aspects of their performance. The delivery of feedback typically falls somewhere along a continuum between “Instructor-Centered” and “Student-Centered” feedback styles. In “Instructor-Centered,” trainees are assembled after the event and the instructor provides most of the information about the students’ performance.

In contrast, “Student-Centered” feedback, trainees are actively engaged in participation in the feedback process. Trainees are required to examine their own performance through a process of guided self-evaluation. Student-centered learning provides building blocks for learning that build on the knowledge that the student already has. The unique distinction of student-centered feedback is that it draws on the student’s experience, knowledge, and abilities to reshape and reinforce what they already know.

Table 3 summarizes the differences between instructor-centered and student-centered feedback.

<table>
<thead>
<tr>
<th>Instructor-Centered Feedback</th>
<th>Student-Centered Feedback</th>
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<tbody>
<tr>
<td>Emphasis on basic skills and one correct answer</td>
<td>Emphasis on critical thinking, problem solving and creative solutions</td>
</tr>
<tr>
<td>Instructor disseminates information</td>
<td>Instructor facilitates knowledge development</td>
</tr>
<tr>
<td>Feedback is evaluative</td>
<td>Feedback is descriptive</td>
</tr>
<tr>
<td>Passive learning</td>
<td>Active learning</td>
</tr>
</tbody>
</table>

The ability to provide feedback that is student-centered requires training and sufficient practice to acquire this unique skill. Initially, most instructors find it difficult and seemingly unnatural to allow the students to do the majority of the talking (by responding to open-ended statements). When students are given more time to talk, the instructor has a clearer picture of what the students thought patterns were (or weren’t) during the training exercise. By allowing students to describe their situation awareness, threat awareness, proposed response, level of effectiveness, and future actions in a similar situation, a greater transfer of learning will take place as opposed to the instructor pointing out what was wrong and what was right.

Li, Solman, Lee, Purvis, & Chu⁷ reported that when feedback focuses on student performance rather than the outcome of the performance, it provides for greater skill
They also identified that the amount, content, frequency, precision, and type of feedback were the critical components of effective training feedback. Since feedback can be provided at different stages during the training process, the terms formative and summative feedback are routinely used. The term formative feedback describes information provided to the student for the sole purpose of improving future performance. In contrast, summative feedback is used in reference to a final performance or practical exercise that is graded to determine proficiency. Formative feedback requires information about a student’s performance to be observed, documented, summarized, and fed back to the student, and generally offers the most promising way of improving student performance.

In a recent research study, Wollert and Norris\(^8\) compared the effectiveness of student-centered and instructor-centered feedback given to trainees during a lethal force training simulation. The student-centered feedback resulted in higher performance in two out of three training scenarios. These findings suggest video supplemented, student-centered feedback is a valuable tool to enhance training effectiveness in dynamic, high stress training settings.

In Figure 6, we provide an overview of the student-centered feedback model. We then describe relevant activities at each stage of this model.
Pre-brief

The “Student Centered Feedback” process starts with briefing session with the student. Because the student will be experiencing a simulation and not an actual encounter that represents some critical pieces of the situation may not be apparent. For example, the instructor may need to explain that the student is responding to a silent alarm or responding to a dispatched call with the goal of providing information the student would if this were a real-world encounter. The briefing provides details excluded because of this being a simulated event so the student can form essential parameters for the totality of circumstances. The briefing should be a canned statement created by the scenario developers and read by the instructor so each student receives the same information. Instructors need to exercise caution while providing the briefing and avoid “coaching” students through the scenario.

Another purpose for the pre-brief is to review elements of the student’s performance from previous scenarios. This information is to remind the student of areas of improvement identified during the after action review. This aspect of the briefing should not be belabored. Focus on the two or three most critical performance deficiencies. Remember it is a briefing not a lecture.

Observe Performance

Preparation

Prior to observing student performance there are several instructor preliminary steps that must be completed. The instructor must familiarize himself or herself with the lesson plan or scenario guide. This includes reviewing the location, equipment, and role-player requirements of the scenario. As part of the review the instructor needs to identify the expected behaviors the scenario is designed to elicit and identify any critical safety issues that may be associated the activity. Once the instructor has armed himself or herself with this information must brief the role-players to ensure they are prepared to act in accordance with the lesson plan or scenario guide. It is also important to prepare role-player signals that will not be detectable by the student if timing is critical for event cues.

Position of Advantage

Instructors need to position themselves to ensure they have an opportunity to observe the student’s behavior to determine its acceptability. Instructor position should be close to the side (left or right) and slightly in front of the student facing at a 45-degree angle to the student but not so close as to interfere with the scenario.
Observation should alternate between the student (visual appearance) and the student’s field of view (try to see what the student sees).

The instructor must also be cognizant of their behavior during the scenario to prevent communicating non-verbal cues to the student. These subtle behaviors can communicate to the student upcoming events or displeasure with their performance thereby altering the student’s behavior.

**Performance Documentation**

Events during a dynamic scenario can happen quickly. Instructors must prepare themselves in order to effectively and accurately record student performance during the scenario. The instructor knowing *what* is supposed to happen can make this task easier. This includes both the expected student actions and the sequence of events. Knowing what is going to happen is only half of the equation. The other is knowledge of *when* it is supposed to happen. This requires knowing the event cues and the timing of student performance stimulus.

In addition to knowing *what* is going to happen and *when* it will happen, the instructor must know *how* acceptable the student’s performance was. The instructor compares how the student performed to the expected student performance-evaluation criteria. Without pre-defined performance criteria, the instructor’s observations can become subjective. One of the more frequent occurrences of this is when the instructor basis their evaluation on how they would have performed the task instead of on whether the student met the pre-defined performance standard.

Once the instructor has determined the student’s performance acceptability, the performance must be documented. By documenting student performance using the STAR Model attributes of the student’s performance can be given a contextual reference. The STAR Model facilitates trending performance within the eight factors. This consistent performance documentation procedure ensures critical and exemplary issues are identified.

The last part of performance documentation is used on as needed basis. During the scenario, the instructor may want to write down observations that do not fit the checkbox criteria or reminders of question the instructor may want to ask for additional clarification. These notes can be very helpful during the after action review. However, a word of caution is offered regarding instructor notes on the evaluation sheet. Do not write anything on the form that you would not want read in a court of law. Keep it professional.
After the student completes the scenario and the instructor has documented this performance the next step of the Student Centered Feedback Model can be initiated.

**Identify Actions**

Having the student describe what they did during the scenario is essential to reinforce articulation of elements associated with officer-involved incidents. This process should reflect the level of detail required for post-incident written reports. The student’s articulation of the event allows the instructor to assess the student’s recall of details, the accuracy of recall, and their ability to provide facts versus conclusions.

It is important that during the articulation of action to remind the student to only describe the events and not define strength or weaknesses of their performance. These components will be addressed later during the after action review. The instructor needs to allow the student to do most of the talking and only interrupt when clarification is required.

Before debriefing the student, explain to them what the purpose of the debriefing/feedback sessions is. For example, the intent of the feedback session is to review what happened during the scenario and why the student took those actions. Once rapport has been established, indicate that the feedback session includes a series of questions about the scenario. The purpose of these questions is to retrieve the following information:

- Student recall of what happened
- Identification of student actions and why they were taken
- The end result or outcome of those actions

**Sample questions for guiding feedback**

From the time you began the scenario until we started this debriefing, describe what happened?

- Starting with how you became involved, tell me what were you responding to?
- What were you doing prior to responding?
- What triggered your response? (self/dispatch)

What information did you collect prior to arriving at the scene?

- How did you get the information?
- Who did you get the information from?

What were you planning prior to arriving at the scene?

- How were you going to implement your plan?
- What changes to your plan did you have to make once you completed your initial assessment of the situation?

What was your initial assessment of the situation?

- How did you approach the scene?
- What did you use for cover/concealment?
- Describe what you saw when you first entered the scene.
- Describe the people you saw.
- What threats did each of them pose?
- How did you prioritize each threat?

What was your initial response?

- How did you initially engage the threat? (tactical approach)
- What did you use for cover/concealment?
- What actions did you take to initially control the scene?
- What tactical options were available to you to control the scene?
- What facts justified the level of force you employed to control the threats?
- What is the legal standard for the level of force you employed?

How did you control the situation after the initial engagement?

- Describe the tactics you used to maintain control of the situation.
- What did you use for cover/concealment?
- Describe how you maintained control of the immediate threats.
- Describe how you maintained control of the non-immediate threats.
- What actions did you take to control the area for crime scene preservation?

