**U.S. Army Research Institute
for the Behavioral and Social Sciences**

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Assessment Tools for Basic Army Noncommissioned Officer Training

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**U.S. Army Research Institute
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14. ABSTRACT *(Maximum 200 words)*:

The Army Research Institute Ft. Benning Research Unit and the Henry Caro Noncommissioned Officer Academy at Ft. Benning identified the need to create an objective assessment scheme for the Infantry Basic Noncommissioned Officer Course (BNCOC). The intent was to produce an assessment instrument that could be used for formative and summative assessment both of different versions of BNCOC and also of different research interventions into BNCOC. Assessment instruments were developed for two major training modules: small arms proficiency training (SAPT) and troop leading procedures (TLP). During development of the assessment instruments, the Infantry BNCOC pedagogical model changed from direct, instructor-led training to outcome-based training and education (OBTE) and a corresponding emphasis on intangibles. With the change to OBTE, the SAPT and TLP instruments are now being used by BNCOC cadre as instructional job aids. Lessons learned from both instruments were incorporated into an outline for OBTE instructor preparation. Additionally, both instruments will serve as foundation for follow-on development of assessments of the effect of research interventions associated with OBTE upon BNCOC students.

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ASSESSMENT TOOLS FOR BASIC ARMY NONCOMMISSIONED OFFICER TRAINING

EXECUTIVE SUMMARY

Research Requirement:

In Army institutional training, as in institutional training in general, training assessment is invoked for two related functions: assessment of student progress, or formative assessment, and assessment of student terminal achievement, or summative assessment. With a view toward establishing baseline levels of interim and final student learning, the Army Research Institute Ft. Benning Research Unit and the Henry Caro Noncommissioned Officer Academy at Ft. Benning identified the need to create an objective assessment scheme for the Infantry Basic Noncommissioned Officer Course (BNCOC). The intent was to produce an assessment instrument that could be used for formative and summative assessment both of different versions of BNCOC and also of different research interventions into BNCOC.

Procedure:

Based on BNCOC priorities, assessment instruments were developed for two major training modules: small arms proficiency training (SAPT) and troop leading procedures (TLP). For both modules, the instrument development process was founded on a series of guided workshops involving both BNCOC subject matter experts (SMEs) and behavioral scientists. The resulting instruments consisted of behaviorally anchored rating scales and checklists. The SAPT instrument, in addition to assessing students' ability to handle small arms and to manage small arms training, was also focused around the then-current concept of the Pentathlete Soldier, with each instrument item associated with a Pentathlete quality. The TLP instrument, in addition to assessing students' ability to produce platoon-level operations orders, was focused around explanatory material that was to serve as a job aid to the instructor either during presentation of training or during conduct of after-action reviews of student performance.

Findings:

Both instruments were deemed acceptable overall by BNCOC cadre, but, during development of the instruments, the BNCOC pedagogical model changed from one of direct, instructor-led training to one of outcome based training and education (OBTE). With the change to OBTE, the instruments are no longer directly applicable to BNCOC formative and summative assessment. To the extent the Pentathlete qualities map to OBTE outcomes and to the extent that the explanatory material can be used for BNCOC OBTE instructor training, the SAPT and the TLP instruments, respectively, will be usable within the new OBTE pedagogical model. Initial steps toward incorporating OBTE instructor training into BNCOC cadre preparation were outlined.

Utilization and Dissemination of Findings:

Both the SAPT and the TLP assessment instruments are being used by the Infantry BNCOC cadre as instructional job aids. Both instruments will serve as foundation for follow-on

development of assessments of the effect of research interventions (e.g., implementations of OBTE) upon BNCOC students' outcomes.

ASSESSMENT TOOLS FOR BASIC ARMY NONCOMMISSIONED OFFICER TRAINING

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Introduction

Assessments are critical for multiple purposes. For instance, measures of trainee behaviors are an essential component of training effectiveness evaluations, student achievement, and more generally, quality control. These assessments provide ways to determine the success of a particular program of instruction and the impact of changes in training approaches. Moreover, measures of trainee behavior can also serve to provide a means of evaluating performance for provision of feedback in order to guide learning or in order to change training. Hence, assessments have the potential to serve both formative and summative evaluation needs, although how such measures are employed and interpreted depends on the goal of the assessment (e.g., Pelligrino, Chudowsky, & Glaser, 2001; Bransford, Brown, & Cocking, 2000).

In the present context, we developed measures of performance for Phase II of the Infantry Basic Noncommissioned Officer Course (BNCOC) at Ft. Benning for two applications. Initially, our goal was to develop methods for assessment of trainee performance in order to facilitate evaluation of training effectiveness (a summative evaluation) of both residential and Mobile Training Team (MTT) delivery of the course. While MTTs provide substantial cost savings over residential course because of the reduced logistical costs (e.g., travel, lodging, food) of moving a handful of members of the MTT to a unit versus moving over 100 Soldiers to the residential course site, the question remained as to whether the MTTs were as effective as more traditional residential courses. We therefore developed measures of one module within the course, Small Arms Proficiency Training (SAPT), as a way to assess the effectiveness of the two versions of the course. However, during conduct of the project, BNCOC leadership introduced a different pedagogy based on Outcomes Based Training and Education (OBTE) which resulted in major modifications both in content and in instructional methodology, for both the residential and the MTT versions of BNCOC. Instead of being used to compare residential and MTT, the measures served to provide a formative method to understand SAPT objectives and methods, thereby facilitating movement of SAPT toward OBTE.

In addition to SAPT, we also developed measures of the Troop Leading Procedures (TLP) and Orders Production module for the Infantry BNCOC course at Ft. Benning. In this case, the measures were developed primarily for the purpose of providing feedback to students as they conducted planning exercises while learning aspects of TLP and Orders Production (for purposes of formative evaluation). The measures were designed to capture execution of critical steps and consideration of essential variables.

Below, we present the results of our work. We begin by outlining the general process that we employed for measures development. We then present the original measures developed for SAPT and TLP/Orders production. Building on these measures, we then explore the introduction of OBTE into BNCOC.

General Method

The COMPASS Approach

In this work, we relied on an established methodological approach to developing effective and reliable measures -- the COmpetency-based Measures for Performance ASsessment Systems (COMPASS) methodology (MacMillan, Entin, Morley, & Bennett, in press). The COMPASS approach has been employed in approximately 20 different domains spanning Army, Air Force, Navy, and Marine applications, and has enabled the fielding of measures across these various domains.

At the heart of the COMPASS methodology is the belief that individual and team performance measures must be developed using a combination of subject matter expertise and psychometric theory. Accordingly, the COMPASS process consists of a series of workshops that leverage insights from both subject matter experts (SMEs) and behavioral scientists, operating on relatively equal footing. In this case, SMEs from BNCOC and retired senior NCOs provided the operational knowledge needed to create measures that were domain-relevant. Psychometric theory and practice were leveraged by the research team to ensure that the measurement instruments and procedures were valid and reliable.

The COMPASS method begins by eliciting knowledge from SMEs about measurable behaviors, while at the same time mapping those behaviors to a framework for understanding how they relate to learning objectives and the task flow of learning events. Hence, the focus of the first workshop is on "Performance Indicators" (PIs), which are observable behaviors identified by SMEs that are considered in task context given learning objectives. Measures are then more fully developed through additional structured workshops. The Workshops typically span multiple days and combine round-table discussions with one-on-one interviews.

Workshop 1: Development of Performance Indicators (PIs)

The first workshop focuses on identifying measurable behaviors or performance indicators (PIs) associated with performance in the domain of interest. The workshop is typically conducted as a group session to ensure that consensus is reached among SMEs regarding the appropriate tasks and objectives on which to focus the discussions and the final list of performance indicators to drive subsequent development. The PIs are usually developed using scenarios or the task flow of training events to focus discussion around specific circumstances, and are linked to a conceptual framework that establishes their importance (e.g., training objectives). The mapping to a framework relevant to the domain is done to ensure that the list of PIs is complete and comprehensive, and that they reflect meaningful training objectives. For instance, in the case of SAPT outlined below, events associated with the program of instruction and BNCOC training objectives were used to structure measure development. Accomplishments in this workshop include identification of PIs, mapping of PIs to the framework, and review to ensure that all tasks and objectives are well represented by the PIs. This process ensures that the PIs describe important and meaningful behaviors that the SMEs believe are associated with learning outcomes, and ultimately, mission success.

Workshop 2: Development of Anchors

While a few performance indicators are readily translated into measures, we generally need more detailed information to create behaviorally-anchored measures that coincide with the performance indicators from Workshop 1. Our objective is to determine what specific behaviors are related to performing poorly or performing well for a given PI in order to create measures with appropriate rating scales. In COMPASS Workshop 2, therefore, we focus on one-on-one interviews (2-3 hours each) to talk through the entire list of PIs and identify explicit behaviors that are representative of good or poor performance for each item. Conducting this workshop using individual interviews allows us to more thoroughly and efficiently obtain detailed information from multiple viewpoints with which we can develop the measures and associated rating scales.

Overall, the goal of the second workshop is to finalize the PIs and to obtain more detailed knowledge about each of the PIs that can be used to develop performance measures. Also, it is at this point in the process that the practical constraints of data collection begin to be considered. There is no guarantee that it will be feasible to collect data on all the PIs identified in the first workshop. Hence, during the second workshop, SMEs are probed for detailed information about how a specific PI can be observed and measured. For instance, facilitators engage SMEs in conversations to identify the specific activities students are responsible for completing associated with each PI. Guidance is offered by facilitators to ensure that those behaviors described are observable and can differentiate good performance from poor performance. Follow-up questions are asked to identify SMEs' interpretations of levels of performance such as *expert, average,* and *novice*, depending on the nature of the domain. During the detailed, intensive discussions of the second workshop, the PIs are reviewed and modified by the SMEs, further ensuring that the PIs and their associated measures are comprehensive.

Subsequently, the information gathered during the interviews of Workshop 2 is used in post-workshop analysis to develop a set of candidate performance measures. This process involves employing the list of performance indicators and the notes from Workshop 2 in order to create measures with associated behavioral anchors that define a range of performance. Depending on the items being measured, draft performance measures tend to include behaviorally anchored rating scales, checklists, and/or simple yes/no items.

Workshop 3: Review of Performance Measures

The goal of Workshop 3 is a detailed review and modification of the draft performance measures. Focus is on review by the SMEs to in order to be certain that performance measures are operationally-relevant, as thorough as possible given the mission scenario/learning task, and worded appropriately using language and terminology appropriate to the domain. Therefore, after the development of the draft performance measures, Workshop 3 consists of a comprehensive review of the measures, once again in a group format, to ensure collective agreement and understanding. During Workshop 3, participants review the measures with respect to relevance, observability, measure type (e.g., scale, yes/no, checkboxes), and wording. For instance, if the goal is to develop an observer rating instrument, concerns may include observability (will an observer actually get a chance to see this behavior), rating scale (how wide

a range can be reliably discriminated), and wording of the behavioral anchors. Participants work through each draft performance measure in real time to incorporate inputs with respect to the above criteria. In addition, the team explores if there are additional measures that need to be developed (in real time) to fill in gaps in the measurement framework, or likewise, if there are measures that need to be removed completely. Ultimately, the result of COMPASS Workshop 3 is a complete set of measures focused on observer ratings of performance.

Applying COMPASS to Small Arms Proficiency Training

At the start of our work, Small Arms Proficiency Training, or SAPT, was the portion of BNCOC related to instruction on weapons operation, with an emphasis on preparing students to effectively lead and train their own units. Objectives for the SAPT module of BNCOC were stated as:

> Students are thoroughly proficient and knowledgeable regarding how to
> a) operate the weapons addressed;
> b) train a Squad on each weapon
> c) plan and conduct a firing range exercise.

Our measures development effort therefore focused on creation of measures related to each of these objectives in relation to the task flow of the BNCOC program of instruction. Moreover, in addition to addressing these more local, task-centered goals, the measures developed were also designed to be related more generally to higher level objectives of BNCOC as a whole. At the time, BNCOC advocated consideration of the NCO Pentathlete Characteristics as higher level training objectives. These characteristics included being a Warrior Leader, an Ambassador, a Critical and Creative Thinker, a Leader Developer, and a Resource Manager. As a result, the measures developed were designed to not only track progress toward task completion, but also to capture progress toward development of these larger objectives.

Specific Method

As outlined above, our measure development effort centered on execution of the COMPASS process. In particular, the three COMPASS workshops took place during the fall of 2007 (September – November). Over the course of the workshops, primary participants included senior leaders from the Non Commissioned Officers Academy (NCOA) and BNCOC specifically (e.g., Commandant, 1st Sergeant, Senior Instructors), as well as senior retired NCOs (e.g. a retired Command Sergeant Major, and a retired Master Sergeant with a background in Special Forces). These individuals were joined by project team staff that had backgrounds in measurement development.
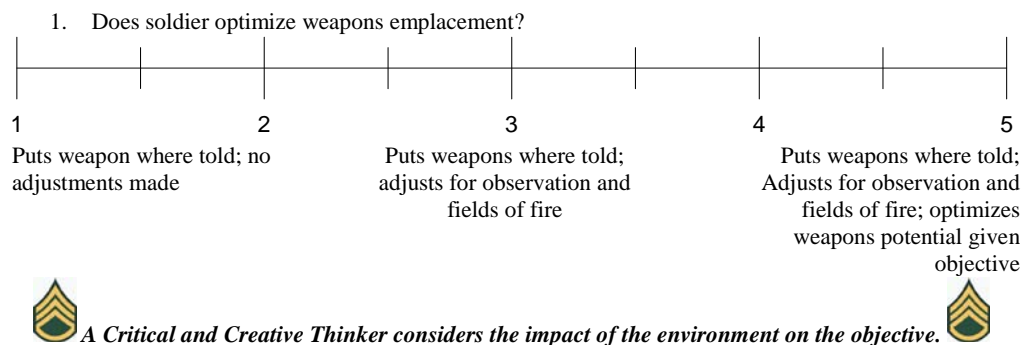
The first workshop began with general discussion of training objectives and primary tasks associated with SAPT. In accordance with the COMPASS process, the workshops then proceeded to focus on identification of observable behaviors, followed by discussion of positive and negative examples of various behaviors, and then review of draft measures. During review

and finalization of draft measures, discussion focused on identifying which measures supported assessment of growth in various Pentathlete characteristics.

Results and Discussion

The outcome of the COMPASS process for SAPT was a complete set of observable performance measures for assessing student behaviors. In all, we developed approximately 75 measures covering the three main training focus areas: Operating Weapons, Training Squad on Weapons Operations, and Plan and Conduct a Range. In each case, measures consisted of a combination of Likert-scale items, simple yes/no measures, and checklists. The complete set of measures is presented in Appendix A. Note that Appendix A also shows associated Performance Indicators.

More specifically, for the Weapons Operations measures, the metrics covered a variety of items such as clearing the weapon, weapons maintenance, weapons emplacement, fundamentals, target prioritization, and reducing stoppage. Figure 1 shows an example measure related to weapons emplacement. Note that in this example, the anchors varied from simply following directions on location (rated "1") to optimizing weapons potential (rated "5"). Of particular interest is the placement of proficient behavior as the "3" rating. While in some instances of Army training, being proficient is the objective (and achieving the objective could yield a "5" rating), our intentional assignment of a "3" rating to this behavior is a result of the leadership's desire to emphasize to students and instructors alike that one can do more than be proficient. This is a theme that will be addressed in OBTE below as well. In addition, note that this measure was designed to facilitate feedback related to becoming a Critical and Creative Thinker. The descriptive label below the measure was included as guide for use of the measures related to provision of feedback to students, should the instructors ultimately use the measures for such purposes.