**Identify Areas of Strength**

Ask the student “what did you do well?” Many well-intentioned trainers will ask the student “how do you think you did?” Unfortunately, with most students, they will articulate a laundry list of the things they think they did wrong. Asking the student what
they did well allows the student to focus on something positive. Some students may be reluctant to tell the instructor what they did well because they do not want to brag about their performance. Others may feel they really did not do anything well. The instructor needs to take this opportunity to help the students identify their own strengths.

Having the student describe what they did well accomplishes two things; first, it keeps the feedback session on a positive note second, it allows the instructor to identify areas that the student thought they did well when in fact their actions may have been questionable. The instructor should acknowledge positive performances and tactfully provide corrective instruction on questionable behavior. The instructor should not dwell on this corrective instruction, as there will be opportunities for instructor reinforcement during the areas of improvement segment of the after action review.

**Identify Areas of Improvement**

Ask the student “If you were to encounter this scenario again, what would you do different?” Notice that the question does not focus on what the student did wrong but what would they do different. This does not mean that the instructor is neglecting the student’s mistakes during the scenario. For the most part the student knows where they made mistakes. This is especially true if the scenario is designed with repercussions for ineffective performance. What is important is for the instructor to guide the student in identifying actions that have the potential for better outcomes. The intent is to develop more effective cue recognition, better decision skills, and successful actions.

After allowing students to analyze their own performance and identify the areas in which they need to improve, the instructor may identify other areas that need improvement. This should not be a laundry list of everything the student needs to improve. The focus should be on the most critical areas first then start correcting the details. The example below illustrates two methods of providing this corrective action.

Example:

**Instructor Centered**: “You were way too close to the suspect when you were conducting the field interview. You need a bigger reactionary gap.”

**Student Centered**: “How was your positioning in relation to the suspect during the field interview? What is a reactionary gap? What do you think a safe distance would be in this instance?”
The main distinction between the two methods is the use of questioning rather than direct statements to the student. Also, note that the questions require more than a yes/no response from the student.

**Identify Alternate Solutions**

The last step of the model is to identify alternate solutions. It is important during this time that instructors not identify too many alternate solutions. The focus needs to be on one or two alternate situations and allow the subject to do some problem solving and planning. This is where the use of video recordings of the student’s performance can be used most effectively. The instructor can show segments of the video with stops at critical discussion points. During these stops, the instructor can ask the student how well their action worked for them, and then ask if they can identify an alternate action that may have worked better. The advantages of paused video visuals allow the student more time to observe the situation to identify different solutions to the problem. Another advantage is that it removes the student’s perception that the instructor did not accurately view the student’s actions. The student sees what they did and what the outcome was thereby turning the after action review session into productive discussions on different ways to complete similar situations successfully. This is also a time to provide an opportunity for the student to ask questions on areas that they are uncertain. At the conclusion of the alternate solutions phase, the instructor will focus on lessons learned and identify goals for improvement for the next scenario. The feedback process then repeats itself on the next activity, or retest on a similar scenario, to correct any identified performance issues.

In the absence of video playback, the instructor can use leading questions like the one below.

- Ask the student “what if you had done _______. Would that have worked in this situation?”
- Instructor asks the student for ideas then proposes alternative ways of handling the situation
- Avoid
  - “This is the way it’s supposed to be done”
  - “This is the way I would have done it.”
- Ask the student “what was the training you received regarding this situation?”
- Ask the Student “do you have any questions?”
Common Mistakes

- Providing no feedback: Adult learners have a need to know how they have performed on a particular assignment or exercise. Adult learners seek feedback. When instructors make the mistake of providing no feedback, and simply move on to the next objective, the learner is deprived of a valuable learning experience. Some well-known reality based training instructors, such as Ken Murray of Armiger Training in Florida; believe that the feedback portion of a scenario is actually as important as or more important than the scenario itself.

- Instructor inattention: Occasionally Instructors may lose their attention when evaluating reality based training scenarios. This can occur when a single instructor has evaluated the same scenario repeatedly during a particular period. The instructor may also get distracted by engaging in conversations with others or taking cell phone calls during an exercise. This behavior can send the message to the student that the instructor is uninterested in their performance, which sends a negative signal to the student about the importance of the scenario. When an instructor is inattentive; they may miss critical elements of a student’s performance that may need to be addressed.

- Cutting the student off: Occasionally instructors will ask students a question during a feedback session, but will not allow the student to give a full answer before interjecting their opinion. Students should be permitted to fully answer a question posed by an instructor before offering an opinion as to what needs to be improved upon. Following the student centered feedback model will assist in this process.

- Talking over the student’s head: Instructors should avoid the use of overly complex or technical terms when conducting feedback sessions. Speak in more general or practical terms. Example- “Your response to the psychological stressor was manifested when your visual cortex stimulated the reticular formation which activated the hypothalamus and the ANS. Fortunately for you the sympathetic stimulation of the medulla released catecholamines elicitng a response in endocrine activation resulting in influencing the pituitary to secrete its respective trophic hormones. Otherwise you would have been in trouble.” Although instructors are Subject Matter Experts in particular fields, that knowledge is useless if it cannot be conveyed to the student on a practical level.

- Losing “Objectivity”: Evaluating students based on personal considerations, emotional perspectives, biases, etc. The “Halo” effect- Instructors evaluate students higher based on high performance in other phases of the course which tends to influence the instructor’s rating. “Central Tendency Error”; the tendency to evaluate all elements on the checklist the same or approximately
the same. “Logical Error”\textsuperscript{12}—a tendency to rely too much upon recent observations and neglect the complete record of observations.

- Believing there is only one answer—Law enforcement is a complex career field and instructors have a varying array of experiences. The good instructor realizes that there may be many solutions to any given law enforcement problem. When facilitating Reality Based Training, scenarios must be winnable. A winnable scenario is one in which a student who performs as a reasonable officer, faced with similar circumstances, has a positive outcome. Scenarios should not require perfection for a successful outcome. While perfection is an admirable goal, it is unlikely officers can achieve perfection in dynamic, rapidly evolving situations in the field. Instructors must remember there is no single way to handle a given situation. Each officer’s perspective is different; therefore, they may handle the situation differently than the instructor would. The critical question is not whether the instructor “would” have done the same thing, but rather “could” a reasonable officer have performed that way and “would” they have survived the encounter.\textsuperscript{13} Instructors need to be open to different approaches when handling law enforcement scenarios, and be as objective as possible when providing feedback to students.

**Lessons Learned: Guidelines for Student-Centered Feedback**

The techniques associated with Student-Centered Feedback actively engage the student in higher order learning through analysis, synthesis, and evaluation. Student-Centered Feedback reflects a Socratic Method of teaching using systematic questions, inductive thinking, and the formulation of general definitions with more emphasis on process and less on content. Student centered feedback emphasized critical thinking, problem solving, and creative solutions. The instructor’s role during Student-Centered Feedback is to facilitate knowledge development. By developing these skills, students can expand their experience and prepare themselves to solve a wider range of complex problems and issues. Ultimately, feedback is about communication. The primary communicator during Student-Centered Feedback is the student, thereby providing an active learning environment to build confidence. While being supportive, the instructor provides corrective feedback to the student to develop competence. The instructor’s focus is on critical student performance deficiencies and allows the student to identify possible corrective actions. To illustrate the significance of the instructors role during feedback, three articles from Brian Willis (Winning Mind Training Inc.) *Change Your Language: Change Your Results, THE POWER OF WORDS, and INCIDENT DEBRIEFINGS: A Learning Opportunity* are included in the appendix. During the SSRP students receiving Student-Centered Feedback demonstrated a more adaptive pattern of behavior exerted
more effort, and persisted in the face of difficulty. The bulleted items below summarize the “Student Centered Feedback” concepts.

- Feedback provided during initial acquisition of skills should be immediate, frequent, and elaborate. Higher-order learning and transfer is best supported by feedback that is delayed, intermittent, and simplified. As learning progresses, the primary source of feedback should shift from externally provided to self-generated.

- To be effective, feedback should be provided as soon as possible after the trainee's behavior. It is not necessary that feedback be instantaneous, only that the relationship between behavior and feedback be clearly evident to the trainee.

- Positive feedback is perceived and recalled more accurately and accepted more readily than negative feedback. Therefore, positive feedback should be provided whenever possible. The trainer should note the positive aspects of an individual's performance as it relates to established goals or to the trainee's previous level of performance. Negative feedback should be clear and precise, and not used in a punitive fashion.

- The more specific the feedback, the greater its impact on performance. Thus, the trainer should be as specific as possible in providing feedback to the trainee.

- Specific performance goals should be specified and understood by trainees before training begins. This is important since feedback tends to be more effective when used in conjunction with goal setting. Note that, unlike "normal" training, the goal of stress training is not to increase technical proficiency, but to maintain proficiency under stress conditions. Performance goals should be set accordingly.

- In a high-stress task environment, individuals will develop either positive expectations regarding their capacity to perform in that environment or negative expectations. Individuals who appraise the task environment in positive terms will have more confidence in their ability to perform and will suffer fewer negative stress effects. They will be less aroused physiologically, they will be less distracted by task-irrelevant concerns, and they will be more likely to focus attention on the task. On the other hand, individuals who are exposed to the stress environment during training and receive feedback that leads them to conclude that they are likely to fail in the operational setting are perhaps worse off than those not trained at all. This underscores the value of graduated stress training, in which trainees proceed from moderate to higher stress simulations.

- A picture is worth a thousand words. Video-reinforced playback can greatly enhance the feedback process.

- Hannafin and Hooper claim that learning improves as the quality of cognitive engagement increases. High quality cognitive engagement is defined as intentional and purposeful processing of training content. This type of engagement involves a
A deeper level of mental processing than simply listening to feedback. Schmidt and Bjork\textsuperscript{19} note that structuring feedback so that it causes the trainees to engage in greater active processing may facilitate learning and transfer.

\begin{thebibliography}{99}


\end{thebibliography}


Appendices
Table: ISD Model (adapted from Salas et al., 2006).

<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>I. Training Needs Analysis</strong></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| □ Analyze requirements. | ▪ What are the organizational goals?  
▪ Who needs to be trained?  
▪ What are the task work and teamwork skills that need to be trained?  
▪ What resources are available?  
▪ Are there any external or legal constraints? | ▪ Needs of organization, task, and team identified.  
▪ Resources and constraints identified. |
| □ Develop training goals. | ▪ What are the desired goals/outcomes of training?  
▪ What are the assumptions regarding training?  
▪ Any givens or non-negotiables? | ▪ Desired outcomes/goals are outlined.  
▪ Assumptions about training identified. |
| □ Analyze existing training programs. | ▪ Is any information useful to incorporate in new training program?  
▪ Is the training program modifiable?  
▪ How feasible are the modifications? | ▪ Relevant training programs identified and potential for modification determined. |
| □ Develop an evaluation plan. | ▪ What are the criteria for training success?  
▪ How will success be measured? | ▪ Criteria for success identified.  
▪ Evaluation plan established. |
| □ Conceptualize performance measures. | ▪ What skills do you want to measure?  
▪ What performance measures do you want to use? | ▪ Measurement plan identified.  
▪ Criteria for success are developed.  
▪ Performance measures established. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>☐ Select the instructional setting/location.</td>
<td>▪ Will it be on-site or remote? Undecided at this point? ▪ Does the site have the necessary capabilities (e.g., access to the web, space for simulator, lighting)?</td>
<td>▪ Available training site identified.</td>
</tr>
<tr>
<td>☐ Ensure the organization is ready for training.</td>
<td>▪ Has become a part of the organization? ▪ Does upper level management support training?</td>
<td>▪ Organization is prepared for training and post-training transfer of knowledge and skills.</td>
</tr>
<tr>
<td>☐ Select KSAs to be trained.</td>
<td>▪ What is the purpose of training? ▪ What should trainees know? ▪ How should trainees behave? ▪ What attitudes towards should they have?</td>
<td>▪ A set of team-based competencies are selected.</td>
</tr>
</tbody>
</table>

### II. Training Design

<p>| ☐ Describe trainee entry behavior. | ▪ At what level is the trainee (e.g., novice, experienced)? ▪ What should trainees’ knowledge level be? ▪ What should trainees’ skill level be? ▪ Are there any prerequisites for attending the training program? | ▪ Trainees’ backgrounds determined. ▪ Prerequisites identified. |</p>
<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| ☐ Develop training objectives. | • What are the learning outcomes? How should they be prioritized?  
• What are the behavioral and cognitive learning objectives? Can they be tied back to the needs analysis? What should trainees be able to exhibit? Are objectives stated in performance terms?  
• What behaviors will be trained?  
• Under what conditions will the learning be demonstrated?  
• What standards of performance are considered acceptable?  
• How do these behaviors translate into the terminal learning objectives?  
• How can trainees meet the training’s goals?  
• Are objectives well written, reasonable, attainable, and suitable for the content?  
• Has the mastery criterion been defined so that success in achieving the objectives is clear?  
• What is the source of the objectives and their particular emphasis? | • Objectives documented.  
• Competencies established.  
• Objectives are specific, measurable, and task-relevant. |
| ☐ Develop criterion-referenced tests. | • What do trainees need to know or do to perform their job?  
• Will each of the learning objectives be measured?  
• How will testing be done? Paper and pencil? Simulation performance? Other methods? | • Established measure of what people need to know or do to perform job.  
• Test items developed to measure each learning objective. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| ■ Determine sequence and structure of training. | • How will the training proceed?  
• Is the flow logical, consistent, and coherent?  
• Is an advanced organizer provided to trainees?  
• Are the following components in each unit of instruction: topical outline, lists of concepts to be learned, lists of objectives, demonstration exercises, case problems, and tutorials for hands-on experience? | • Progression of training identified.  
• Logical, consistent, and coherent flow determined. |
| ■ Determine hardware and software requirements. | • What are the hardware requirements for training?  
• Is it easy to use?  
• What are the software requirements for training?  
• Does the software have a backup?  
• Can the software be copied? | • Hardware requirements for training determined.  
• Software requirements for training determined. |
| ■ Describe training delivery methods. | • By what means will the instruction be delivered (e.g., information, demonstration, practice)?  
• What is the cost effectiveness of the delivery system?  
• Is it cost effective to develop the materials?  
• Are management, maintenance, and replacement costs reasonable? | • Means of instruction delivery determined.  
• Cost effectiveness of means determined. |
| ■ Review initial design. | • Who will review the design?  
• Do any modifications need to be made? | • Suggested modifications are identified. |
### III. Training Development

<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| ☐ Specify specific learning scenarios and events. | - How many opportunities for learning are being made available?  
- Are the scenarios/events realistic?  
- Who will guide the learning scenarios/events?  
- How will learning be measured?  
- How and when will feedback be provided? | - Scenarios/events developed.  
- Opportunities for assessing and diagnosing individual and team performance established. |
| ☐ Specify the instructional management plan. | - Are the responsibilities of the instructors included?  
- Is how the instruction will be delivered included?  
- Is how the trainees will be guided through the training included?  Self-paced?  Group mode?  Both?  
| ☐ Develop instructional materials for classroom learning. | - Have existing instructional materials been reviewed?  
- In what forms will the materials be available (e.g., paper based, web based)?  
- How is the sequence/organization of the materials?  
- Do they relate to the training objectives and goals?  
- Have subject matter experts reviewed them? | - Existing materials reviewed and modified (if applicable).  
- Instructional materials developed. |
### IV. Training Implementation

<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| ☐ Develop full scale prototype. | ▪ What does the full scale prototype look like?  
▪ Is there consistency throughout the training program?  
▪ Are the events based on the training objectives and goals?  
▪ Are criterion measures included? | ▪ Full scale prototype is developed. |
| ☐ Validate and identify. | ▪ Has the training been reviewed by subject matter experts?  
▪ Has the training been tried out on typical trainees?  
▪ Are any modifications needed?  
▪ Does training receive the appropriate signatures and approval? | ▪ Suggested modifications are identified.  
▪ Sign off/approval obtained. |

| ☐ Prepare trainees and environment. | ▪ How are trainees being motivated?  
▪ Is there management support?  
▪ How is training framed?  
▪ Is training voluntary or mandatory? | ▪ Individuals are ready for training.  
▪ Training environment is prepared. |
| ☐ Prepare trainers/instructors for training. | ▪ Are instructors knowledgeable?  
▪ Are instructors able to adequately answer trainees’ questions?  
▪ Are instructors able to provide constructive performance feedback? | ▪ Instructors/trainers are ready to teach training. |
| ☐ Implement the management plan. | ▪ Have trainees been scheduled?  
▪ How many trainees per class?  
▪ What is the trainee to instructor ratio?  
▪ Have instructors been scheduled?  
▪ Are all facilities, equipment, and materials ready for use? | ▪ Training program is live and functional. |
| ☐ Conduct the instruction. | ▪ Is the management plan being followed?  
▪ Is training occurring under actual conditions in the specified setting?  
▪ Are the final course materials being used? | ▪ Developed instructional materials put into practice.  
▪ Training program completed. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| ☐ Create an event-based approach. | ▪ Are instructional features embedded within simulation?  
▪ What do the event sets look like? | ▪ Trainees practice skills taught. |
| ☐ Use simulation (whenever possible) | ▪ Is the simulation role-play, PC-based, fixed based, or motion based?  
▪ Are the scenarios carefully crafted and embedded within simulation? | ▪ Trainees are able to practice in a realistic environment. |
| ☐ Provide feedback to trainees. | ▪ Who will provide feedback (e.g., instructors, other trainees)?  
▪ If trainees provide feedback, who will facilitate feedback process?  
▪ Is an advanced organizer provided to tell trainees how the feedback process will proceed?  
▪ Are the training’s objectives restated?  
▪ Are key events (i.e., examples) from the training recapped?  
▪ Are trainees encouraged to participate?  
▪ Is feedback constructive?  
▪ Is feedback behavior- or solution-based rather than personal?  
▪ Is feedback timely?  
▪ Are strengths and weaknesses identified?  
▪ Are strategies for correcting negative behaviors discussed?  
▪ Are strategies and goals for improvement discussed? | ▪ Trainees know how they did.  
▪ Trainees know where improvements are necessary. |
## V. Training Evaluation