1. Does soldier optimize weapons emplacement?

1	2	3	4	5
Puts weapon where told; no adjustments made		Puts weapons where told; adjusts for observation and fields of fire		Puts weapons where told; Adjusts for observation and fields of fire; optimizes weapons potential given objective

A Critical and Creative Thinker considers the impact of the environment on the objective.

Figure 1: Example Weapons Operation Measure

Similarly, for assessment of Training Squad on Weapons Operations, the measures developed covered a variety of items such as identification of training objectives, resource identification and execution of After Action Reviews. Figure 2 shows an example measure focused on resource identification and management, incorporating a variety of measurement

types. Once again, the measure includes a guide for feedback related to the overall Pentathlete category of Resource Manager.

1. Is the training on a static range?
   - ☐ Yes
   - ☐ No

    a.   If static range, did the Soldier identify the following resources?

Rounds per shooter	☐
Targetry	☐
Weapons	☐
Terrain	☐
Communications	☐
Medical	☐
Time needed per person	☐

    b.   If non-static range, did the Soldier fully specify the resources?

1	2	3	4	5
Request for range only		Request for range, medical coverage, comms system		Request for range, medical coverage, comms systems, and road guards

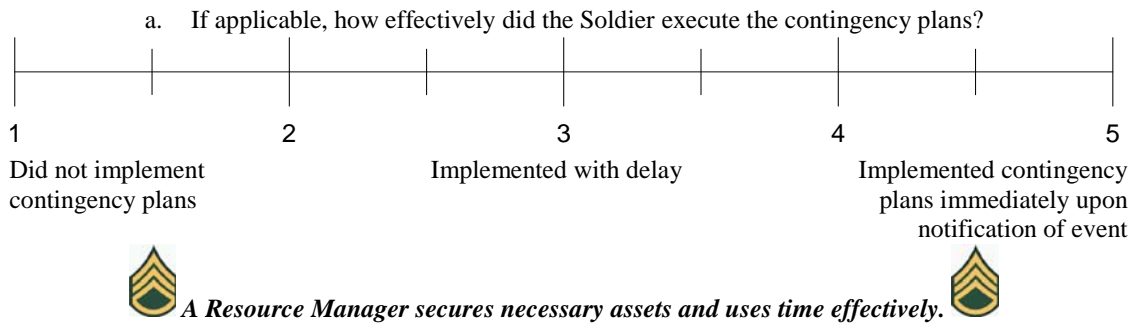*A Resource Manager secures acquisition and distribution of resources.*

Figure 2: Example Training Squad on Weapons Operation Measure

Finally, Figure 3 shows an example measure related to Plan and Conduct a Range. In this case, measures focused on items such as training objectives, planning, safety, and execution. Figure 3 shows an example focused on contingency planning and its relationship to resource management.

1. If applicable, does the Soldier develop employ appropriate contingencies?

	Yes	No	Not applicable
Weather	☐	☐	☐
Maintain communications	☐	☐	☐
Time	☐	☐	☐
Resources	☐	☐	☐
Fire downrange	☐	☐	☐
Range maintenance	☐	☐	☐
Aircraft	☐	☐	☐

a. If applicable, how effectively did the Soldier execute the contingency plans?

```
1                        2            3            4                    5
Did not implement              Implemented with delay    Implemented contingency
contingency plans                                         plans immediately upon
                                                          notification of event
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A Resource Manager secures necessary assets and uses time effectively.

Figure 3: Example Plan and Conduct a Range Measure

In total, the outcome of our work for SAPT was a comprehensive set of measures for use in future assessments. The measures were developed to be used by knowledgeable observers in order to reliably rate Soldier behaviors. As developed, the measures have the potential to be used to compare and assess future versions of SAPT in terms of success in meeting training objectives. Likewise, as developed, the measures include pointers to ways in which the measures can be used to provide feedback to learners related to learning objectives. However, as noted above, following our development of the SAPT measures, BNCOC moved away from its original SAPT course and toward methods influenced by OBTE. In a later section of this manuscript, we therefore explore how metrics can be used to design such training and provide feedback to guide learning.

Troop Leading Procedures/Orders Production

In addition to measures of SAPT, in the second phase of our work with BNCOC, we focused on the development of measures related to Troop Leading Procedures (TLP), and specifically, Orders Production. In this case, BNCOC's learning objective focused on drafting of an Operations Order (OPORD). As stated by BNCOC representatives, the objective of this aspect of the course was to prepare students to understand and produce a standard five paragraph OPORD, which conveys Commander's Intent and is doctrinally correct. Accordingly, in this section, our measure development effort focused on assessment of student OPORDs. At the time of measures development, in this section of BNCOC, students were tasked with addressing Order Production as a team, with each student playing the role of a different member of a Platoon's leadership (e.g., Platoon Leader, Platoon Sergeant, etc.). Students were given an operations order at the Company level and were tasked with assessing the mission and producing an appropriate OPORD at the Platoon level through utilization of key aspects of the TLP process. Unlike the measures developed for SAPT, since much of this student work occurred outside of direct interaction with instructors, our measures focused on assessment of completed student OPORDS and their presentation of those OPORDS.

Specific Method

Our measure development effort once again centered on execution of the COMPASS process. The three COMPASS workshops took place during the summer of 2008 (June - September). Over the course of the workshops, primary participants included senior leaders and Instructor Cadre from BNCOC (e.g., 1st Sergeant, Instructor Cadre), as well as a senior retired NCO (e.g. a retired Command Sergeant Major). Once again, these individuals were joined by project team staff that had backgrounds in measurement development.

The first workshop began with general discussion of training objectives and primary tasks associated with TLP and Orders Production as they related to the BNCOC curriculum. In accordance with the COMPASS process, following this initial work, the workshops proceeded to focus on identification of observable behaviors and products, followed by discussion of positive and negative examples, and then review of draft measures. During review and finalization of draft measures, descriptive contextual paragraphs were added to the measures list to provide enhanced guidance to instructors regarding what to assess and what to address when providing feedback to students.
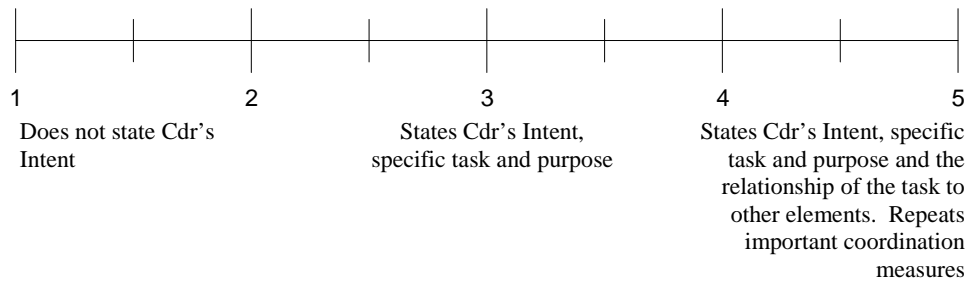
Results and Discussion

The outcome of the COMPASS session was a set of 47 measures related to TLP and Orders production. These measures were then reviewed and refined by BNCOC cadre and research staff, such that many measures were eliminated based on a lack of simulation of particular elements of the process in the classroom (e.g., reconnaissance, some forms of mission rehearsal). In addition, many measures were eliminated that focused heavily on the group dynamics and leadership behaviors of the Platoon during the planning process. As noted above, given the structure of BNCOC, these activities were not typically observed by Cadre since they were not completed in the context of direct student-instructor interactions.

Consequently, through this refinement process, the result was a final set of approximately 16 items (Appendix B). The measures focused primarily on the product submitted and presented by each group. Within the context of the OPORD, they focused on items such as the organization of data within the OPORD template and the appropriate communication of the situation and tasking of the different planning, organizational and execution activities. Note that overall, the measures reflect an individual rather than team focus as only a few of the measures reflect behaviors of other students. However, quality of teamwork can be derived from the end product, given that team members must work together to deliver a quality product and provide injects to various elements of the OPORD. This strategy was acceptable for BNCOC given student rotation through various different roles within the Platoon leadership. In addition, as shown in Appendix B, the measures contain several short paragraphs that provide guidance to instructors regarding items to focus on and discuss when providing feedback. Figure 4 shows an example measure focused on a Performance Indicator related to Commander's Intent, and shows sample instructor notes.

*OP.3.1: Commander's intent. Commander's intent gives the commander a means of indirect control of subordinate elements during execution. It must be understood and remembered by subordinates two echelons down. In the absence of orders, the commander's intent, coupled with the mission statement, directs subordinates toward mission accomplishment. When opportunities appear, subordinates use the commander's intent to decide whether and how to exploit them. Therefore, **brevity and clarity** in writing the commander's intent is key. The commander's intent can be in narrative of bullet form; it normally does not exceed five sentences.*

3. Does the PL state the Commander's Intent?

1	2	3	4	5
Does not state Cdr's Intent		States Cdr's Intent, specific task and purpose		States Cdr's Intent, specific task and purpose and the relationship of the task to other elements. Repeats important coordination measures

Figure 4: Example Order Production Measure.

In total, the outcome of our measures development work related to Order Production and TLP was a set of measures tuned to evaluation of the OPORD as prepared and briefed. The measures were developed to be used by knowledgeable observers or instructors in order to reliably rate student behaviors. In addition, the measures set contained guidance with respect to focus areas for feedback, given the objective of using these measures to facilitate feedback to students. The measure set therefore provides a comprehensive method for OPORD evaluation in the context of BNCOC, and can be used in the future for student assessment and provision of feedback.

Application of OBTE to BNCOC

Following development of measures related to SAPT and TLP/Orders Production, BNCOC decided to redesign their marksmanship training in light of Outcomes Based Training and Education (OBTE) (Asymmetric Warfare Group, in preparation b). This section describes the changing context that motivated our collaborative in-stride adjustments to best meet the needs of BNCOC by exploiting evolving opportunities in the institutional Army.

As a starting point, the fundamental notion that observable behaviors can be linked to abstract concepts was an important commonality between the BNCOC SAPT measures and developments in OBTE. Indeed, from this perspective, the most important criteria imposed on the COMPASS process were the Pentathlete Characteristics (i.e., Warrior Leader, an Ambassador, a Critical and Creative Thinker, a Leader Developer, and a Resource Manager). This introduced an exigency to map the measures of observable instructional behavior to something more abstract, to something more like cultural values. As noted above, while the Pentathlete Characteristics in particular ceased to remain a priority over the course of the project, we consider this kind of mapping to be an important general source of external validity for a set of measures.

In a prior project, we addressed another set of value-based concepts, those embodied in Warrior Ethos (Brunye, et al., 2006; Riccio, et al., 2004). We found that it is possible to identify relationships between abstract values and concrete behavior of Soldiers in an operational or training context. These relationships led to a deeper understanding of Warrior Ethos in terms of empirically traceable concepts and in terms of specific actionable recommendations for planning and conducting training. This is important because there is a natural skepticism about the meaning of values-based terminology that changes from time to time. We suspect that persistence of a relatively small number of core values can be identified amid such changes in terminology through their common connections to a meaningful foundation of subordinate concepts. A mapping among various sets of values-based terms would help reveal such invariants. We suggest a mapping after reviewing a related approach to instruction in which values-based level of abstraction is important.

Given the original intent of the current project, it was natural to consider common and convergent themes across projects that gave us first-hand exposure to other programs of instruction in the institutional Army. Given that our involvement with various programs was through research projects, we were more likely to be exposed to programs in which change was taking place or was being considered. A significant convergence occurred during this project between the SAPT module of BNCOC and an initiative of the Asymmetric Warfare Group (AWG) to introduce a different approach (OBTE) to Army training and education through its initial application to marksmanship training (Asymmetric Warfare Group, 2000b, in preparation-b).

The AWG initiative in OBTE became important to consider because our initial development of measures for SAPT revealed possibilities for further impact of higher-level training objectives on training execution. At the same time, OBTE was enjoying great success in several programs of instruction (e.g., Artis, et al., 2008; Cox, 2008; Currey, 2008; Fitzgerald,

2008; Tice, 2008). Both our team and BNCOC leadership began to inquire into the success of the AWG. The partially independent inquiries eventually had a beneficial effect on the AWG and enabled the AWG to have a beneficial effect on BNCOC. The convergence of programs is described in the following sections.

Reciprocal Impact Through Measure Development and Application

As noted above, our COMPASS workshops included SMEs from both the conventional Army and Special Operations. By coincidence, one of the Special Operations SMEs was one of the progenitors of OBTE with the AWG. Through his participation in the COMPASS workshop, BNCOC leadership became aware of the AWG's OBTE-based marksmanship course (then known as the Combat Applications Training Course, or CATC, before OBTE was adopted by the AWG in July 2008 as a more general approach). Correspondingly, the AWG became aware of the current project to develop measures of learning and instruction.

By December of 2007, BNCOC leadership began to inquire into the possibility of BNCOC instructors attending the AWG's OBTE-based marksmanship course. By January, the AWG began to inquire into the possibility of developing measures for OBTE by employing the COMPASS process. After some deliberation about intent and purpose, a related Wexford-Aptima-IMPRIMIS team began a three-month effort with the AWG beginning in April 2008 to define and measure the practice of OBTE and to begin the development of theoretical underpinnings for the approach. The measures resulting from this effort have been distributed widely and have been incorporated into both the AWG's OBTE workshops (Asymmetric Warfare Group, 2008b) and its OBTE-based Train-the-Trainer (T3) courses (Asymmetric Warfare Group, in preparation-b).

There has not yet been a formal systematic comparison of the measures developed for OBTE and those developed for SAPT. However, a cursory review suggests that the major difference is that many more of the SAPT measures address the instructor's role in orchestrating the events considered sufficient for student learning, while many more of the OBTE measures address the instructor's interpersonal influence on students. This focus of OBTE reflects a principled approach that has deep and diverse connections with the literature in psychology and education. This literature reveals many reasons why OBTE has enjoyed relatively unusual success as a grass roots initiative. One important reason is that it seems to address the learner-centered, assessment-centered, and knowledge-centered needs of a learning system in the context of overarching community-centered needs (Bransford, Brown, & Cocking, 2000). Another is that it addresses motivational factors that correspond well to the demands of the 21[st] century (Deci & Ryan, 2008). An extensive treatment of these and other connections to the scientific literature is in progress (Asymmetric Warfare Group, in preparation-b).

One similarity between OBTE and SAPT, with respect to the development of measures, is that abstract values-based concepts had to be considered. In particular, OBTE seeks to develop Soldiers with respect to attributes such as confidence, accountability, and initiative as well as associated capabilities such as awareness, discipline, judgment, and deliberate thought. In our work on OBTE, we have identified a useful mapping between these intangibles, the attribute of Warrior Ethos (Riccio et al., 2004), and primary factors affecting motivation

according to self-determination theory (Deci & Ryan, 2008). This comparison has been useful not only in helping to connect abstract concepts to concrete observable behavior but also to reveal scientific constructs that help identify causal influences of the abstract concepts on behavior. We have extended this listing to include the Pentathlete Characteristics (see Table 1).

Table 1
Bridging the Gap Between Values and Behavior

Warrior Attributes	OBTE Intangibles	Pentathlete	Motivation
Persevere	Confidence	Warrior Leader	Competence
Sense of Calling	Accountability	Leader Developer	Relatedness
Depend on Others	Awareness	Ambassador	
Responsible	Discipline	Resource Manager	
Adaptable	Initiative	Critical/Creative Thinker	Autonomy
Prioritize	Judgment		
Make Tradeoffs	Deliberate Thought		

This comparison should not be taken to imply that there is a strict one-to-one mapping among these sets of concepts. The listings are useful insofar as they reveal substantial similarities among corresponding concepts that help develop a deeper meaning for the concepts and suggest new ways to use them to influence the development of individuals. The mapping is included in an Intent Statement for OBTE that helps makes some connections between persistent values-based themes with situation-specific plans and actions in an instructional setting (Appendix C).

In addition to the scientific cross-fertilization between the projects with BNCOC and the AWG, there has been an accelerating programmatic cross-fertilization. Personnel from Ft. Benning, including the new BNCOC leadership, attended the AWG's OBTE and leadership workshop at Johns Hopkins University in June 2008. The workshop included doctrine writers from TRADOC, training developers, instructional program leadership and instructors from various posts, and scientists. This broad organizational approach has been instrumental in the success of the AWG's initiative in OBTE. It often reveals that the institutional friction is not as pervasive or strident as generally assumed.

Soon after this workshop, decisions were made by the leadership of the Infantry School to set up an organic OBTE Train the Trainer (T3) capability (i.e., eventually independent of the AWG) and by the leadership of BNCOC to incorporate an OBTE-based marksmanship course into BNCOC. Another AWG workshop was held in September 2008 at Ft. Benning specifically for the Infantry School and NCOA personnel. BNCOC thus is benefiting from the AWG's development of OBTE. At the same time, the AWG will benefit from the experience of BNCOC as one of the first programs to transition OBTE from the AWG. Moreover, BNCOC is being introduced to OBTE through the new T3 course that will become organic to the Infantry School. This will be another element of transition from the AWG which previously was the only provider of OBTE T3.

Facilitating Transition of OBTE to BNCOC

In September 2008, we began to inquire into the readiness of BNCOC instructors to follow through on the intent of BNCOC leadership to employ OBTE in the SAPT module. The understanding of BNCOC instructors about OBTE was based exclusively on their experience in a weeklong OBTE-based course on marksmanship given by the AWG. In addition to informal discussions with BNCOC personnel, and in coordination with BNCOC leadership, we held two working-group meetings with a small number of instructors to explore their understanding of OBTE. One of the progenitors of OBTE and two of the scientists involved in the RESHAPE project were involved in these discussions.

Two BNCOC instructors participated in the first working group, a one-day meeting at Ft. Benning. Both had taken the AWG's OBTE-based course on marksmanship. It became clear in this meeting that BNCOC instructors had a tendency to remember their experiences in the AWG's OBTE course in two ways, primarily with respect to content and secondarily with respect to instruction. In terms of content, they viewed it as a shooting and marksmanship course. They did not tend to view it as a T3 course. For this reason, the focus of our influence throughout most of the meeting was to stimulate and guide collaborative reflection on instruction in the OBTE course.

Initially, in the collaborative reflection on instruction, the BNCOC instructors tended to recall what they had experienced in the AWG's course in terms of particular techniques utilized by the OBTE cadre. However, after a few hours of discussion, we engaged in problem solving with them in the context of what-if scenarios in teaching marksmanship that were different from what they had experienced in the AWG course. Gradually they generated their own ideas about how they might adapt to these what-if scenarios rather than only recalling what AWG cadre had done. At this point, we stressed the relationship of their initiatives to the principles of OBTE. There was a sense of progress toward a deeper understanding of OBTE, one that has potential for influencing instruction in BNCOC. The two BNCOC instructors and their leadership subsequently requested that we give a workshop on OBTE to the entire cadre.

Given difficulties in scheduling, we eventually agreed on a one-day workshop that could be attended by whoever was available. Ultimately, six BNCOC instructors were able to attend the workshop, only three of which had taken the AWG's OBTE-based course on marksmanship. However, even the instructors who had taken the course had done so many months earlier. Hence, the experience was not fresh in their minds. In general, although there was some evidence of progress as during the first working-group meeting, circumstances did not allow us to build on the opportunity we saw in the first working-group meeting. Yet, while the working-group meetings with BNCOC instructors were not sufficient to assure transition of OBTE to BNCOC, they did inform the development of products that can provide a path to transition.

Contributing to the State of the Art in Instruction

Given the plan to transfer and sustain OBTE in BNCOC, the workshops noted above indicated that there were gaps in understanding and application of OBTE. It is recognized by both the AWG and BNCOC that workshops for instructors are necessary to the transition and

sustainment of OBTE over its life cycle. The AWG has been holding workshops on a regular basis for stakeholders interested in OBTE and adaptability. BNCOC is interested in incorporating such a workshop into BNCOC to supplement OBTE-based instruction. There currently is an opportunity to develop a workshop that integrates the adaptability and OBTE workshops often packaged together by the AWG and to integrate these workshops with OBTE-based instruction.

The adaptability workshops sponsored by the AWG provide participants with tools to identify unnecessary habitual constraints on their thinking and to develop better habits that foster student creativity, problem solving, and broader awareness (Asymmetric Warfare Group, 2008a, b; Vandergriff, 2006, 2007). These workshops generally utilize a method that involves mini-lectures and breakout groups organized around collaborative problem solving. The OBTE workshops focus on principles of instruction that foster the development of intangible attributes such as confidence, initiative and accountability.

One aspect of our vision of integration is to utilize instruction structured around conducting collaborative reflection on personal experiences in an OBTE field course and reinterpretation of these experiences in terms of the principles and intended outcomes of OBTE. Integration of the workshops with personal experiences in OBTE addresses a gap frequently emphasized by individuals who only take the workshops or only read existing documents describing OBTE and adaptability: inability to make connections to instructional methods or lack of understanding of specific things instructors should do to implement OBTE.

The measures of instructor behavior developed for OBTE, inspired in part by the original work in this project, are proving to be helpful in understanding the meaning and opportunities in an instructor's approach to training and education (Asymmetric Warfare Group, in preparation-b). They are helping to link common and consistently cited values of the Army culture to observable behavior of instructors and students. In a sense, they have provided a behavioral semantics for Army institutional instruction. In this same sense, a gap can be identified as the lack of a behavioral syntax that can guide instructors in their interactions with students without imposing scripts for that behavior.

Instructors, training developers, and doctrine writers often will say that one of the challenges they face in implementing OBTE is that instructors want to be provided with specific instructions for training events. This, of course, is fundamentally inconsistent with OBTE. At the same time, we consider this to be an expression of need by instructors that is valid but perhaps not an entirely accurate description of what instructors actually need. We believe that instructors could benefit from exposure to examples of good training and education: a variety of them as alternative means to an end, rather than prescriptive directions. There are various actionable implications of this conjecture. One of them is to utilize vignettes that describe the thoughts and actions of instructors that unfold over a period of seconds to minutes during OBTE-based instruction. In our recommendations to BNCOC, we suggest that such instructional vignettes should be utilized in problem-centered collaborative discussions within an OBTE workshop.

Toward an Integrated OBTE and Adaptability Workshop for BNCOC

The measures of instructor behavior can be used by BNCOC in the implementation of OBTE (Asymmetric Warfare Group, in preparation-b). They can help instructors plan and conduct training, and they can be used in formal or informal quality assurance for such training. It is not within the scope of the current project, however, to provide a turnkey product to BNCOC that is *sufficient* to assure transition and sustainment of OBTE. We can provide a framework for a workshop and some samples of how to conduct a workshop that would greatly facilitate the implementation of OBTE in BNCOC. Recommendations for the workshop are summarized below.

The workshop should be conducted over two days including about four hours of working group discussions per day. We have found this format to be effective for collaborative problem solving in a wide variety of contexts. More than four hours per day tends to go beyond the point of diminishing returns and can even interfere with earlier progress made in mentally demanding or novel tasks. We also have observed that cognitive progress almost always occurs during the "time off" between the sessions on consecutive days. Within each day, we recommend between two and four sessions. Four two-hour sessions per day are more reasonable if the problems or issues addressed across sessions are closely related.

A framework for workshop sessions is summarized in Appendix D. The intent of this framework is to scaffold learning that takes place across sessions. All sessions should help instructors understand what they should do to implement OBTE (Terminal Learning Objective of the workshop). Samples of individual sessions are provided in Appendices E to G. Each session would take a step toward the TLO. The first session, for example, would help instructors develop a deeper understanding of their influence on the development of intangibles in students (an Enabling Learning Objective in the workshop). The session would begin with a mini-lecture on the intangibles before a more lengthy leader-guided discussion about the prior experiences of workshop participants in an OBTE-based T3 course.

Group discussion and collaborative reflection would be guided by an instructional vignette revealing the level of detail that would be most effective in stimulated insight, discovery of meaning, and reinterpretation of experiences about OBTE. Examples of this level of detail are provided in Appendices E to G. There will be obvious gaps and shortcomings in the ability of workshop participants to remember unique and essential aspects of OBTE. In the first session, for example, one might expect participants to recall some of the effects OBTE had on them and some of the ways it made them feel. If the participants did not fully appreciate the causal relationship between the instructor's behavior and those effects, the next session could focus on instructor behavior.

Subsequent sessions should address gaps and shortcomings of prior sessions. In Appendix E, we make particular assumptions about this based on our experience in workshops and discussions with individuals who have taken the OBTE-based T3 course. Cascading assumptions such as this would be a good plan to have going into a workshop. Realities as the workshop unfolds may require in-stride adjustments in the rate of progress across the steps represented in plan. We encourage the workshop leader to engage participants in discussions

about such in-stride adjustments. This discussion could take the form of an After-Action Review (AAR) at the end of a session. The conduct of the workshop thus should exemplify OBTE, and the instructor should model OBTE-based thinking and behavior.

We also recommend the use of breakout groups as well as leader-guided discussions. We expect that it would be useful to start with leader-guided discussions so that participants develop a clear idea about what collaborative reflection looks like and how to use the vignettes as a guide for reflection on their own experience. Again, the use of instructor-led discussion and breakout groups should be at the discretion of the workshop leader, preferably in consultation with workshop participants in AAR.

If possible, the workshop leader should strive to make sufficient progress to introduce the concept of applying OBTE to a skill different from the ones addressed in the OBTE T3 course taken by participants of the workshop. To date, OBTE has been applied primarily in the context of marksmanship. The OBTE T3 course that has transitioned from the AWG to the Infantry School at Ft. Benning currently also is in the context of a marksmanship course. There has been recent success applying OBTE to Land Navigation in the development of a new Army Reconnaissance Course (ARC) at Ft. Knox. Land Navigation thus would be a good focus for one of the later sessions in the workshop.

An understanding of the measures of instructor behavior developed for OBTE is critical to a deeper understanding of how OBTE applies to any program of training and education (Asymmetric Warfare Group, in preparation-b). The measures should be utilized extensively in the workshop. They should be introduced gradually and systematically within and across sessions. The complete set of measures can be provided as a handout but each measure need not be addressed comprehensively in the workshop. A small number of measures should be chosen at the discretion of the workshop leader. As the workshop progresses, participants can be included in this choice of measures. This will give participants experience with an important aspect of using the measures—they can and should be chosen on the basis of momentary and situation-specific needs and interests.

We expect that workshops eventually will serve a dual purpose. In addition to helping instructors make connections from an OBTE T3 course to their own situations, the workshop will be a natural forum for discussing improvements to instruction in BNCOC. Peer-to-peer sharing of best practices will, to some extent, occur naturally in these workshops. There also will be an opportunity to improve the measures with respect to evolving lessons learned about how they best inform ongoing improvements in instruction.

Conclusions

There have been many efforts in the past to reshape Army institutional training, and these efforts have had drastically varying levels of success and adoption. Whether OBTE will reform training for BNCOC in the near sense and the larger Army in the far sense remains to be seen. However, regardless of whether OBTE per se is adopted or another approach, there are some common characteristics of effective instruction that our work reflects on that we believe should be captured regardless.

First, it is critical to emphasize core values, even when training the most basic and fundamental of skills. Whether these are the tenets of Warrior Ethos, the characteristics of the Pentathlete, or intangibles like confidence, the linkage to values provides a larger framework within which Soldiers can acquire new skills and develop over time. Consequently the Soldier does not simply acquire the skill, but considers how the skill becomes a tool for achieving larger goals, which will require intense agility in full spectrum operations.

Second, any training approach must emphasize timely and thought-provoking feedback to the student. While this seems rather basic in some sense, practical constraints (time, class size, etc.) can easily distract the instructor from providing useful feedback. In such cases, it can be challenging to provide even timely feedback, let alone thought-provoking feedback. However, both of these aspects of feedback are critical. The timeliness of feedback captures a moment in time which the student is heavily or recently engaged in a task and is therefore prepared for additional reflection. The danger is that the student becomes too heavily engaged in the moment to consider what lessons can be learned more generally from the training event. The importance of thought-provoking feedback is that it can be used to challenge students to draw connections between the training events and core values for example.

Collectively, the work in this project strives to make progress along these dimensions. The measures developed here for SAPT can be used in the future to guide provision of feedback. In addition, the work here on SAPT measure development and ultimately integration of OBTE demonstrates methods to integrate larger development themes into military training and education. While these materials provide only examples and starting points, we believe that efforts such as these can be instrumental in facilitating the reshaping of Army training.

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Appendix A: SAPT Measures

Performance Measures for SAPT

Operating Weapons

Relevant Performance Indicator:
OW 1: Clear Weapon

1. Does the Soldier clear the weapon?

☐ Yes
☐ No
☐ N/A
☐ N/O

    a. If no, which elements were missed?

Point in a safe direction	☐
Select lever on safe	☐
Lift Cover	☐
Remove Belt	☐
Sweep Links Off	☐
Lift Feed Tray	☐
Check Chamber for Round	☐

Comments:

_____
_____
_____

2. When clearing the weapon, does the Soldier follow the appropriate sequence?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader keeps safety and force protection a priority.
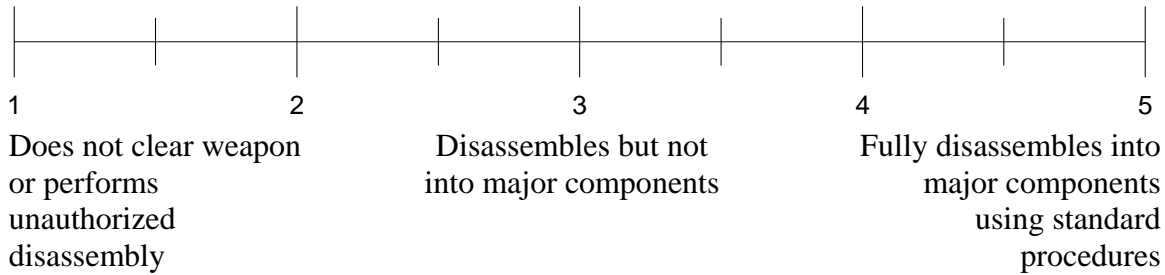
Relevant Performance Indicator:
OW 2: Disassemble Weapon

☐ N/A
☐ N/O

3. Does the Soldier disassemble the weapon in accordance with standard procedures?

1	2	3	4	5
Does not clear weapon or performs unauthorized disassembly		Disassembles but not into major components		Fully disassembles into major components using standard procedures

Comments:

_____
_____
_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
OW3: Weapons Maintenance

4. Does the Soldier correctly perform weapons maintenance?

☐ Yes
☐ No
☐ N/A
☐ N/O

a. If no, which elements were missed?

Cleanliness ☐

Serviceability ☐

Accountability ☐

Comments:

_____
_____
_____

A Resource Manager maintains his weapons for future use.

Relevant Performance Indicator:
OW4: Weapons Assembly

5. Does the Soldier correctly assemble the weapons with no extra parts remaining?
☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
OW5: Weapons Function Check

6. Does the Soldier perform the weapons function check in accordance with standard sequence?
☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
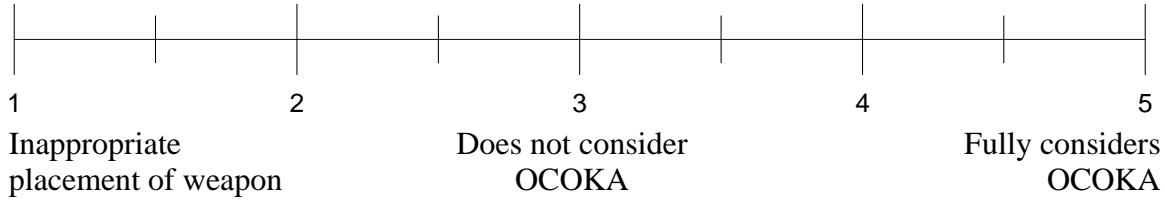_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
OW6: Emplacement of Weapon System

☐ N/A
☐ N/O

7. Does Soldier optimize weapons emplacement?

|——————+——————+——————+——————+——————+——————+——————+——————|

1   2   3   4   5

Inappropriate   Does not consider   Fully considers
placement of weapon   OCOKA   OCOKA
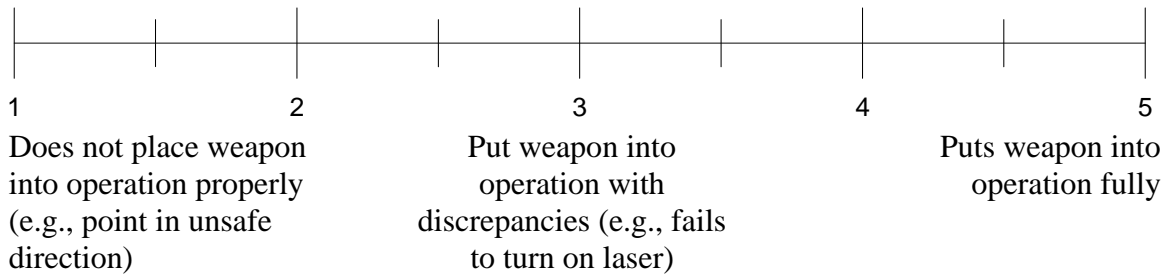
  Comments:

  _____
  _____
  _____

A Critical and Creative Thinker considers the impact of the environment on the objective.

Relevant Performance Indicator:
OW7: Put Weapons System into Operation
OW8: Load Weapon

☐ N/A
☐ N/O

8. Does the Soldier put the weapon into operation appropriately?

|——————+——————+——————+——————+——————+——————+——————+——————|

1   2   3   4   5

Does not place weapon   Put weapon into   Puts weapon into
into operation properly   operation with   operation fully
(e.g., point in unsafe   discrepancies (e.g., fails
direction)   to turn on laser)

  Comments:

  _____
  _____
  _____

A Warrior Leader pays close attention to detail.

Relevant Performance Indicator:
OW9: Fire Weapon
OW9.1 Zero Weapon
OW9.1.1 Applies Fundamentals of Marksmanship
OW9.1.2 Sight Manipulation Adjustment
OW9.1.3 Understands Capabilities and Limitations of Optics or Special Equipment

9. Does the Soldier prepare to zero the weapon (prepare laser/optics/iron sights as appropriate)?

☐ N/A
☐ N/O

Comments:

_____
_____
_____

10. Does the Soldier zero the weapon?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Resource Manager ensures weapons work to their full potential.

☐ N/A
☐ N/O

11. Does the Soldier apply the fundamentals of marksmanship?

1	2	3	4	5
Fails to apply fundamentals		Applies fundamentals but fails to adjust for environmental conditions		Applies fundamentals with tight shot groups, adjusting for environmental conditions
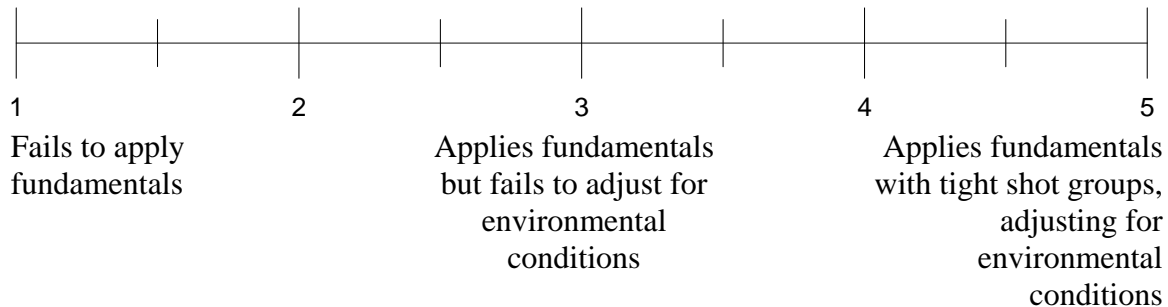
a. ***Which fundamentals missed or not accurate?***

Non-firing Arm/Hand	☐
Pocket of Shoulder	☐
Grip of Firing Hand	☐
Spot Weld	☐
Firing Elbow	☐
Breath Control	☐
Body Position	☐
Relaxation	☐
Sight alignment	☐
Sight picture	☐
Point of aim	☐
Trigger Control	☐

Comments:

_____
_____
_____

12. ***Does the Soldier make proper sight adjustments given elevation and windage based on strike of the round?***

☐ Yes
☐ No
☐ N/A
☐ N/O

A Warrior Leader is technically competent.

Relevant Performance Indicator:
OW9: Fire Weapon
OW9.2: Engage Targets
OW9.2.1: Apply Ballistics and mechanics

13. Does the Soldier hit the target?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

 A Warrior Leader applies knowledge to tasks.

OW9.2.2: Target Identification

14. Does the Soldier engage the appropriate target?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

 A Critical and Creative Thinker engages a target appropriately.

OW9.2.3: Prioritizing targets

15. Does the Soldier engage the highest priority target?
- ☐ Yes
- ☐ No
- ☐ N/A
- ☐ N/O

Comments:

_____

_____

_____

A Critical and Creative Thinker prioritizes targets according to threat.

OW9.2.4: Control rate and distribution of fires

16. Does the Soldier control the rate of fire?
- ☐ Yes
- ☐ No
- ☐ N/A
- ☐ N/O

17. Does the Soldier apply appropriate fires given the orientation of the targets?
- ☐ Yes
- ☐ No
- ☐ N/A
- ☐ N/O

Comments:

_____

_____

_____

A Resource Manager uses limited resources appropriately.

Relevant Performance Indicator:
OW10: Fire commands
OW10.1: Put weapon into action
OW10.2: Rates of fire

- ☐ N/A
- ☐ N/O

18. Does the Soldier give the appropriate command to:

	Place into action	Engage targets	Take out of action
Place weapon into action	Yes/No	Yes/No	Yes/No
Change barrels	Yes/No	Yes/No	Yes/No
Shift fire	Yes/No	Yes/No	Yes/No
Lift fire	Yes/No	Yes/No	Yes/No
Cease fire	Yes/No	Yes/No	Yes/No
Out of action	Yes/No	Yes/No	Yes/No

Comments:

_____
_____
_____

19. Does the Soldier give the appropriate fire commands at the appropriate time?

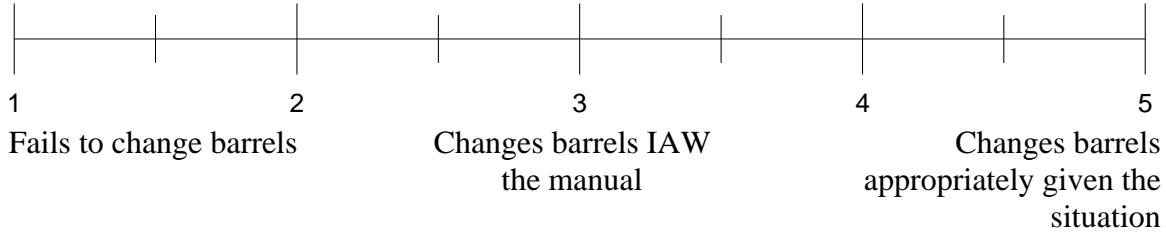☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Leader Developer clearly communicates commands.

A Resource Manager prevents damage to weapons.

Relevant Performance Indicator:
OW10: Fire commands
OW10.3. Change barrels

20. Does the Soldier give the signal to change barrels at the correct time given the situation?
☐ N/A
☐ N/O