<table>
<thead>
<tr>
<th>Step</th>
<th>Considerations</th>
<th>Outcome</th>
</tr>
</thead>
</table>
| ☐ Evaluate training program. | - Have both utility and affective reaction data (i.e., attitudes) been collected?  
- Has learning been assessed at multiple levels?  
- Has behavior been assessed in a transfer situation?  
- Has the impact of training on the organization been evaluated at multiple time intervals (e.g., immediately, 3 months after, 6 months after)?  
- Has the data been analyzed to determine instructional effectiveness? | - Data on training’s effectiveness collected at four levels.  
- Data on job performance collected. |
| ☐ Revise training program. | - Are any revisions needed based on the empirical data?  
- How will the revisions be implemented?  
- What impact will the revisions have?  
- Are the revisions cost effective?  
- How long will the revisions take?  
- How will it impact upcoming training sessions? | - Training revised on basis of empirical data. |
Appendix B (Scenario Development Worksheets)

Scenario Stress Templates

A Peak then Diminish Stress Template typically involves a situation where the students are confronted with a highly volatile situation that is resolved by first utilizing tactics to ensure their safety, then resolving the event with verbal de-escalation tactics. This creates an initial high stress response, but as the event slowly escalates, the students stress levels also decline.

An example, might be a subject who is suicidal armed with a weapon, who when initially confronted by police becomes highly aggressive. However, after proper tactical communication occurs, complies with officers demands to drop the weapon allowing the subject to be brought into custody.
A Gradual Peak Stress Template typically involves a situation where the students are confronted with an inert situation that slowly escalates into a highly volatile situation. This creates a situation where the student is under little stress at the beginning of the scenario but as it unfolds the stress increases.

An example of this template is a scenario that involves a spot check of an individual or a traffic stop. At the beginning of the scenario, the role player is completely compliant, as the scenario plays out; more information is given leading the student to forming an opinion that the subject is a suspect in a crime or wanted for arrest. The subject starts verbally resisting directions, and then escalates to the point where they may produce a weapon, etc.
A Sudden Peak Stress Template typically involves a situation where students are suddenly and unexpectedly confronted with a potential threat at close proximity. This creates a situation where the student will get a massive SNS response. The potential threat is identified as either being inert or being legitimate. Regardless, the threat is dealt with immediately.

An example of this template is a scenario would be situations like a building search where a subject jumps out of a confined area. The subject may or may not be armed at this point. Any scenario where the threat is presented suddenly and spontaneously would fit this type of template.

The benefit of these types of scenarios is that typically, the student, regardless of what skill level they are performing, cannot control the stress response.
A Random Stress Template involves scenarios that will cause the student to have multiple peaks and valleys of stress. Depending on the length of time involved, these scenarios can be very taxing on students.

These scenarios typically involve subjects that are Emotionally Disturbed or suffering from some type of mental disorder. An example might be a subject suffering from Schizophrenia and have armed themselves as they believe someone is out to kill them. Suicidal subject can fall into random stress templates also. To a milder extend, domestic situations where both parties are still on scene can fall into this stress template.
A Steady State Stress Template typically are scenarios that are considered routine police operations such as learning to take reports or statements from witnesses. They are seldom used in use of force scenarios.

A Double Peak Stress Template involves a scenario that causes the students to have an initial stress peak that diminishes and when the arousal diminishes, they are pushed into
another stress peak. These scenarios are very powerful to teach students that they cannot drop their guard just because an initial situation has been dealt with.

An example of this type of scenario might involve a situation where one threat is presented, then controlled by the students, only to be confronted by a secondary threat. This might involve a situation like an active shooter. When one subject is dealt with, the students are suddenly confronted by a secondary subject in which they were unaware. The double stress peak can also be created with a single subject that is dealt with initially but as the officers move in to handcuff are suddenly attacked with a weapon by the downed subject.
Scenario Worksheet

TRAINING INNOVATION DIVISION
TRAINING RESEARCH BRANCH
SCENARIO WORKSHEET

Terminal Performance Objective:

Scenario # 1

Given a situation involving multiple threats and/or potential victims in a Federally controlled location, the student will demonstrate the ability to assume a position of advantage, perform threat recognition, apply and justify necessary use of force, and complete required follow-up actions in accordance with FLETC Lesson Plans and the Constitutional Standards of Graham vs. Connor (1989).

Scenario Overview:

Student assignment is to review a statement in preparation for an upcoming interview. The statement is in a folder on their office desk. The student enters the scenario location and encounters two unarmed security guards. One of the security guards indicates they are leaving to make their rounds. Three minutes after the student retrieves the statement and begins the review they receive a frantic call from the security officer. The security officer requests that the student warn Mrs. Jones that an individual may be on the way to do her harm. A male fitting the description of Mrs. Jones estranged husband (who is on the do not admit list because of a domestic abuse conviction) has entered the building and set off the magnetometer. The male individual would not respond to the security guard’s demands to stop. When the student approaches the scenario room, they will hear screams for help, when the student triggers the hallway motion sensor a shot is fired leaving one individual on the floor with a gunshot wound and screaming for help. When the student opens the door, the student will see the male individual standing over Mrs. Jones with his back to the door. Mrs. Jones will be screaming “don’t shoot” while the male individual shouts verbal threats. When the student shoots the male individual, the second security guard will appear in the side doorway. The security guard will comply with verbal commands from the student. The student is expected to secure the room.

Site Requirements:

The location is a Federal field office.

Rooms:
1. Building access point with a security desk and magnetometer.
2. Office with phone and file cabinet.
3. Shoot room configured as an office setting with at least two entrance locations.
4. All rooms need to be instrumented with video cameras and audio to capture the essential angles to support remote evaluation of the student.
### Scenario Objectives Worksheet

**Terminal Performance Objective:**
Given a situation involving multiple threats and/or potential victims in a Federally controlled location, the student will demonstrate the ability to assume a position of advantage, perform threat recognition, apply and justify necessary use of force, and complete required follow-up actions in accordance with PLETU Lesson Plans and the Constitutional Standards of Graham vs. Connor (1989).

<table>
<thead>
<tr>
<th>Activity</th>
<th>BEHAVIOR</th>
<th>PERFORMANCE OBJECTIVE</th>
<th>PERFORMANCE MEASURE</th>
</tr>
</thead>
</table>
| 1.       | Transmit emergency radio traffic | lesson plan # 5985, Radio Communications  
#2 Demonstrate mechanical procedures for transmitting radio messages.  
#3 Demonstrate procedures for transmitting clear and accurate messages.  
#4 Demonstrate appropriate message format for transmitting radio messages in various law enforcement situations. | • Speak in a clear voice directly into the microphone.  
• Respond to their call signs.  
• Identify self and location.  
• Give details specific to the emergency. |
| 2.       | Acquire situational information | lesson plan # 6034, Situation Response.  
#5 Demonstrate proper communication skills, i.e. verbal commands, radio communications, or emergency telephone procedures. | • Ask what happened  
• Ask for a description of suspect  
• Ask about weapons  
• Request location information  
• Request other relevant information  
• Direct security to secure doors and direct backup |
| 3.       |          |                        |                     |
| 4.       |          |                        |                     |
| 5.       |          |                        |                     |
**Scenario Script Worksheet**

**TRAINING INNOVATION DIVISION**
**TRAINING RESEARCH BRANCH**
**SCENARIO SCRIPT WORKSHEET**

**Briefing**
You are a Federal Law Enforcement Officer/Agent assigned to a Federal Field Office. Your supervisor has assigned you to review a case file in preparation for an upcoming follow-up interview. You are returning to your office in preparation for this interview. React to the events as they occur.