```
1                       2                   3                   4                       5
```
Fails to change barrels   Changes barrels IAW   Changes barrels
                                      the manual   appropriately given the
                                                                         situation

Comments:
_____
_____
_____

A Critical and Creative Thinker adapts to the situation.

Relevant Performance Indicator:
OW10: Fire commands
OW10.4: Take out of Action

21. Does the Soldier give the appropriate command to take the weapon out of action?
☐ Yes
☐ No
☐ N/A
☐ N/O

22. Does the Soldier give the signal at the appropriate time?
☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:
_____
_____
_____

A Leader Developer clearly communicates commands.

Relevant Performance Indicator:
OW11: Reduce stoppage - immediate

23. Does the Soldier remove the stoppage safely in a reasonable amount of time?
☐ Yes
☐ No
☐ N/A
☐ N/O

    a. **If no, does the Soldier initiate remedial action to correct the stoppage?**
☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:
_____
_____
_____

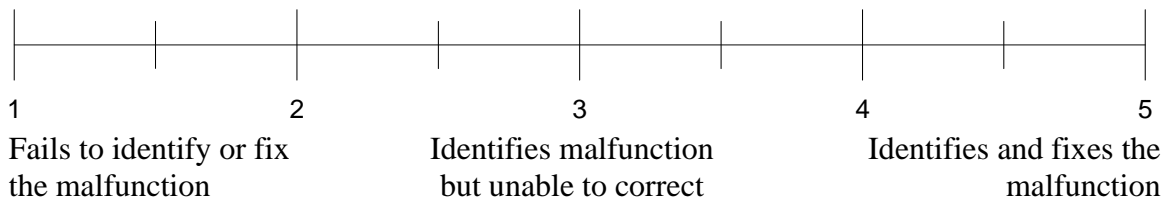*A Warrior Leader is technically competent.*

Relevant Performance Indicator:
OW11: Reduce stoppage
OW11.1: Reduce stoppage – remedial

24. Does the Soldier have the appropriate resources to correct the stoppage?
☐ Yes
☐ No
☐ N/A
☐ N/O

                                                                ☐ N/A
    a. **If yes, how efficiently did the Soldier correct the stoppage?**   ☐ N/O

1	2	3	4	5
Fails to identify or fix the malfunction		Identifies malfunction but unable to correct		Identifies and fixes the malfunction

Comments:
_____
_____
_____

A Critical and Creative Thinker can diagnose a problem.

Relevant Performance Indicator:
OW12: Unload and clear weapon

25. Does the Soldier clear the weapon?

☐ Yes
☐ No
☐ N/A
☐ N/O

        a. If no, which elements were missed (.50 cal)?

Unlock the bolt latch release and raise the cover	☐
Lift the extractor from the ammunition belt	☐
Lift the ammunition belt from the feed way and clear the links	☐
Pull the bolt to the rear	☐
Return charging handle forward	☐
Ensure the T-slot and chamber hold no rounds	☐
Complete first 5 steps within ten seconds	☐

b. If no, which elements were missed (MK 19)?

Place the gun on SAFE	☐
Open the top cover	☐
Lower the charger handles	☐
Pull back on the charger handles slightly	☐
Inspect the bolt face, the chamber, and the feed area for ammunition	☐
Take clearing rod to extract cartridge	☐
Place weapon on "Fire"	☐
Ride the bolt forward	☐
Return the charger handles to upright position	☐
Move the feed slide assembly to the left	☐
Close the feed tray cover	☐
Place weapon on SAFE	☐

Comments:

_____
_____

_____
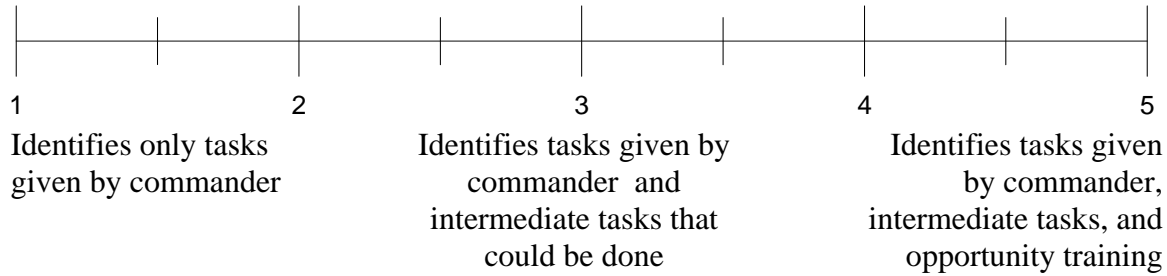
A Warrior Leader is technically competent.

Training Squad on Weapons Operations

Relevant Performance Indicator:
TS 1: Identify training objectives

☐ N/A
☐ N/O

26. Does the Soldier identify training objectives?

1	2	3	4	5
Identifies only tasks given by commander		Identifies tasks given by commander and intermediate tasks that could be done		Identifies tasks given by commander, intermediate tasks, and opportunity training

Comments:

_____
_____
_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
TS 1.1: Identify weapon system to train on

27. Does the Soldier choose the appropriate weapons system given training objectives?
☐ Yes
☐ No
☐ N/A
☐ N/O

28. Does the Soldier ensure that weapons organic to his unit would be available?
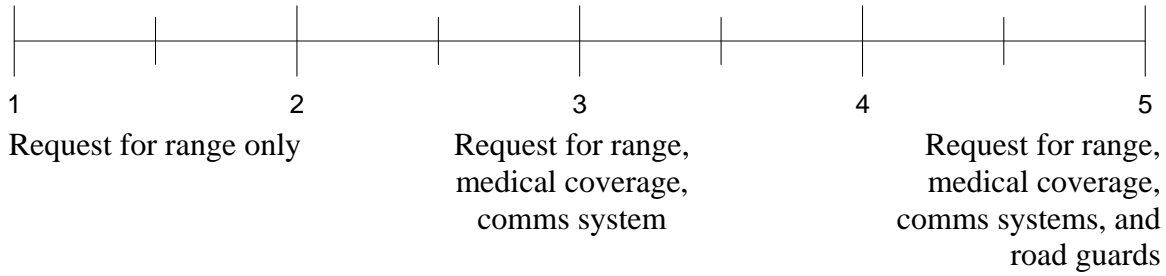☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Resource Manager secures acquisition and distribution of resources.

Relevant Performance Indicator:
TS 1.2: Know characteristics and capabilities of weapon system

☐ N/A
☐ N/O

29. Does the Soldier request the appropriate munitions?

```
|-------|-------|-------|-------|-------|-------|-------|-------|
1               2               3               4               5
```

1	3	5
Request for standard ball ammunition	Request for standard ball plus tracer mix	Request for full spectrum of ammunition available

Comments:
_____
_____
_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
TS 2: Identify resources needed

30. Is the training on a static or non-static range?
☐ Static
☐ Non-static

a. If static range, did the Soldier identify the following resources?

Rounds per shooter ☐

Targetry ☐

Weapons ☐

Terrain ☐

Communications ☐

Medical ☐

Time needed per person ☐

b. If non-static range, did the Soldier fully specify the resources?

1	2	3	4	5

1	3	5
Request for range only	Request for range, medical coverage, comms system	Request for range, medical coverage, comms systems, and road guards

Comments:

_____

_____

_____

A Resource Manager secures acquisition and distribution of resources.

Relevant Performance Indicator:
TS 2.1: Specify amount of weapon systems needed

31. Does the Soldier determine how many firing points are needed?
- ☐ Yes
- ☐ No
- ☐ N/A
- ☐ N/O

  a. If yes, is it adequate to meet training objective given the timeframe?
  - ☐ Yes
  - ☐ No
  - ☐ N/A
  - ☐ N/O

  b. If yes, is an appropriate number of safeties specified?
  - ☐ Yes
  - ☐ No
  - ☐ N/A
  - ☐ N/O

Comments:

_____

_____

_____

A Resource Manager secures necessary assets.

Relevant Performance Indicator:
TS 2.1.1: Ensure required components available

☐ N/A
☐ N/O

32. Does the Soldier ensure that the required components are available?

1	2	3	4	5
Fails to requests weapons		Requests weapons		Requests weapons with all required components

Comments:

_____
_____
_____
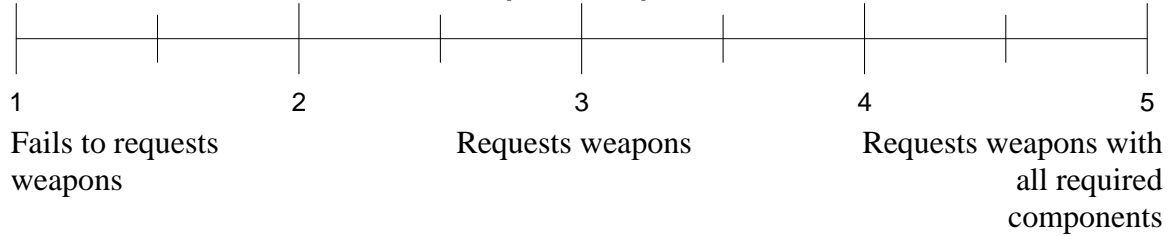
A Warrior Leader understands the units' needs and capabilities.

Relevant Performance Indicator:
TS 2.2: Applicable FMs TMs

33. Does the Soldier apply concepts from the appropriate Field Manuals and Technical Manuals?

☐ Yes
☐ No
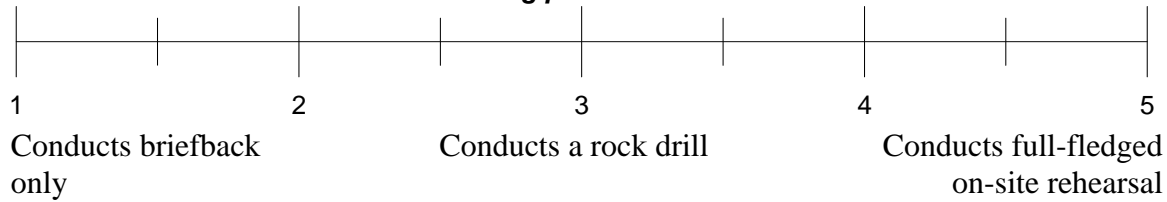☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
TS 3: Create training plan

☐ N/A
☐ N/O

34. Does the Soldier create a suitably realistic and challenging training plan?
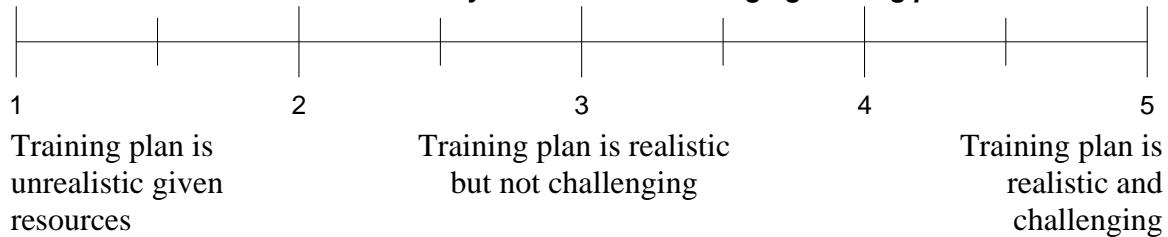
1	2	3	4	5
Training plan is unrealistic given resources		Training plan is realistic but not challenging		Training plan is realistic and challenging

Comments:

_____
_____
_____

A Critical and Creative Thinker achieves goals with available resources.

Relevant Performance Indicator:
TS 3.1: Ensure standard Army training strategy implemented

35. Does the Soldier follow the 8-step training strategy?
☐ Yes
☐ No
☐ N/A
☐ N/O

       a.   If no, which elements of the strategy were not implemented?

Plan the training	☐
Training and certifying leaders	☐
Reconnoitering the site	☐
Issuing the plan	☐
Rehearsal	☐
Execution	☐
AAR	☐
Retraining	☐

Comments:

_____
_____
_____

A Leader Developer is a competent trainer.

Relevant Performance Indicator:
TS 3.2 Assess individual task proficiency

Relevant Performance Indicator:
TS 3.3 Identify individual tasks to train

☐ N/A
☐ N/O

36. Does the Soldier identify the tasks for all individuals to be trained?

1	2	3	4	5
No individual tasks are identified		Identification of individual tasks for M16 family of weapons		Identification of individual tasks for all squad specialty weapons and assets

Comments:
_____
_____
_____

A Warrior Leader understands the units' needs and capabilities.

37. Does the Soldier down-select and prioritize the identified tasks based on the individuals' training needs and time available?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:
_____
_____
_____

A Critical and Creative Thinker achieves goals with available resources.

Relevant Performance Indicator:
TS 3.4 Lesson outline

38. Does the Soldier create a lesson outline in accordance with group objectives?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____

_____

_____

A Warrior Leader is technically competent.

Relevant Performance Indicator:
TS 3.5 Rehearse training plan

☐ N/A
☐ N/O

39. Does the Soldier rehearse the training plan?

1	2	3	4	5

1   2   3   4   5

Conducts briefback   Conducts a rock drill   Conducts full-fledged
only   on-site rehearsal

Comments:

_____

_____

_____

A Leader Developer is a competent trainer.

Relevant Performance Indicator:
TS 4 Train tasks identified

☐ N/A
☐ N/O

40. Does the Soldier train the tasks identified?

1	2	3	4	5

1   2   3   4   5

Training not to   Training to standard   Training to standard
standard   under difficult and
                                                         challenging conditions

Comments:

_____

_____

_____
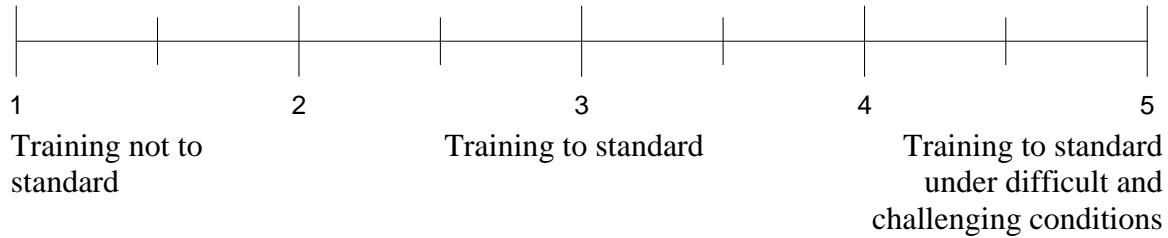
A Leader Developer is a competent trainer.

Relevant Performance Indicator:
TS 4.1 Coordinate resources

☐ N/A
☐ N/O

41. Does the Soldier obtain the necessary resources?

1	2	3	4	5

1	3	5
Inadequate resources and insufficient quantity	Some resources missing or amounts wrong	All resources obtained in appropriate amounts

☐ N/A
☐ N/O

42. Does the Soldier use the resources effectively?

1	2	3	4	5

1	3	5
Uses resources for non-meaningful tasks (mad minute)	Uses resources to meet objectives; moderate realism	Uses resources to meet objectives; realistic and challenging tasks

☐ N/A
☐ N/O

43. Does the Soldier effectively manage the time?

1	2	3	4	5

1	3	5
Soldiers sometimes unoccupied	Soldiers occupied, but sometime in non-meaningful tasks	All Soldiers actively participating in meaningful training

Comments:

_____
_____
_____

A Resource Manager secures necessary assets and doesn't waste time.

Relevant Performance Indicator:
TS 4.2 Execution of training

Relevant Performance Indicator:
TS 4.2.1 Facilitate learning of individuals

☐ N/A
☐ N/O

44. Does the Soldier facilitate individual learning?

1	2	3	4	5
Does not tolerate failures and provides no guidance		Tolerates failure but guidance sometimes inadequate or untimely		Tolerates failure and provides timely feedback

Comments:

_____
_____
_____
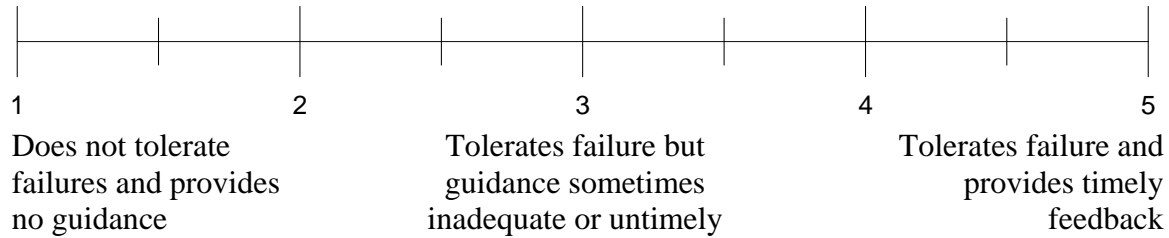
A Leader Developer creates a positive learning environment.

Relevant Performance Indicator:
TS 5 Evaluate training

45. Does the Soldier evaluate training in accordance with the published standards?
☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader assesses the unit effectively.

Relevant Performance Indicator:
TS 5.1 AAR for squad training performed

46. Does the Soldier conduct an AAR?

☐ Yes
☐ No
☐ N/A
☐ N/O

      a. If yes, does it address:

What was the task to be trained? ☐

What was the plan? ☐

What happened? ☐

What are we going to do better next time? ☐

      b. If yes, does the Soldier engage the squad during the AAR?

1	2	3	4	5
Leader lectures squad on what they did wrong		Leader directed questions to specific Soldier		Leader asks probing questions, gets willing participation from Soldiers, and relates discussion to higher level objectives
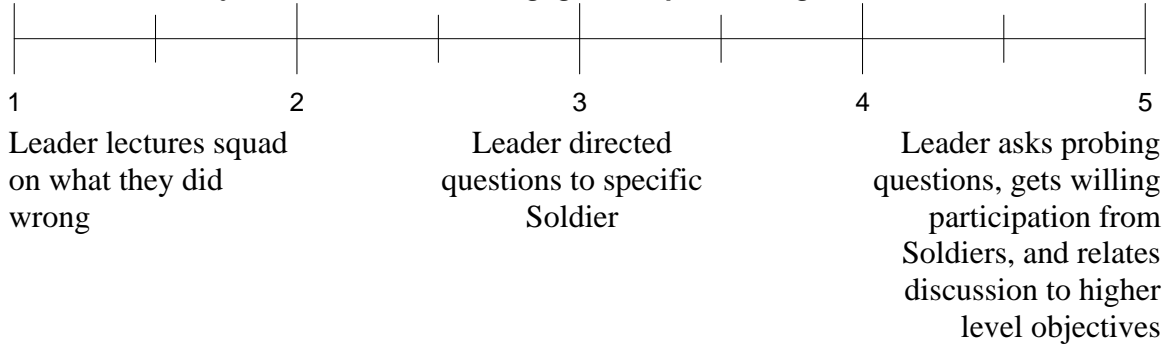
Comments:
_____
_____
_____

A Critical and Creative Thinker challenges his subordinates intellectually.

Relevant Performance Indicator:
TS 5.2 Retrain if applicable

47. Does the Soldier allocate time to retrain?

☐ Yes
☐ No
☐ N/A
☐ N/O

a. If no, is a time specified for retraining?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Resource Manager secures necessary assets and uses time effectively.

Relevant Performance Indicator:
TS 6 Execute AAR of training (leadership)
TS 6.1 Assess completion of training objectives

48. Does the Soldier conduct an AAR with leadership?

☐ Yes
☐ No
☐ N/A
☐ N/O

a. If yes, does it address:

What was the training objective?	☐
What was the plan?	☐
Did we meet the training objectives?	☐
What are we going to do different next time?	☐

Comments:

_____
_____
_____

A Leader Developer creates a positive learning environment.

Plan and Conduct a Range

Relevant Performance Indicator:
PCR 1: Identify training objectives

☐ N/A
☐ N/O

49. Does the Soldier identify training objectives?