<table>
<thead>
<tr>
<th>Event</th>
<th>Scenario Case</th>
<th>Expected Performance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Casual greeting; Encounters unarmed security personnel #1 &amp; #2 approaching</td>
<td></td>
</tr>
<tr>
<td>2.</td>
<td>Upon alarm, encounter security #2 who acknowledges security #1 prior to the start of security rounds</td>
<td></td>
</tr>
<tr>
<td>3.</td>
<td>Goes to Field Office and retrieves case file (case specific)</td>
<td></td>
</tr>
<tr>
<td>4.</td>
<td>Review statement from specific case file. (In preparation for follow-up questions) Start timer when field officer reads.</td>
<td>Reading for 5 minutes.</td>
</tr>
<tr>
<td>5.</td>
<td>Call from police security #1 who is at the entrance (Scripted with: who, what and description, attempted to contact Mrs. Jones prior to this call)</td>
<td>Ask security #1 where her office is located. “Did you see any weapons?“ Secure doors.</td>
</tr>
<tr>
<td>6.</td>
<td>Student proceeds down hallway towards scenario office; shotgun blast when student reaches threshold on hallway (should hear screaming for help from office)</td>
<td>Student assumes a position of tactical advantage at the office doorway.</td>
</tr>
<tr>
<td>7.</td>
<td>Student opens the door. (Hostile threat should react reasonably to hits, after four hits threat should fall down and clearly indicate they are not dead.)</td>
<td>Should not issue any verbal commands. (If student issues verbal command before shooting, threat shoots female; female clearly indicate she is not dead and screams for help.)</td>
</tr>
<tr>
<td>8.</td>
<td>Student will encounter a weapon malfunction on the third round requiring an immediate action drill to clear.</td>
<td>Performs immediate action and re-engage the hostile target until the threat is stopped.</td>
</tr>
<tr>
<td>9.</td>
<td>Security #2 appears in doorway after first round is fired</td>
<td>Student should direct security #2 out of the room, go, and call EMS and report back. (Student should demonstrate command presence.) Student may also contact dispatch to request EMS.</td>
</tr>
<tr>
<td>10.</td>
<td>Female victim should behave in a distressed, out of control manner, and shout, “You shot him.”</td>
<td>Student should direct female victim into a position of disadvantage wait for backup.</td>
</tr>
<tr>
<td>11.</td>
<td>After 1 minute security #2 returns to doorway and informs student that backup and EMS are in route and should be there shortly.</td>
<td>Student should direct security #2 to stay out of the room.</td>
</tr>
<tr>
<td>12.</td>
<td>After 3 minutes backup arrives and provides cover for student.</td>
<td>Student should demonstrate command presence by directing backup to provide cover. (Student may direct security #2 to escort female victim to a safe location (i.e., field office).</td>
</tr>
<tr>
<td>13.</td>
<td>Student should secure the suspect.</td>
<td></td>
</tr>
</tbody>
</table>
# Scenario Logistics Worksheet

## Staff Requirements

<table>
<thead>
<tr>
<th>Safety Officer(s)</th>
<th>Scenario Coordinator</th>
<th>Video Operator(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>AMT Evaluator</td>
<td>Male Role Players</td>
<td>Female Role Players</td>
</tr>
<tr>
<td>Audio Operator</td>
<td>Weapons Custodian</td>
<td>Additional personnel</td>
</tr>
</tbody>
</table>

## Site Requirements

- Site Description
- Special Requirements
- Vehicle Information

## Student Protective Equipment

- Eye Protection
- Head Protection
- Hand Protection
- Chest Protection
- Groin Protection
- Hearing Protection
- Cool Vest
- Jacket
- DT Protection

## Student Personal Equipment

- Impact Weapon
- Inert OC
- TASER
- Radio Earpiece
- Radio Mic
- Handcuff
- Portable Radio
- Web Gear
- Special Gear

## Student Firearms

<table>
<thead>
<tr>
<th>Handgun</th>
<th>Type</th>
<th>Magazines</th>
<th>Ammo</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>FX Handgun</td>
</tr>
<tr>
<td>Handgun</td>
<td></td>
<td></td>
<td>Safe Fire Handgun</td>
</tr>
<tr>
<td>Longgun</td>
<td></td>
<td></td>
<td>FX Longgun</td>
</tr>
<tr>
<td>Longgun</td>
<td></td>
<td></td>
<td>Safe Fire Longgun</td>
</tr>
</tbody>
</table>

## Notes
# Scenario Performance Evaluation

## Active Shooter

<table>
<thead>
<tr>
<th>ID</th>
<th>Scenario 1</th>
<th>Scenario 2</th>
<th>Scenario 3</th>
<th>Scenario 4</th>
</tr>
</thead>
</table>

1. **Situational Awareness (student is/is not aware of potential threats/risks)**
   - **A** Area (React to chaos)
   - **B** Suspects
   - **C** Other Persons
   - **D** Team Members/Backup

2. **Threat Identification (student does/does not properly identify threats)**
   - **A** Position of advantage
   - **B** Suspicion(s)
   - **C** Other Persons
   - **D** Threat Prioritization
     - Off cover
     - Close cover
     - Inside room

3. **Initial Threat Response (proper respond to threats)**
   - **A** Maintain position of advantage
   - **B** Gun drawn
   - **C** Identify self
   - **D** Verbal challenge
   - **E** Continuous threat engagement/momentum
   - **F** Tactics (Mechanics)
   - **G** Command Presence (Fl stance, voice tone, etc.)

4. **Scene Control (after initial response)**
   - **A** Control immediate threats
   - **B** Control non-immediate threats
   - **C** Preservation of crime scene/evidence
   - **D** Render Aide to Injured
   - **E** Command Presence (Fl stance, voice tone, etc.)
   - **F** Weapons/Contraband

5. **Application of Force**
   - **A** Reaction/Transition time
   - **B** Hands on
   - **C** Baton
   - **D** OC
   - **E** Weapon Handling (Safety/Malfunction/Condition/Awareness)
   - **F** Hit ratio
   - **G** Accuracy
   - **H** Non-Threats

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9/26/2011
Scenario Performance Evaluation

6. Arrest/Processing Techniques
   A. Suspect in position of disadvantage
   B. Handcuffing time
   C. Handcuffing technique
   C. Search

7. Communication
   A. Call for backup/transport
      a. ID self
      b. Provide location
      c. Describe situation
      d. Specify resources/other
   A. Before hands-on  B. Immediately after control  C. No call/Excessive time
   B. Verbal commands (alpha/beta)
   C. Information exchange (dispatch/backup)

8. Articulation (After Action Review)
   A. Ability to articulate facts
   B. Ability to recall details
   C. Ability to describe threats
   D. Tactics (Decisions)
   E. Articulation of use of force
### Scenario Performance Evaluation

**Attorney**

#### 1. Situational Awareness (student is/is not aware of potential threats/risks)

| A | Position of advantage | [ ] | [ ] |
| B | React to magnetometer alarm | [ ] | [ ] |

#### 2. Threat Identification (student does/does not properly identify threats)

| A | Position of advantage | [ ] | [ ] |
| B | Threat prioritization |
| a. Suspect | [ ] | [ ] |
| b. Late person | [ ] | [ ] |
| c. Media person | [ ] | [ ] |
| d. Worker(s) | [ ] | [ ] |

#### 3. Threat Response (proper respond to threats)

| A | Maintain position of advantage | [ ] | [ ] |
| B | Gun drawn | [ ] | [ ] |
| C | Verbal challenge | [ ] | [ ] |
| D | Continuous threat engagement/momentum | [ ] | [ ] |
| E | Tactics (Mechanics) | [ ] | [ ] |

#### 4. Scene Control (after initial response)

| A | Control immediate threats | [ ] | [ ] |
| B | Control secondary threats | [ ] | [ ] |
| C | Render Aide to Injured | [ ] | [ ] |

#### 5. Application of Force

| A | Reaction/Transition time | [ ] | [ ] |
| B | Hands on | [ ] | [ ] |
| C | Baton | [ ] | [ ] |
| D | OC | [ ] | [ ] |
| E | Gun drawn | [ ] | [ ] |
| F | Gun fired | [ ] | [ ] |
**Scenario Performance Evaluation**

6. **Arrest/Processing Techniques**
   
   A. Suspect in position of disadvantage [ ] [ ]
   
   B. Handcuffing time [ ] [ ]
   
   C. Handcuffing technique [ ] [ ]
   
   C. Search [ ] [ ]

7. **Communication**
   
   A. Call for backup/transport [ ] [ ]
      - ID self [ ] [ ]
      - Provide location [ ] [ ]
      - Describe situation [ ] [ ]
      - Specify resources/other [ ] [ ]
      - Before handson [ ] [ ]
      - During engagement [ ] [ ]
      - Immediately after control [ ] [ ]
      - No call/Excessive time [ ] [ ]
   
   B. Verbal commands (alpha/beta) [ ] [ ]
   
   C. Information exchange (dispatch/backup) [ ] [ ]

8. **Articulation (After Action Review)**
   
   A. Ability to articulate facts [ ] [ ]
   
   B. Ability to recall details [ ] [ ]
   
   C. Ability to describe threats [ ] [ ]
   
   D. Tactics (Decisions) [ ] [ ]
   
   E. Articulation of use of force [ ] [ ]
   
   F. Identify evidence room [ ] [ ]
Appendix D (Student Centered Feedback Worksheets)

Structured Student-Centered Feedback Model Debrief Questions

Before the debrief, clarify with the student as to what the reason and desired result of the debriefing/feedback portion of the training. Example- I am going to ask you a series of questions about the scenario. The premise is not to pass judgment but to retrieve the following information:

1) Your recall of what happened
2) Identify your actions
3) The end result or outcome of your actions

Ask the student do you understand? Then begin the debrief.

Questions:

1) From the time you began the scenario until we started this debriefing, describe what happened?
   a) Starting with how you became involved, tell me what were you responding to?
      i) What were you doing prior to responding?
      ii) What triggered your response? (self/dispatch)
   b) What information did you collect prior to arriving at the scene?
      i) How did you get the information?
      ii) Who did you get the information from?
   c) What were you planning prior to arriving at the scene?
      i) How were you going to implement your plan?
      ii) What changes to your plan did you have to make once you completed you initial assessment of the situation?
   d) What was your initial assessment of the situation?
      i) How did you approach the scene?
      ii) What did you use for cover/concealment?
      iii) Describe what you saw when you first entered the scene.
         (1) What did you see?
         (2) What did you hear?
      iv) How did you feel?
      v) Describe the people you saw.
      vi) What threats did each of them pose?
      vii) How did you prioritize each threat?
      viii) What environmental factors affected your assessment and decision to act? (lighting, terrain, weather, etc.)
   e) What was your communications during the scenario?
      i) Who?
      ii) When?
      iii) How?
   f) What was your initial response?
      i) How did you initially engage the threat? (tactical approach)
      ii) What did you use for cover/concealment?
iii) What actions did you take to initially control the scene?
iv) What tactical options were available to you to control the scene?
v) What facts justified the level of force you employed to control the threats?
vi) What is the legal standard for the level of force you employed?
g) How did you control the situation after the initial engagement?
i) Describe the tactics you used to maintain control of the situation.
ii) What did you use for cover/concealment?
iii) Describe how you maintained control of the immediate threats.
iv) Describe how you maintained control of the non-immediate threats.
v) What actions did you take to control the area for crime scene preservation?
vi) What actions did you take to render aid to the injured?
vii) How did you secure the suspect’s weapons?
viii) What information did you provide the backup officer when they arrived at the scene?
h) What actions did you take when arresting the suspect?
i) What facts justified the arrest?
ii) What is the suspect being charged with?

2) **Identify what you think you did well.**
a) How did you implement that action?
b) Why did you select that action?
c) Trainer Reinforcement
d) Correct Misconceptions

3) **Identify Areas for Improvement**
a) Knowing how the scenario unfolded, if you were to encounter this scenario again what would you do different?
b) Trainer Reinforcement
c) Correct Misconceptions

4) **Identify Alternate Solution**
a) What if you...
b) Trainer Reinforcement
c) Correct Misconceptions
d) Do you have any questions?
Appendix E (Feedback Articles)

Change Your Language: Change Your Results
By Brian Willis

Trainers and coaches have long suffered from a common but often misdiagnosed medical condition known as TCS (Trainers Concussion Syndrome). This is a direct result of repeatedly banging their head against the wall in frustration with those students who “Just Don’t Get It”. Well relief can be found in a preventative strategy – Change Your Language. Changing the way you communicate to the people you are entrusted to train, as well as the way you talk to yourself, can result in positive changes in everyone’s performance.

The solution may be one simple strategy:

Communicate in positive terms what you want yourself, or your officers to do.

That may sound overly simplistic, but the reality is that many people in today’s society are conditioned to communicate in negative terms. Instructors, coaches, parents, teachers and peers spend a great deal of time communicating what not to do, instead of using positive terms to directly communicate the desired behavior or outcome.

Some of these negative based statements probably sound familiar: Don’t quit. Don’t stop fighting. Don’t anticipate the gun going off. Don’t jerk at the trigger. Don’t worry. Don’t slip and fall. Don’t think about it. Don’t put your finger on the trigger. Don’t panic. Police Don’t Move.

The first step to positively communicate is to delete two key words from your vocabulary. The word ‘Don’t’ is the most common, potentially most damaging and perhaps THE most important word to delete. The rationale behind this is that when you use the word ‘Don’t’ as part of your feedback, or direction to an officer their mind must first figure out what it is not supposed to do. To accomplish this, the mind drops the word ‘Don’t’ and actually imagines the negative behavior. For example, if you say to an officer on the range “Don’t jerk the trigger.” the mind actually hears “Jerk the trigger.” and the image of that jerking motion becomes the primary thought. The officer then tells himself or herself “Ok. This time, don’t jerk the trigger.” Once again the mind hears “This time jerk the trigger.” and the image of the less desirable behavior of jerking the trigger comes to mind again. When the officer fires the weapon they jerk the trigger just as they imagined, and the cycle of instructor feedback and negative self talk is repeated.

This cycle simply increases the chances of continually repeating the negative behavior. The more often this cycle is repeated the more powerfully engrained the negative behavior becomes resulting in a compounding of the negative self talk. Officers start adding descriptive phrases such as “How could I be so stupid”, “I am such an idiot”, “What a loser I am.”, or “What a dumb ass.” before they tell themselves to stop jerking the trigger. This not only engrains the negative behavior but also negatively impacts their self image and self esteem. This vicious cycle can create a great deal of anxiety and frustration for both the trainer and the officer.

The solution then is simple: Tell them what you want them to do. Telling the officer to “Be smooth on the trigger.” or “Focus on a smooth trigger press.” will have a far more positive result
especially when the officer follows it up with positive self talk and repeats the positive directions to themselves. When this positive communication occurs the mind will imagine a smooth press of the trigger, which is more likely to be replicated physically when the officer fires their weapon.

Another word to remove from the instructional vocabulary is the word ‘Try’. The word ‘try’ is a word that describes the actions that go into failure. When you think about all the things you ‘tried’ in your lives, you realize that many of them were unsuccessful attempts. The reason for this apparent lack of success is that when you use the word try, the subconscious mind is willing to accept failure. Everyone has heard someone say, “Well, at least I tried.” When communicating with officers instead of saying ‘Try this’ simply remove the word ‘try’ and tell them, in positive terms, what you want them to do.

This brings us back to the basic strategy: **Communicate in positive terms what you want yourself, and your officers to do.** This will require some work and some conscious effort for most instructors to create the habit of communicating in positive terms. At first you will have to think about what you want the officer to do before you communicate it to them. If you catch yourself giving the direction in negative terms immediately change it to positive terms and restate the direction. Instructional teams can help each other out by monitoring communications and if necessary, give other instructors a quiet reminder about their language. Encourage positive self talk in your officers by helping them understand the power of the conversations they have with and about themselves in the privacy of their own mind.

Making positive communications part of the culture within your training programs will improve performance results and reduce the number of cases of Trainer Concussion Syndrome.

**About the author:** Brian Willis served as a full time police officer for 25 years beginning his career in 1979. He worked as a patrol officer, tactical officer, patrol supervisor and use of force trainer. Brian is now the President of Winning Mind Training Inc. ([www.winningmindtraining.com](http://www.winningmindtraining.com)) a law enforcement training and consulting company. Brian serves as an Advisory Board Member for ILEETA and Police Marksman magazine, and is a member of IALEFI, NTOA, ITOA and ASLET. He is a certified instructor in officer safety, use of force, EVOC and Incident Command and holds certificates in Adult Learning, Hypnosis and NLP. Brian can be contacted by e-mail at winningmind@shaw.ca, or by phone at 403-809-5954.

**THE POWER OF WORDS**

By Brian Willis

Law enforcement officers and trainers understand the importance of good communication skills. Most training programs address the value of strong verbal and nonverbal communications skills when dealing with all types of subjects. Tactical communication courses have been integrated into many agency’s officer safety and defensive tactics programs. However, do trainers and officers truly appreciate the power of the words they use every day? Those words have the
power to sow the seeds for success or failure. The purpose of this article is to encourage patrol officers and law enforcement trainers to closely examine the words they use, and the subconscious messages they may be implanting.