```
1                    2                    3                    4                    5
```

1	3	5
Identifies only tasks given by commander	Identifies tasks given by commander and intermediate tasks that could be done	Identifies tasks given by commander, intermediate tasks, and opportunity training

Comments:

_____
_____
_____

A Critical and Creative Thinker thoughtfully selects critical training objectives.

Relevant Performance Indicator:
PCR1.1: Range requirements

50. Does the Soldier choose the correct range given the weapons system being trained?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Resource Manager secures necessary assets.

Relevant Performance Indicator:
PCR 2: Develop Tentative Plan

☐ N/A
☐ N/O

51. Does the Soldier develop a tentative plan using the checklist as a guide?

1	2	3	4	5

Does not follow the checklist

Follows the checklist but fails to adjust to changing conditions

Follows the checklist and adapts to changing conditions

Comments:
_____
_____
_____

A Leader Developer guides the development of subordinates.

Relevant Performance Indicator:
PCR 2.1: Task Organization

52. Does the Soldier develop a complete task organization?

	Yes	*No*	*Not applicable*
OIC	☐	☐	☐
NCOIC	☐	☐	☐
Range safety officer	☐	☐	☐
Safeties on the firing lines	☐	☐	☐
Tower operator	☐	☐	☐
Ammo detail	☐	☐	☐
Radio operator	☐	☐	☐
Medic	☐	☐	☐
Road guards	☐	☐	☐
Armor repair	☐	☐	☐
Initial Briefer	☐	☐	☐

Primary/assistant instructors ☐ ☐ ☐

Other ☐ ☐ ☐

Comments:
_____
_____
_____

A Resource Manager distributes resources effectively.

Relevant Performance Indicator:
PCR 2.1.1: Number of key personnel

53. Does the Soldier have the sufficient number of key people needed to perform the task?
☐ Yes
☐ No
☐ N/A
☐ N/O
   a. If no, how does he solve the problem?

Comments:
_____
_____
_____

A Resource Manager distributes resources effectively.

Relevant Performance Indicator:
PCR 2.2: Timeline

54. Does the Soldier develop a comprehensive timeline?
☐ Yes
☐ No
☐ N/A
☐ N/O
   a. If no, how does he solve the problem?

Comments:
_____
_____
_____

A Resource Manager effectively manages time.

Relevant Performance Indicator:
PCR 2.3: Safety and risk assessment

☐ N/A
☐ N/O

55. Does the Soldier identify and address hazards and risks?

1	2	3	4	5
Does not identify hazards and risks		Identifies most hazards and risks but only implements minimal control measures		Identifies hazards and risks and implements appropriate control measures
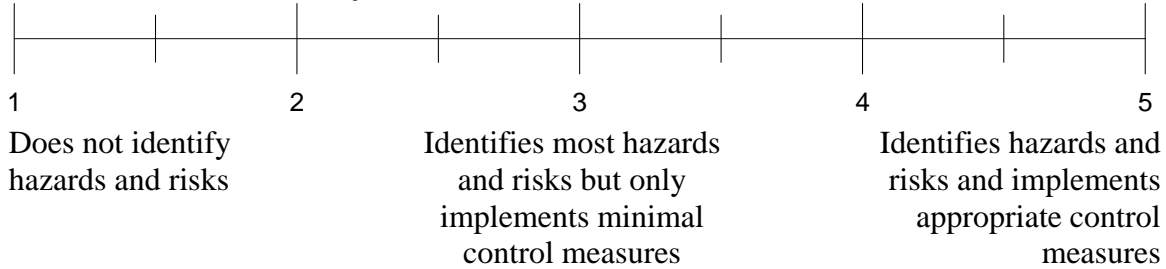
Comments:

_____
_____
_____

A Warrior Leader maximizes force protection.

Relevant Performance Indicator:
PCR 2.4: Identify contingency plans

56. Does the plan account for various contingencies?
☐ Yes
☐ No
☐ N/A
☐ N/O

    a. If yes, which contingency elements does it address:

Student performance ☐

Checkfire ☐

Range maintenance ☐

Weather ☐

Other ☐

Comments:

_____
_____
_____

A Critical and Creative Thinker adapts to changing conditions.

Relevant Performance Indicator:
PCR 2.5: Concurrent Training

57. Does the Soldier develop a concurrent training plan?
☐ N/A
☐ N/O

1	2	3	4	5
No concurrent training plan		Not comprehensive or not realistic or not relevant		Comprehensive, realistic, relevant training plan

Comments:

_____
_____
_____

A Critical and Creative Thinker achieves goals with available resources.

Relevant Performance Indicator:
PCR 2.6: Develop AAR plan

58. Does the Soldier develop an AAR plan that includes who, what, where, when, and how?
☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Leader Developer exploits lessons learned.

Relevant Performance Indicator:
PCR 2.7: Complete Plan & Issue order
PCR 3: Confirm resources required

59. Does the Soldier complete the plan?
☐ Yes
☐ No
☐ N/A
☐ N/O

60. Does the Soldier issue the order?

☐ Yes
☐ No
☐ N/A
☐ N/O

61. Does the Soldier confirm requested resources are available?

☐ Yes
☐ No
☐ N/A
☐ N/O

a. If resources were not available, does the Soldier make adjustments?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Resource Manager secures necessary assets and uses time effectively.

Relevant Performance Indicator:
PCR.4: Rehearse plan

☐ N/A
☐ N/O

62. Does the Soldier rehearse the training plan?

1	2	3	4	5
Conducts briefback only		Conducts a rock drill		Conducts full-fledged on-site rehearsal

Comments:

_____
_____
_____
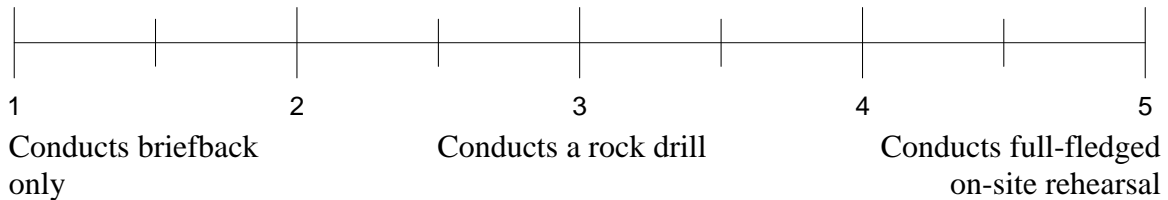
A Leader Developer is a competent trainer.

Relevant Performance Indicator:
PCR 5: Occupy the range

63. *Does the Soldier follow the plan for range occupation and setup prior to execution of training?*

☐ N/A
☐ N/O

1	2	3	4	5
Does not follow the plan		Follows the plan but fails to adjust to changing conditions		Follows the plan and adapts to changing conditions

Comments:

_____
_____
_____

☐ N/A
☐ N/O
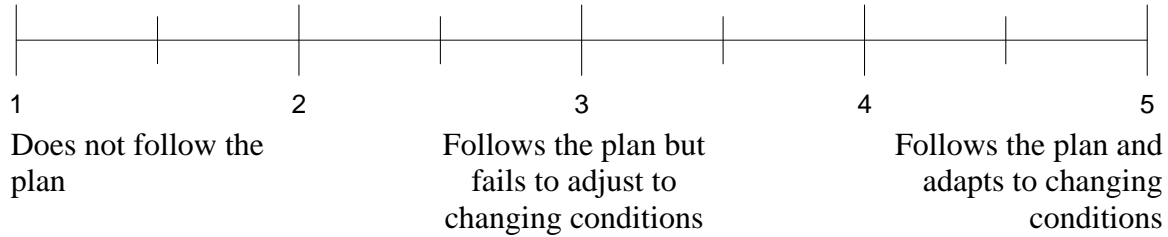
64. *Does the Soldier follow the plan for execution of training?*

1	2	3	4	5
Does not follow the plan		Follows the plan but fails to adjust to changing conditions		Follows the plan and adapts to changing conditions

Comments:

_____
_____
_____

☐ N/A
☐ N/O
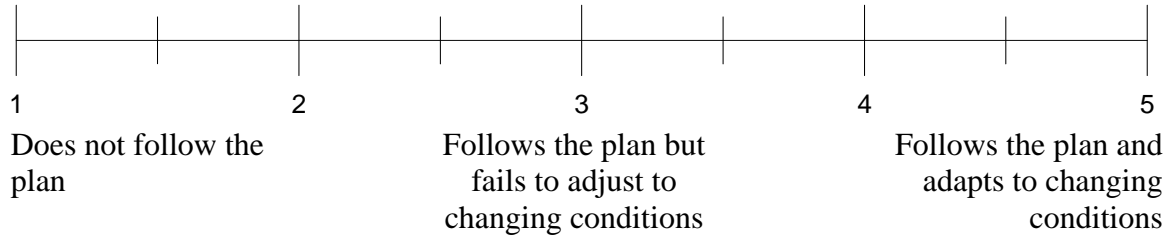
65. *Does the Soldier follow the plan for concurrent training?*

1	2	3	4	5
Does not follow the plan		Follows the plan but fails to adjust to changing conditions		Follows the plan and adapts to changing conditions
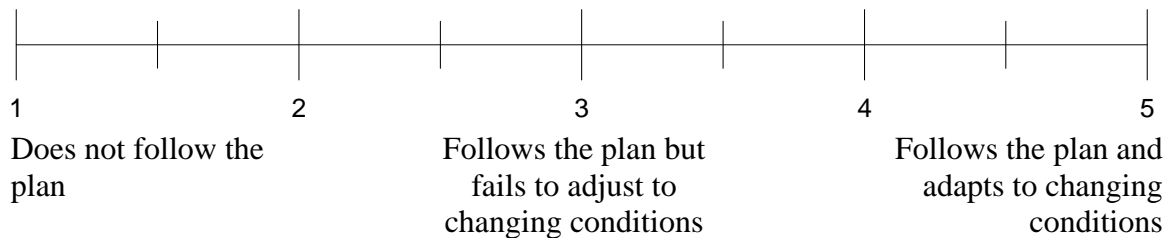
Comments:

_____
_____
_____

66. Does the Soldier follow the plan for recovery? ☐ N/A ☐ N/O

|—————————|—————————|—————————|—————————|
1　　　　　　　　　2　　　　　　　　　3　　　　　　　　　4　　　　　　　　　5

1		3		5
Does not follow the plan		Follows the plan but fails to adjust to changing conditions		Follows the plan and adapts to changing conditions

Comments:

_____
_____
_____
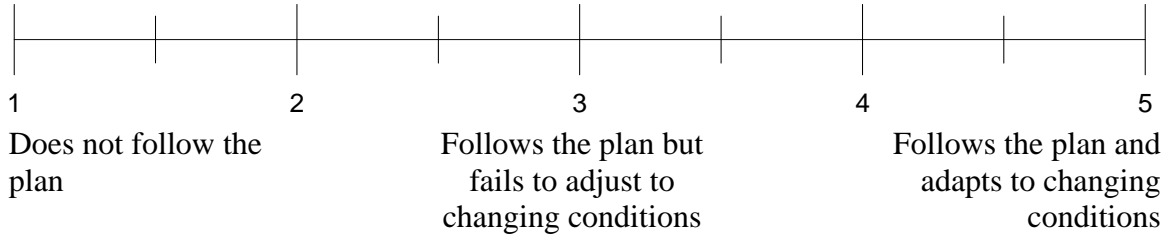
A Critical and Creative Thinker is a decisive, confident, and competent decision maker.

Relevant Performance Indicator:
PCR 5.1: Open the range
PCR 5.1.1: Establish key points

67. Does the Soldier properly open the range?
☐ Yes
☐ No
☐ N/A
☐ N/O

    a. If yes, does the Soldier:
        Alert range control of ready status ☐

        Get code to run ☐

Comments:

_____
_____
_____

A Resource Manager secures necessary assets and uses time effectively.

Relevant Performance Indicator:
PCR 6: Maintain Communications

68. Does the Soldier maintain comms throughout the exercise?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader is technically proficient.

Relevant Performance Indicator:
PCR 7: Conduct the range
PCR 7.1: Receive the unit

69. Is the Soldier prepared to receive the unit when they arrived?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader is technically proficient.

Relevant Performance Indicator:
PCR 7.2: Outline brief
PCR 7.2.1: Range safety brief
PCR 7.2.2: Orientation of range
PCR 7.2.3: Range layout

70. Does the Soldier give a range safety briefing?

☐ Yes
☐ No
☐ N/A
☐ N/O

a. If yes, does the Soldier address check fire procedures?

☐ Yes
☐ No
☐ N/A
☐ N/O

71. Does the Soldier provide an orientation of the range?

☐ Yes
☐ No
☐ N/A
☐ N/O

72. Does the Soldier provide a range layout?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader is technically proficient.

Relevant Performance Indicator:
PCR 7.3: Identify firing orders

73. Does the Soldier identify the firing orders?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Resource Manager effectively employs control measures.

Relevant Performance Indicator:
PCR 7.4: Establish/explain rotation schedule
PCR 7.4.1: Firing line
PCR 7.4.2: Weapons maintenance
PCR 7.4.3: Concurrent training
PCR 7.4.4: Remedial training

74. Does the Soldier establish the rotation schedule and explain it to the Soldiers?

- ☐ Yes
- ☐ No
- ☐ N/A
- ☐ N/O

Comments:

_____
_____
_____

A Resource Manager secures necessary assets and uses time effectively.

Relevant Performance Indicator:
PCR 8: Employment of contingencies if applicable
PCR 8.1: Weather
PCR 8.2: Maintain communications
PCR 8.3: Time
PCR 8.4: Resources
PCR 8.5: Fire downrange
PCR 8.6: Range maintenance
PCR 8.7: Aircraft

75. If applicable, does the Soldier develop employ appropriate contingencies?

	Yes	*No*	*Not applicable*
Weather	☐	☐	☐
Maintain communications	☐	☐	☐
Time	☐	☐	☐
Resources	☐	☐	☐
Fire downrange	☐	☐	☐
Range maintenance	☐	☐	☐

Aircraft   ☐   ☐   ☐

a. If applicable, how effectively did the Soldier execute the contingency plans?

|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 |
| Did not implement contingency plans | | Implemented with delay | | Implemented contingency plans immediately upon notification of event |

Comments:

_____
_____
_____

A Resource Manager secures necessary assets and uses time effectively.

Relevant Performance Indicator:
PCR 9: Evaluate performance measures
PCR 9.1:   Adjust conditions as required

76. Does the Soldier evaluate performance measures to determine if they are appropriately assessing student performance?

☐ Yes
☐ No
☐ N/A
☐ N/O

a.   If no, does the Soldier adjust conditions to help achieve the standard?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Leader Developer guides the development of subordinates.

Relevant Performance Indicator:
PCR 10: Close down range

77. Does the Soldier close down the range [go cold with the range]?

☐ Yes
☐ No
☐ N/A
☐ N/O

Comments:

_____
_____
_____

A Warrior Leader is technically proficient.

Relevant Performance Indicator:
PCR 11: Conduct AAR

78. Does the Soldier conduct an AAR?

☐ Yes
☐ No
☐ N/A
☐ N/O

a. If yes, does it address:

What was the task to be trained? ☐

What was the plan? ☐

What happened? ☐

What are we going to do better next time? ☐

b. If yes, does the Soldier engage the squad during the AAR?

1	2	3	4	5
Leader lectures squad on what they did wrong		Leader directed questions to specific Soldier		Leader asks probing questions, gets willing participation from Soldiers, and relates discussion to higher level objectives

Comments:

_____
_____
_____

A Critical and Creative Thinker challenges his subordinates intellectually.
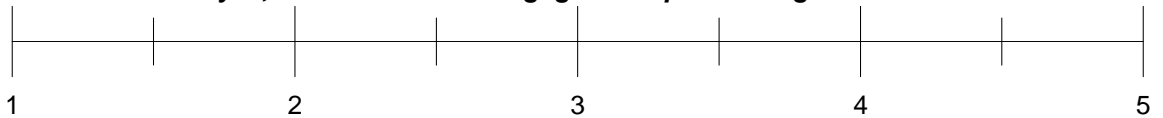
Relevant Performance Indicator:
PCR 12: Clear the range

☐ N/A
☐ N/O

79. Does the Soldier clear the range?

1	2	3	4	5
Failed to recover targetry, report discrepancies, report problems, and requires maintenance from range		Signed out, but did not have range control inspection, left residue on range		Released range, reported shortcoming with targetry and/or facilities, was cleared by range control personnel

Comments:

_____
_____
_____
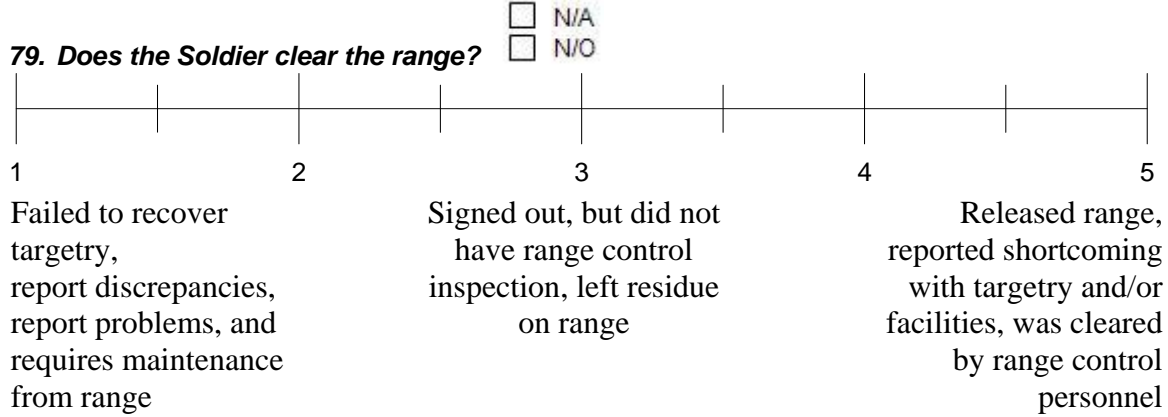
A Resource Manager maintains and sustains resources.

Appendix B: TLP/Orders Production Measures

Performance Measures for Operations Order

Note: Unless otherwise noted, measures are applicable to operations orders

1. Does the leader discuss the task organization?
   ☐ Yes
   ☐ No

OP 1: Situation (for small unit operations). Leaders need to know about the enemy's composition, disposition, strength, recent activities, ability to reinforce, and possible courses of action. Much of this information comes from higher headquarters. Additional information comes from adjacent units and other Army leaders. Some information comes from the leader's experience. Leaders also determine what they do not know about the enemy, but should. They identify these intelligence gaps to their higher headquarters or take action (such as sending out reconnaissance patrols) to obain the necessary information.

OP 1.1: Enemy forces

2. Does the PL state the Enemy situation?

1	2	3	4	5
Does not state the Enemy situation		States Enemy situation as it relates to the composition and disposition		States Enemy situation as it relates to composition, disposition, strength, recent activity, ability to reinforce and likely course of action
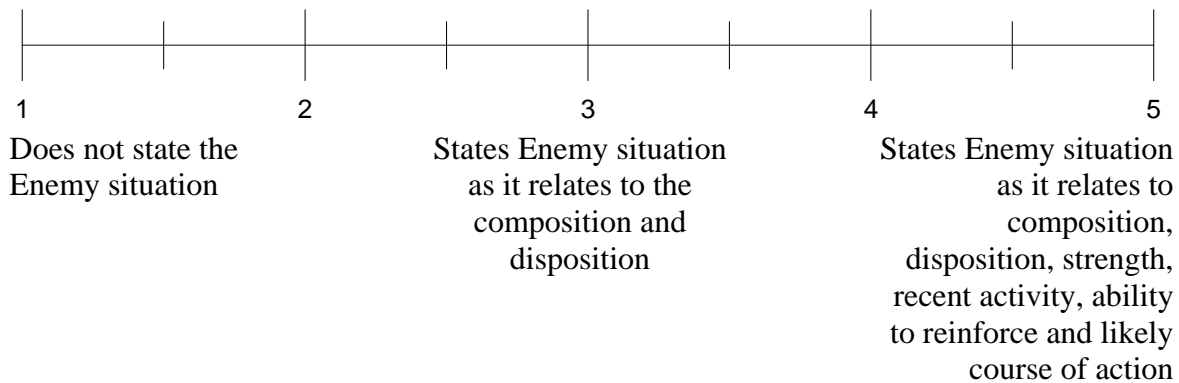
3. Does the PL provide relevant information on the Enemy?
   ☐ Yes
   ☐ No

   3a. What items were missed?

Identification of enemy	☐
Location/Disposition	☐
Activity	☐
Other	☐

Morale	☐
Strengths/Weakness	☐
Probable course of action	☐

OP 1.1.2: Friendly forces. Leaders know the status of their Soldiers' morale, their experience and training, and the strengths and weaknesses of subordinate leaders. They realistically determine all available resources. This includes troops attached to, or in direct support of the unit. The assessment includes knowing the strength and status of Soldiers and their equipment. It also includes understanding the full array of assets in support of the unit. Leaders know, for example, how much indirect fire, by type, is available and when it will become available. They consider any new limitations based on level of training or recent fighting.

4.   Does the PL state the Friendly situation?

1	2	3	4	5
Does not state the Friendly situation		States Friendly situation as it relates to the Platoon		States Friendly situation as it relates to the Platoon but also to Company and the Battalion
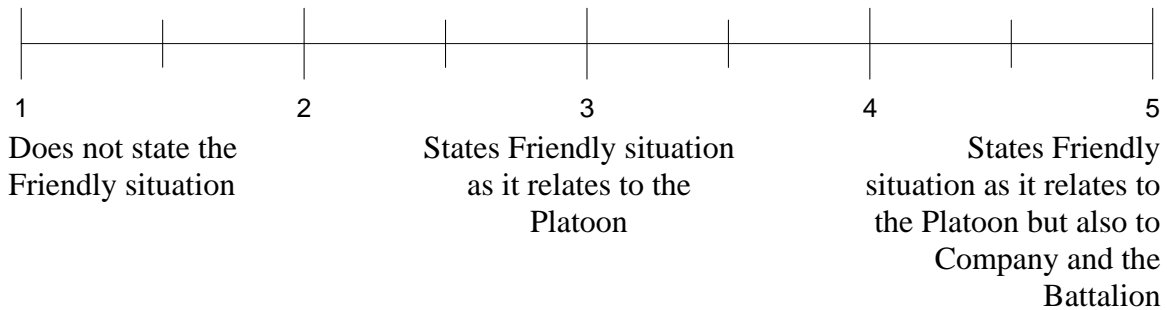
   4a.   *What items were missed?*

Mission and concept of next higher	☐
Location and actions of units on left, right, front, rear and effects	☐
Units providing fire support	☐
Attachments and detachments	☐

5.   Does the PL do analysis using AOKOC and ASCOPE?
   ☐ Yes
   ☐ No

5a.   What items were missed?

Terrain (OAKOC)	
Obstacles	☐
Avenues of approach	☐
Key terrain	☐
Observation and fields of fire	☐
Cover and Concealment	☐

ASCOPE. Civil considerations of how - 1) man-made infrastructure, 2) civilian institutions, 3) attitudes and activities of the civilian leaders 4) populations and organizations within an area of operation - influence the conduct of military operations. Most of the time, units are surrounded by noncombatants. These noncombatants include residents of the AO, local officials, and governmental and nongovernmental organizations (NGOs). Based on information from higher headquarters and their own knowledge and judgment, leaders identify civil considerations that affect their mission.

5b. What items were missed?

Civil Considerations (*ASCOPE)*	
Areas	☐
Structures	☐
Organizations	☐
People	☐
Events	☐

6. Does the PL provide weather and light data?
☐ Yes
☐ No

6a.　　　　What items were missed?

Weather	
Visibility	☐
Wind speed and direction	☐
Precipitation	☐
Cloud cover	☐
Temperature/ humidity	☐
Light Data	
Sunrise/Sunset	☐
Moonrise/Moonset	☐
Moon phase	☐
% Illumination	☐
BMNT/EENT	☐
Effects on enemy and friendly forces	☐

OP 2: Mission. The mission statement is a simple concise expression of the 1) essential tasks the unit must accomplish and 2) the purpose to be achieved. The mission statement includes: who (the unit), what (the task), when (either critical time or on order), where (location), and why (the purpose of the operation). The leader states mission statement twice!

OP 2.1: State 5 W's

7. Does the PL state the mission statement using the 5 W's at the Platoon level using doctrinally correct terms?

    ☐ Yes
    ☐ No

      7a. What items were missed?

Who	☐
What	☐
When	☐
Where	☐
Why	☐
Doctrinally correct terms	☐
Mission Statement stated twice	☐

OP.3: Execution

*OP.3.1: Commander's intent. Commander's intent gives the commander a means of indirect control of subordinate elements during execution. It must be understood and remembered by subordinates two echelons down. In the absence of orders, the commander's intent, coupled with the mission statement, directs subordinates toward mission accomplishment. When opportunities appear, subordinates use the commander's intent to decide whether and how to exploit them. Therefore, **brevity and clarity** in writing the commander's intent is key. The commander's intent can be in narrative of bullet form; it normally does not exceed five sentences.*

8. Does the PL state the Commander's Intent?