The subconscious mind, not the rational, analytical conscious mind, is the focal point of this discussion. Research and experience have shown that in high stress events, such as deadly force encounters, the conscious mind is bypassed as a result of combat or survival stress leaving the subconscious mind to control the officer’s reactions. It is important for all officers to understand that the subconscious mind processes information literally, thus affording tremendous power to the words used in training and self talk. The following is an examination of some of the terminology commonly used in law enforcement and the implications it has for officers.

**RIGHT AND WRONG vs. THE SCALE OF DESIRABILITY**

Most people grew up in educational systems where they were taught there is one right answer to every problem. When you got an answer wrong, you were punished in some way. This thinking has unfortunately found its way into the tactics taught in officer safety and subject control tactics training. Officers are taught that there are right and wrong responses to a subject’s actions. ‘wrong’ response by the officer is accompanied by some form of punishment. This may be push ups or some other physical activity, being told to do it over and make sure they do it right this time, or being told that they are dead or would have been killed on the street. This often results in officers stopping during training when they think they made a mistake, and leaving the training session with the conscious and subconscious belief that if they ever find themselves in that scenario on the street, they are going to lose the confrontation and die. Now, we are not talking about situations where the officer does something that is unlawful, but situations where the officer’s response is not what the trainer would have done or believe should have been done. This type of training is generally technique oriented.

The scale of desirability on the other hand, teaches officers that all responses fall somewhere on this scale with some responses or actions being less desirable, and others are more desirable. Regardless of where their initial response falls, all situations are fixable and winnable. If the initial response is less desirable, officers simply flow into a more desirable response. Once this mind-set is instilled in officers it is unlikely they will stop in training, or in real life. This builds on the philosophy of consistency in principle while allowing for diversity in application. This philosophy takes into consideration the multitude of variables in any situation, the different strengths and experiences of each officer and allows officers to be goal oriented and apply the concepts and principles necessary to prevail in any situation rather than training them to be technique oriented.

Another benefit of this philosophy and terminology is that it creates an extremely positive training atmosphere where officers are more receptive to suggestions that will build on their strengths. Officers then leave training with an enhanced level of confidence and competence.

**ROUTINE**
This term should have been purged from the law enforcement vocabulary long ago. However, trainers and patrol officers still refer to routine traffic stops, routine patrol, routine calls, and routine busts. The word routine endorses an attitude of complacency, and all law enforcement officers know that a complacent attitude is less desirable. Would it not be more desirable to talk about degree of risk based on the officer’s risk assessment? This would include terms such as active patrol, unknown or high risk warrants, operational traffic stops, increased risk traffic stops and high risk vehicle stops to encourage officers to be vigilant while conducting continual assessments of these situations.

**WINNING VS SURVIVAL**

For years law enforcement trainers have encouraged officers to develop the Survival Mind Set, and to believe they can survive any situation. This was a positive step towards developing proper mental conditioning skills in officers, however is it really the most desirable mind-set? Is it enough for officers to simply survive? Should the mind-set and the goal not be to win every confrontation? After analysing many violent encounters it is apparent that in many cases survival is defensive in nature. In ‘survival’ mode it is common for an officer to continually backup while the subject continues to aggress and attack. In other cases officers in ‘survival’ mode simply curl up in a ball while being violently assaulted. In all these cases the officer has adopted the role of the prey while the subject is the predator. If an officer responds in this manner and survives, but is permanently disabled is that the most desirable outcome? Officers need to be taught that when they find themselves in a confrontation, winning is the only option. They need to become the predator, not the prey. A tie or a loss may be in the sports arena, but not in law enforcement. This a new way of thinking for officers entering the law enforcement profession as many have been raised with the philosophy that it is not important whether you win or lose, it is how you play the game that counts. They need to understand that it is ok to win every time. Officers need to “Think Winning” and understand that survival is a by-product of winning.

**DEFENSIVE**

This is closely linked to the issue of survival vs. winning. The terms defensive tactics and officer self-defence imply that officers’ use of force is always defensive in nature. In many cases officers are reactive, but that doesn’t mean they have to go into defensive mode. Officers need to be taught how to go on offence to take immediate control of subjects or situations. A good example of this defensive mind-set is an officer who was attacked by a prisoner in a holding cell area. For approximately eight minutes the prisoner unleashed a violent, unrelenting assault against the officer. The officer was punched, knocked to the ground, his head smashed against the concrete floor, attacked with his own handcuffs, OC spray, and baton. The prisoner also attempted to disarm the officer of his pistol. The officer, who was defensive during the entire attack, eventually drew his sidearm and shot the offender numerous times. Even while he was shooting, the officer was moving backward in a defensive posture. You must have the utmost respect for this officer for surviving the nightmare and ultimately winning, but you also can’t help wonder how differently this would have turned out if the officer had been taught to win by
taking immediate and aggressive offensive action. Does this mean it should be called it offensive tactics? No, but Control Tactics or Subject Control Tactics may be more desirable terminology.

**FATAL FUNNEL**

The fatal funnel is a term used in relation to building clearing operations. It refers to areas such as stairwells, hallways and doorways which are all generally narrow, confining areas which offer no cover or concealment and can limit the officer’s tactical options if they have to go to combat. The literal translation and image of a Fatal Funnel is a choke point where you are going to die. Therefore, the term ‘Fatal Funnel’ implies that officers will die if they are in these locations when the fight breaks out. Although these may be less desirable places to be when engaging in combat, the fight is far from over simply because you are in a hallway, doorway or stairwell. Would it not be more desirable to call these areas what they are, which is thresholds and transitional areas. In order to search a building officers must move through these thresholds and transitional areas. Therefore, it would be more desirable to teach officers tactics to minimize their time in these areas, and win fights in these areas without subconsciously telling them they will die if they are engaged in combat there.

**ZONES OF APPROACH**

Many agencies teach some variation of the four zones of approach for vehicle stops. These are often taught as the Retreat Zone, Target Zone, Crisis Zone, and Reach Zone. The following is just one explanation of these four zones. The Retreat Zone is usually the area inside the officer’s vehicle. For most cops the word retreat implies defeat. What officers do need to understand is that while the officer is still in the car they greatest amount of cover from fire, as well as excellent mobility to disengage to a more desirable tactical location by placing the vehicle in reverse, or to become offensive and use the vehicle as a weapon. The Target Zone is from in front of the officer’s car door up to the rear bumper of the subject vehicle. As with building clearing this is simply a transitional area where the officer is between points of cover or concealment. The officer still has the ability to move to cover or concealment, and to aggressively deal with any attack which may be perpetrated by the subject(s). The Crisis Zone extends from the rear bumper to the B pillar of the subject vehicle. The word ‘crisis’ for many officers implies a situation where there is panic, and loss of control. Does the officer need to be in a state of crisis when they are attacked in this transitional area? Would it not be more desirable to simply teach officers the tactical options if they have to go to combat in this area? The reach zone is that area where the officer is close enough to make immediate physical contact with the subject. Different agencies use variations of the explanations of these zones however, the terminology used, and the subconscious message sent is very similar.

Rather than teaching the zones of approach, officers could be walked through the stages of a traffic stop allowing them to identify positions of cover and concealment, transitional areas and tactical options for defeating threats that emerge at any point in the stop. This allows for consistency in terminology and principles throughout all aspects of officer safety training.
Kill Zone is another term commonly used in relation to vehicle stops and building approaches. The Kill Zone is used to describe open areas where an officer has little or no cover or concealment, and may be exposed to firearms attacks from the subject. In some cases officers must pass through these transitional areas on their approach to the building or vehicle. The term however, implies an officer cannot win a battle that takes place in these areas. While these are less desirable locations for officers, they can still defeat the attacker if they understand the necessary mind-set and tactics.

**BULLET PROOF VESTS**

Body armor worn by patrol officers is not bullet proof, but bullet resistant. The term bullet proof lends itself to an attitude of over confidence, possibly resulting in officers taking unnecessary risks. Officers need to understand the capabilities, and limitations of their body armor. They also need to understand that there are many excuses for not wearing body armor, but there are no good reasons for not wearing it. Body armor has saved thousands of officers lives, and could have saved hundreds more. Body armor is only effective however; if the officer wears it every time they put on their uniform and go to work.

**STRONG AND WEAK HAND**

Officers have a dominant and a non-dominant hand, a dominant hand and a reaction hand, but they do not have a weak hand. This terminology infers that if the officer’s dominant hand is occupied or disabled that they are weak and ineffective with their other hand. With a little training, officers can learn to deliver powerful blows with both hands. They must also be able to perform all tasks with a firearm one handed, with either hand. This means shooting as well as performing all stoppage and reloading drills. With the proper mind set officers will soon learn they have two strong hands. There are numerous documented cases where the officer’s dominant hand was disabled during a gun fight and they simply transitioned the firearm to their reaction hand and won the fight.

The above list of less desirable terminology reflects a training philosophy and is far from exhaustive. To ensure they are using the most desirable terminology all trainers need to critically examine the language used in their presentations, lesson plans, handouts and feedback provided to officers during training sessions. Once changes have been made to that terminology trainers need to monitor the behavioural changes which take place in their officers and continually seek to improve the manner in which training is delivered. Patrol officers need to examine the terminology they use every day and critically reflect on the mind-set it is creating in themselves, and their peers.

Law enforcement training has made significant strides in the quality of training provided to officers over the past twenty years. The transition to terminology focussing on the positive attributes and providing the most desirable mind-set for officers is part of the next progression in that training. Subconscious mind programming one of the most powerful tools officers have to prepare to successfully manage conflict and develop the Winning Mind, and language plays a powerful role in that programming.
INCIDENT DEBRIEFINGS: A Learning Opportunity
By: Brian Willis

As law enforcement officers you respond to a myriad of calls on a daily basis which range from the dangerous to the mundane. Whether it’s a domestic or an unknown risk vehicle stop, a crime in progress or a neighbour dispute, a high risk warrant or a barking dog complaint, a high risk vehicle stop or a noise complaint, a man with a gun call or a drunk passed out in a stairwell they all have at least two things in common. First, they all have the potential for the responding officers to get killed or assaulted, and secondly they are all opportunities to learn and improve. So, how do you measure the success of the tactics and techniques used to resolve these calls? How do you determine if there were safer and more effective ways you could have handled the situation? The answer is by conducting a debriefing of the incident.

Too often the measuring stick of how well an incident was managed is the simple question “Did any of us get hurt?”. If the answer is no, it’s assumed that everyone did a good job, and the officers move onto the next call. How often is the fact no officers were injured, a result of good luck instead of good management? If you took the time to conduct an honest assessment you might realize good luck may be more common than good management. Good management means utilizing proper tactics, communicating effectively with the subject and other officers, properly assessing and responding to threat cues, utilizing appropriate force response options, and properly documenting the incident. Relying on this age old measuring stick for success results in complacency, and a false sense of confidence on the part of many officers. Remember, on Pierce Brook’s list of Ten Deadly Mental Errors, COMPLACENCY was number one. The statistics indicate you cannot rely on good luck alone to safely get through these calls. Over the last decade in North America almost 700 law enforcement officers have been murdered in the line of duty, over 600 have been killed in duty related accidents and over 600,000 have been assaulted. Officers need to learn from every call so they can continue to enhance their skills, knowledge and safety. One of the greatest learning opportunities is an Incident Debriefing. This debriefing is very simply an operational review of the incident involving the officers who participated in managing the call. This can range from the lone officer going over a call in their mind, to an entire squad getting together to debrief an incident. There is seldom the opportunity to conduct the debriefing immediately after the call as arrests needs to be processed, there are witnesses and complainants to be interviewed, and there may be search warrants to be executed. It should be done however, within a reasonable period of time or it will lose it’s value.

There are some keys to making the debriefing a positive learning experience. The focus of the debriefing is to answer the following question - “If we were to go to this same call again what would we do differently?”. This is not the incident commander, or highest ranking officer telling the troops how they screwed up, or conversely that they did everything right. The participants need to engage in an open discussion where every officer has an equal opportunity to address questions or concerns. During the debriefing rank needs to be set aside. This is an opportunity for everyone to learn. Officers should be encouraged to be honest and constructive in their feedback, and questions. Avoid telling officers they need to be brutally honest. The tendency for cops is to focus on the brutal part, and forget the reason for the debriefing is to create a positive learning experience.

Topics up for discussion include anything that concerns the safety of the officers, the public or the subject including:
- Decisions made by the supervisor around utilization of personnel, whether or not to enter the crisis point, and terms of engagement.
- Tactics utilized by any of the officers including the use of cover, locations of containment points, commands to the subject, arrest and control techniques and force response option selection.
- Any intelligence gathered during the incident and the manner in which it was shared (or hoarded). Did officers receive critical information about the incident such as location and description of the subject, type of weapon, and the location of other officers in a timely manner?
- Issues surrounding officers trying to give too much information, and tying up valuable airtime on the radio.
- The manner in which the crisis point was cleared after all the known threats had been removed.

Many times officers don’t understand the rationale behind commands they received, or the actions of other officers during the incident. All these concerns should come out in the debriefing. This is the time to ask the questions, do some internal reflection and learn from the answers. Debriefings don’t have to be long and drawn out, but they do need to happen.

Officers shouldn’t think of an Incident Debriefing as another chore they have to do after a call, or as a waste of their time. Instead, they should view it as an investment in their safety, well being and education. An Incident Debriefing is a valuable tool in what should be a never-ending quest to reduce the number of police officers killed and assaulted every year. Ask yourself if it is a regular part of your education.

1 1997 UCR Law Enforcement Officers Killed and Assaulted

**About the Author**

Brian Willis has been a law enforcement officer since 1979 and is currently a Sergeant with the Calgary Police Service Training Section. He is a certified instructor and/or instructor trainer in Officer Safety, Defensive Tactics, Crowd Management, and Emergency Vehicle Operations. Professional affiliations include memberships with the American Society of Law Enforcement Trainers, International Wound Ballistics Association, and International Defensive Tactics Foundation.
Subject Index
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Dr. James E. Driskell has served in the academic, government, and private sectors, and has conducted funded research for the Naval Research Laboratory, U.S. Air Force, National Science Foundation, NASA, FAA, Department of Homeland Security, Defense Intelligence Agency, the FBI, National Institutes of Health, and other organizations. He has authored over 100 articles and papers, including recent publications in the Journal of Applied Psychology, American Psychologist, Human Factors, Journal of Experimental Social Psychology, Military Psychology, Small Group Research, Psychology, Crime, & Law, and Group Dynamics. He is a Fellow of the American Psychological Association, member of the Editorial Board, Human Factors, and Contributing Editor, Journal of Applied Psychology.

Sergeant Jeff Quail is a police helicopter pilot with a major Canadian police agency. Both the Court of Queens bench and Provincial Court have declared Jeff an expert in officer safety training. Jeff was the recipient of the prestigious Earnest Manning Innovation Award in 2009, for the creation of the Shockknife®. He was also the recipient of the 2006 Smart Award for Innovation. He is the creator of the patent pending Stress Inoc™ software based controller and co-creator of the Stressvest™ system. Jeff has delivered officer safety instructor courses to numerous agencies in countries around the globe. Jeff instructs the Simunition® FX® Scenario Instructor and Safety Certification Course in Canada. Jeff is currently the Director of research and training for Setcan® Corporation, the world’s largest supplier of reality based training products. He is also a certified Force Science Institute use-of-force investigator.
About the FLETC

The FLETC serves as an interagency law enforcement training organization for 90 Federal agencies. The FLETC also provides services to state, local, tribal, and international law enforcement agencies. The FLETC is headquartered at Glynco, Ga., near the port city of Brunswick, halfway between Savannah, Ga., and Jacksonville, Fla.

In addition to Glynco, the FLETC operates two other residential training sites in Artesia, N.M., and Charleston, S.C. The FLETC also operates a non-residential in-service re-qualification and advanced training facility in Cheltenham, Md. The Cheltenham facility is for agencies with large concentrations of personnel in the Washington, D.C., area.

The FLETC has oversight and program management responsibilities at the International Law Enforcement Academies (ILEA) in Gaborone, Botswana, and Bangkok, Thailand. The FLETC also supports training at other ILEAs in Hungary and El Salvador.

About Florida Maxima

Florida Maxima Corporation is a small business that conducts basic and applied research in the social and behavioral sciences for government and industry. Florida Maxima Corporation has over 25 years’ experience in conducting and managing research projects for the US Navy, National Science Foundation, Defense Intelligence Agency, Army Research Institute, NASA, Department of Homeland Security, FAA, US Air Force, and other organizations. Florida Maxima's corporate offices are located in Winter Park, FL.
About Setcan

Setcan® Corporation was established in 2006 to provide ONLY the finest reality based training products and Instructor training certifications available to Officer Safety/Defensive Tactics/Use of Force/Instructor Trainers and Master Instructors in law enforcement, military, corrections and security agencies. It is now the WORLD’S LARGEST provider of reality based training equipment and Instructor level certifications. Setcan® is the worldwide exclusive distributor of the Shockknife®, Blue Baton™, DTS Tools™, EyeLock Eye Tracking System™, BattleField FX™, Blood Mats™, and the StressVest™.

Setcan®'s owns the largest private Law Enforcement training center in Canada.