```
|----+----|----+----|----+----|----+----|
1         2         3         4         5
Does not state      States Cdr's Intent,     States Cdr's Intent,
Cdr's Intent        specific task and        specific task and
                    purpose                  purpose and the
                                             relationship of the task
                                             to other elements.
                                             Repeats important
```
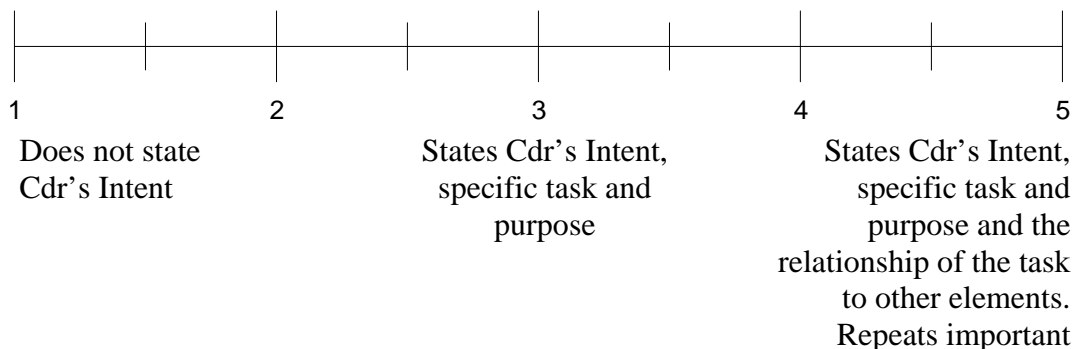
OP 2.3.2: Concept of Operations (CONOPS). The concept of the operations describes how the leader envisions the operation unfolding from its start to its conclusion or end state. He determines how accomplishing each task leads to executing the next. He identifies the best way to use available terrain and how best to employ unit strengths against enemy weaknesses. Fire support considerations make up an important part of the concept of operations. Even if fires are only executed in case of emergency, he keeps in mind the relationship between maneuver and fires. Leaders develop the graphic control measures necessary to convey and enhance the understanding of the concept of operations, prevent fratricide, and clarify the tasks and purposes of the decisive and shaping actions.) As a minimum, the concept of the operations includes the scheme of maneuver and concept of fires. If required for complex operations, the leader will address the role of ISR, Intelligence, Engineer, Air and Missile Defense, Information Operations, NBC, MP, and Civil-Military Operations.

9. Does the PL state the *Concept of Operations (CONOPS)*?
   - ☐ Yes
   - ☐ No

9a. What items were missed?

Operation unfolding from start to end state	☐
How accomplishing each task leads to executing next task	☐
How to best use the terrain and how best to employ unit strengths against weaknesses	☐
Fire support consideration	☐
Graphics to enhance understanding of CONOPS, prevents fratricide, and clarify tasks and purposes of the decisive and shaping actions	☐

Maneuver (discussion point). The maneuver paragraph should address, in detail, the mechanics of the operation. Specifically, it should address all subordinate units and attachments by name, giving each its mission in the form of task and purpose. The main effort must be designated and all other subordinates missions must relate to the main effort. Actions on the objective will comprise the majority of this paragraph and therefore could address the plan for actions on the objective, engagement/disengagement criteria, an alternate plan in the event of compromise or unplanned movement of enemy forces, and a withdrawal plan. A plan for dissemination of information and where the unit will assemble after the mission may also be stated. The trainees should use a sketch, terrain model, or overlay as they address the scheme of maneuver. It is imperative that the concept defines the relationship of each subordinate unit, and that the concept is clearly understood.

10. Does the platoon leader address in detail the mechanics of the operation?

```
  |----+----|----+----|----+----|----+----|----+----|
  1         2         3         4         5
```

1		3		5
Does not address the mechanics in detail		Addresses the mechanics of the operation but the concept not clearly understood		Addresses the mechanics of the operation in detail and the concept is clearly understood
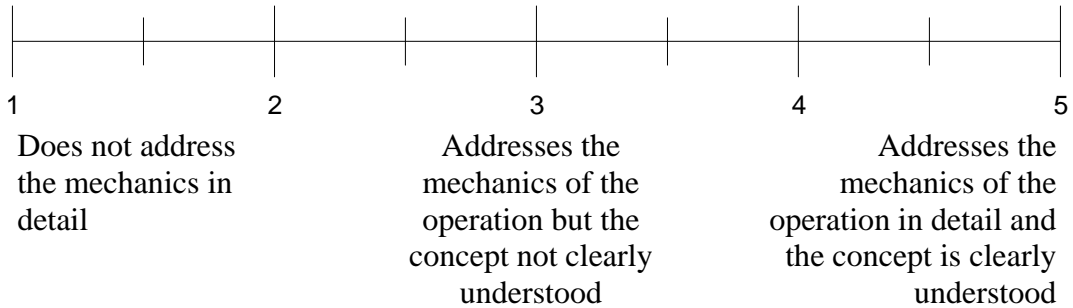
10a. What items were omitted?

Maneuver	
Assigns Squads/attachments missions by name and states their task & purpose	☐
Designates main effort and supporting effort	☐
Engagement and disengagement criteria	☐
Alternate plan in event of compromise	☐
Uses sketch, terrain model or overlay	☐
Concept defines relationship of each squad	☐
Plan for dissemination of information and where unit will assemble upon completion of mission	☐
Concept is clearly understood	☐

Fires (discussion point). This paragraph should describe how the leader intends for the fires (Close Air, Field Artillery, Naval Gun Fire, and the Fire Support Coordination Measures) to support his maneuver (much like a "scheme" of fire support). It should state the purpose to be achieved by the fires, the priority of fires, the allocation of any priority targets, and any restrictive control measures on the use of fire. A target list should be referenced here, if applicable. Specific targets should be discussed and pointed out on the terrain model.

11. Does the leader describe how he intends to use fires to support his maneuver?

```
  |----+----|----+----|----+----|----+----|----+----|
  1         2         3         4         5
```
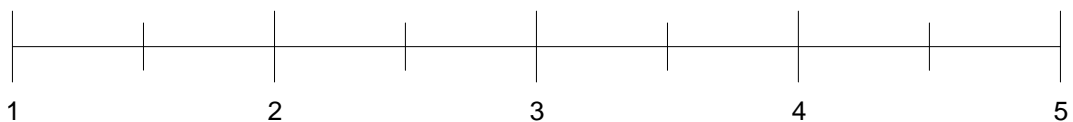
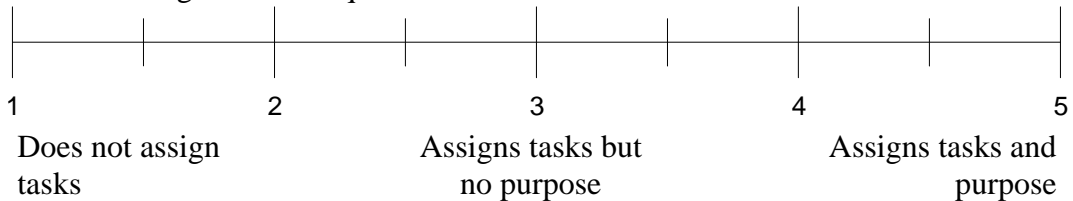| Does not address the use of fires	Addresses the use of fires but does not state purpose to be achieved	Addresses the use of fires, purpose to be achieved, priority of fires and restrictive control measures

11a. What items were omitted?

Fires	
Shares purpose to be achieved by fires	☐
Priority of fires	☐
Allocation of priority targets	☐
Restrictive control measure on the use of fires	☐
References target list and overlay	☐
Discusses specific targets and points out on terrain model	☐

OP 2.3.3: Task to Maneuver Units (discussion point). In this paragraph, trainees should specify those tasks not discussed in the concept of the operation. Each subordinate unit will have a separate paragraph and the reserve should be addressed last. Tasks or information common to two or more subunits should be addressed in coordinating instructions.

12. Does the PL assign tasks to Squads?

```
    |----|----|----|----|----|----|----|----|
    1         2         3         4         5
Does not assign      Assigns tasks but     Assigns tasks and
tasks                no purpose            purpose
```

12a. What tasks were missed?

Specify tasks and purpose not addressed above for all units	
Recon & security	☐
Assault	☐
Support	☐
Security	☐
Aid & litter	☐
EPW & search	☐
Clearing	☐
Demolition	☐

13. Does the PL assign tasks to the attached /OPCON Combat Support elements?

```
|-----|-----|-----|-----|-----|-----|-----|-----|
1           2           3           4           5
Does not assign       Assigns tasks but      Assigns tasks and
tasks                 no purpose             purpose
```
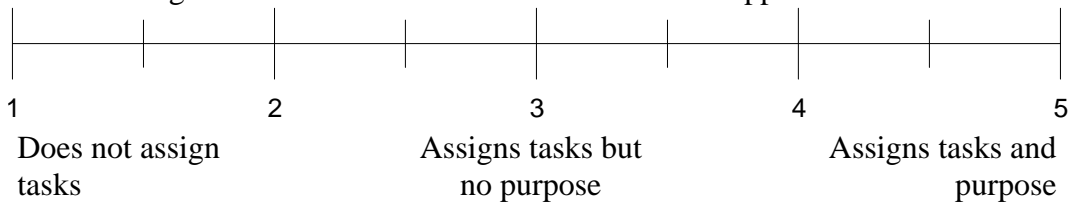
13a. Which Combat Support elements were omitted?

Mortars	☐
Artillery	☐
Engineers	☐
ADA	☐

OP 2.3.5: Coordinating instructions (discussion point) this paragraph should list the details of coordination and control applicable to two or more subunits. These also may have been assigned by higher or required by the COA developed by the leader. If they do not apply to all units, the trainees should clearly state those units that must comply.

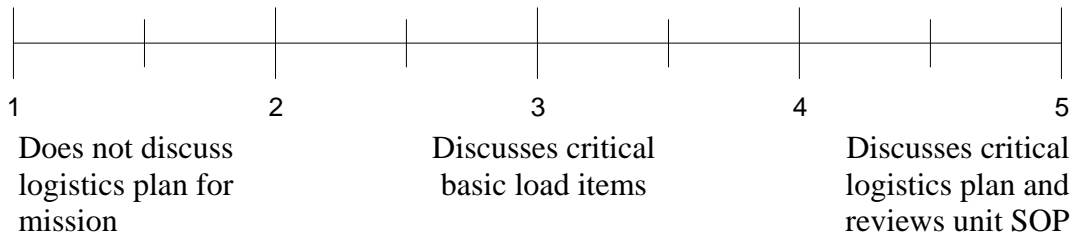14. Does the PL issue appropriate coordinating instructions?

☐ Yes
☐ No

14a. What items were missed?

Time or condition when the order becomes effective	☐
CCIR (PIR, FFIR)	☐
Risk reduction control measures	☐
Rules of engagement	☐
Environmental considerations	☐
Force protection	☐
Issue timeline	☐
Order of movement	☐
Actions at halts	☐
Departure and reentry of friendly lines	☐
Rally points and actions at rally points	☐
Actions at danger areas	☐
Actions on enemy contact	☐
Reorganization and consolidation instructions (other than SOP items)	☐
Fire distribution measures: point fires vs. area fire	☐
Fire control measures	☐
MOPP Level	☐
Troop safety and operational exposure guidance	☐
Debriefing requirements	☐
Reports	☐

OP 2.4: Service and support (discussion point). This paragraph provides the critical logistical information required to sustain the unit during the operation. Also included are combat service support instructions and arrangements to support the operations. (The timeline is important! Does the leader discuss the logistical plan for Class I, III, IV, V, Medical and Maintenance item? Does he establish / review casualty collection and EPW SOP?)

15. Does paragraph 4 provided the critical logistical information required?

1	2	3	4	5
Does not discuss logistics plan for mission		Discusses critical basic load items		Discusses critical logistics plan and reviews unit SOP

15a. What items were missed?

General Information	
SOPs in effect for sustainment operations	☐
Current and proposed trains/re-supply/cache points	☐
Casualty and damaged equipment	☐
Special instructions to medical personnel	☐
Material and Services	
Supply	
Class I (rations)	☐
Class III (fuel)	☐
Class IV (construction/barrier material)	☐
Class V (ammunition)	☐
Class VII (major end items)	☐
Class VIII (medical)	☐

Class IX (repair parts)	☐
Miscellaneous (water, salvage. captured material)	☐
Transportation	☐
Services (laundry, showers)	☐
Maintenance (weapons and equipment)	☐
Medical evacuation (Method of evacuating dead and wounded, friendly and enemy. Include priorities)	☐
Personnel (Method of handling EPWs and designation of EPW collection point	☐
Miscellaneous: Special equipment, Captured equipment	☐

OP 2.5: Command and signal (discussion point). This paragraph should state where command and control facilities and key leaders will be located during the operation. It should also cover the SOI in effect, methods of communication in priority, challenge and password, number combination, running password in effect. Finally, it should review unit signal SOPs.

16. Does the PL establish Chain of Command?

```
    |----|----|----|----|----|----|----|----|
    1         2         3         4         5
Does not mention    Establishes/reviews   Establishes/reviews
                    Chain of Command      Chain of Command
                                          and informs of
                                          location during
                                          movement and
                                          actions on the
                                          objective
```
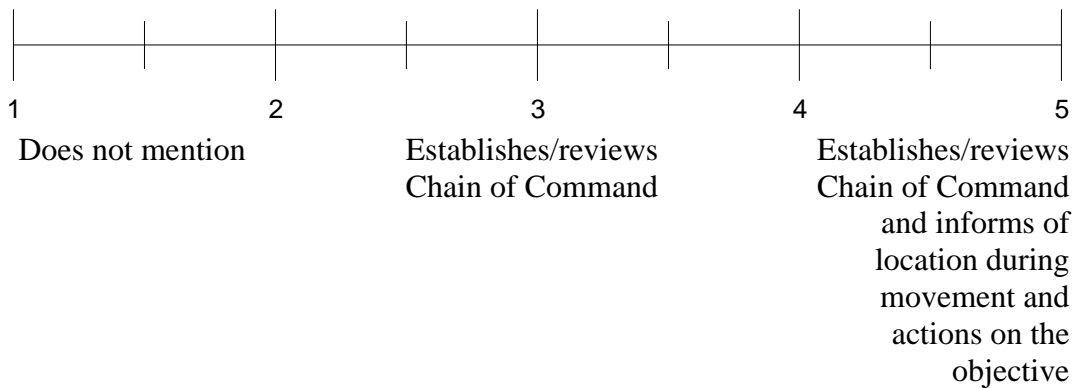
16a. What items were missed?

Command	
Location of higher unit commander and CP	☐
Location of key personnel (PL, PSG, SL's & CP during each phase)	☐
Succession of Command	☐
Adjustments to unit SOP	☐
Signal	
SOI in effect	☐
Methods of communication in priority (P-A-C-E)	☐
Pyrotechnics and signals, to include arm and hand signals	☐
Code words	☐
Challenge and password (behind friendly lines)	☐
Number combination (forward of friendly lines)	☐
Running password	☐
Special instructions to RTOs	☐

ATTACHMENTS (Annexes, Appendixes, Tabs, and Enclosures) (discussion point)

Attachments contain details not readily incorporated into the base order or a higher-level attachment: appendixes contain information necessary to expand annexes. Tabs expand appendixes; enclosures expand tabs. Prepare attachments in the form that best portrays the information, for example, text, a matrix, a trace, an overlay, an overprinted map, a sketch, a plan, a graph, or a table.

The number and type of attachments depend on the commander and level of command, needs of the particular operation, and complexity of the functional area addressed. Minimize the number of attachments to keep consistent with completeness and clarity. If the information relating to an attachment's subject is brief enough to be placed in the base order or the higher- level attachment place it there and omit the attachment

Appendix C: Intent for Outcomes-Based Training and Education

Purpose

Develop high quality Army leaders and Soldiers by allowing subordinates maximum latitude to exercise individual and small-unit initiative. This requires a climate of trust in the abilities of superior and subordinate alike. It also requires leaders at every level to think and act flexibly, constantly adapting to the situation.

Key Tasks

- Facilitate Through Development of Training Plan

    o To achieve desired outcomes irrespective of resources

    o Including measures of "effectiveness" irrespective of resources

- Advise and Mentor During Execution

    o Assist the Soldier to <u>understand the situation</u> and desired result

    o Assist the Soldier in <u>identifying obstacles</u> to the desired result

    o Allow the Soldier to <u>work towards solution</u> within defined principles

    o Draw out of the Soldier <u>critique of performance</u> during the process

    o Demonstrate the <u>linking of tasks</u> in military situation

End States

- Trainee is a proud team member possessing the character and commitment to live the Army Values and Warrior Ethos

- Trainee's behavior reflects confidence, accountability, initiative, awareness, discipline, judgment, and deliberate thought

- Trainee masters critical combat skills and is proficient in basic Soldier skills in all environments

Warrior Attributes	OBTE Intangibles	Pentathlete	Motivation
Persevere	Confidence	Warrior Leader	Competence
Sense of Calling	Accountability	Leader Developer	Relatedness
Depend on Others	Awareness	Ambassador	
Responsible	Discipline	Resource Manager	
Adaptable	Initiative	Critical/Creative Thinker	Autonomy
Prioritize	Judgment		
Make Tradeoffs	Deliberate Thought		

Appendix D: A Framework for OBTE Workshops

	Format	Enabling Learning Objective	Mini-Lecture	Inputs	Collaborative Problem-Based Discussion	Outputs	Terminal Learning Objective	Expected Gaps & Shortcomings
Day 1 Session 1	Instructor-led discussion	Understand Influence: Intangibles	Developmental objectives: Intangibles	Multifaceted Vignette #1 emphasizing impact on student	Retrospective: Reflect on experiences in CATC/OBTE	Recollections about influence of the course on students	Understand what instructors should do to implement OBTE	Recall effect without understanding cause-effect relationship
Day 1 Session 2	Instructor-led discussion	Understand Instructor Behavior	Principles of Instruction: Performance Indicators	Multifaceted Vignette #2 emphasizing cause-effect relationship	Retrospective: Reflect on experiences in CATC/OBTE	Recollections about instructor behavior that was impressive and influential	Understand what instructors should do to implement OBTE	Too much focus on particular techniques as the solution
Day 1 Session 3	Break-out Groups	Understand Instructor Behavior	Generality & adaptability across contexts	Intent: influence intangibles in BNCOC setting	Prospective: Consider future experience in BNCOC Marskmanship	Variations on vignette #1-2: problem solving about BNCOC frictions	Understand what instructors should do to implement OBTE	Don't get SGL influence on context (e.g., how SGL can overcome frictions)
Day 1 Session 4	Break-out Groups	Understand Influence: Intangibles	Measures with anchors (better/worse)	Intent: Assess SGL Behavior in BNCOC setting	Prospective: Consider future experience in BNCOC Marskmanship	Variations on vignette #1-2: problem solving about BNCOC frictions	Understand what instructors should do to implement OBTE	Don't get generality of approach
Day 2 Session 5	Instructor-led discussion	Understand Influence: Intangibles	Developmental objectives: Intangibles	Multifaceted Vignette #5 emphasizing impact on student	Prospective: Consider Land Navigation as application of OBTE	Similarity of intangibles between markshmanship and Land Nav	Understand what instructors should do to implement OBTE	Recall effect without understanding cause-effect relationship
Day 2 Session 6	Instructor-led discussion	Understand Instructor Behavior	Principles of Instruction: Performance Indicators	Multifaceted Vignette #6 emphasizing cause-effect relationship	Prospective: Consider Land Navigation as application of OBTE	Similarity of instruction between marksmanship and Land Nav	Understand what instructors should do to implement OBTE	Too much focus on particular techniques as the solution
Day 2 Session 7	Break-out Groups	Understand Instructor Behavior	Generality & adaptability across contexts	Intent: influence intangibles in BNCOC	Prospective: Consider OBTE in BNCOC Land Navigation	Variations on vignette #5-6: problem solving about BNCOC frictions	Understand what instructors should do to implement OBTE	Don't get SGL influence on context (e.g., how SGL can overcome frictions)
Day 2 Session 8	Break-out Groups	Understand Influence: Intangibles	Measures with anchors (better/worse)	Intent: Assess SGL Behavior in BNCOC	Prospective: Consider OBTE in BNCOC Land Navigation	Variations on vignette #5-6: problem solving about BNCOC frictions	Understand what instructors should do to implement OBTE	Need refresher and opportunities for peer-to-peer instructor collaboration

Appendix E: OBTE Workshop: Vignette #1 in Context

This appendix presents a sample vignette in the context of its use in a workshop to help instructors connect their personal experience with instructor role models with their own approach to instruction. The context is the first session in a workshop that includes a number of sessions that build on each other and systematically provide a deeper understanding of a principled approach to instruction.

Session 1: Collaborative Reflection about Influence of OBTE

Terminal Learning Objective (TLO): Understand OBTE

The TLO is the same for all sessions in the workshop, to understand what instructors can and should do to implement Outcomes Based Training and Education (OBTE).[1]

Enabling Learning Objective (ELO): Instructor Influence on Intangibles

The ELO are similar for all sessions in the workshop, to guide student reflection on their experiences in the OBTE-based field course in marksmanship in a way that helps them get more out of that experience and a deeper understanding of OBTE. In session 1, the ELO will focus on a deeper understanding of an instructor's influence on the development of intangibles in students.

Mini-Lecture: Intangibles as Developmental Outcomes

The workshop leader/facilitator will begin each session with a mini-lecture (15 minutes) that provides a focus for discussion.[2] In session 1, the mini-lecture will be on intangibles such as confidence, initiative, and accountability as developmental outcomes.[3] This lecture will set up a discussion about a vignette that gives some examples of an instructor's intent and approach to influencing intangibles.

Vignette 1: Instructor's Awareness and Understanding of Students

In this vignette, we describe a set of instructional events from an instructor's perspective. The instructor describes his thoughts and actions during an instructional event with emphasis on its influence on students. An OBTE oriented instructor should be thinking and doing these kinds of things but not necessarily the exact things described in the vignette:

After a slow start on Monday, today is proceeding much better. No matter how hard we try, it always seems that the Army has a hard time getting to the range on Monday morning. Fortunately, we frontloaded a few classes that did not require ammunition so my fellow instructor could give the functions and maintenance class and also the safety class while I called everyone on post to find our ammo.[4] Training was not disrupted because the rounds got here before lunch. I will highlight this to the students when we do our After Action Review. It's important to plan for contingencies to make the most out of our time out here. We don't want to waste time for two reasons. The first is that we're trying to teach folks a bunch of stuff in a short

period of time. The other reason is that wasting time demotivates everybody and that affects how much effort the students put into the training. Soldiers don't like having their time wasted.

So far, we've zeroed at 25 meters so that everyone could get comfortable with the fundamentals of marksmanship. Then we talked about the minutes of angle so that everyone has the ability to adjust their weapon correctly when we move away from a target that doesn't have all of the directions to zero written on it. I'm pretty sure the students understand the concept, but they need to practice applying it so that it really sinks in and they're able to do it irrespective of the conditions. They shot at 100m yesterday and were making good progress applying the fundamentals. The shot groups were getting smaller and the scores were going up. We called it a day when performance started to decline—both instructors and students agreed that the shooters were getting tired. Monitoring how the student is doing helps build their confidence (e.g. don't let them keep shooting to the point where declining performance reduces their confidence). Also, focusing on the student and asking him how he feels is a way of relating to the student and that he cares about what the student thinks.[5]

This morning we shot a few strings at 100m to pick up where we left off. We then talked about different shooting positions, and how they still relate to the fundamentals. Stability is the important thing, and because everybody is just a little bit different, they each have to figure out what makes them the most stable. We practiced some drills in the different positions, and as soon as they started to get it, we went on to the next drill. The idea is to get them close to enough to where they think they would get it if they just had time to practice more. Hopefully, it will provide them with motivation to get out to the range as soon as they can when they're back in their unit and continue practice.[6]

"Ok guys, you're doing well with the different positions, and everybody seems to be getting comfortable with shooting while on the clock. We're going to have a quick talk about the 200m zero, and then we'll move back to the 200 meter line and do some grouping exercises from there."

In the class, we talked about the benefits of the 200 meter zero as compared to the 300 meter zero that the Army normally uses. While there are several tactical advantages, it was really important to get the students to realize and accept those advantages. The 200 meter zero allows the shooter to keep the same point of aim for all targets out to 300 meters, whereas the 300 meter zero requires the shooter to adjust their point of aim based on the distance to the target. And because range estimation is difficult in the first place, let alone in a firefight, keeping the same point of aim simplifies combat marksmanship. Most seemed to see the benefits, and we headed back out to the firing line. I made a special effort to give them this technical information in easily digestible and operationally relevant context. Those who want to understand it because they realize that it will help them as a Soldier will be much more motivated than those who simply want to complete the training because the First Sergeant told them to go to the range.[7]

Toward the end of the class, one student asked, "So what's the standard for this exercise?"

"Well, what do you think it should be?" I asked him. In actuality, I had some good ideas, but I wanted him to actually think about it.

"I think that we should have all the shots within the seven circle."

"Ok, so what's that get you? If a guy were standing 200 meters away wearing a shirt that had a target painted on it, and you hit him in the six circle, would he feel it? Probably. How far away is the enemy in the typical firefight in Iraq?"

"Less than 200 meters, but in Afghanistan they can happen from one ridgeline to another. Things can get pretty spread out there."

"You're right. Often the fights move outside of the effective range of the M4, right? So we might not be training with the best weapon for Afghanistan. But we have to make do with the equipment we have. Do you think that anything we are doing here would transfer to another weapon, like an M14?"

"Yes."

"Yeah, I think so too. So seeing as we might be going to Iraq or Afghanistan, it might make more sense to get as good as we can with marksmanship, and then practice the more specific skills when we're getting ready to deploy. So again, what do you think the standard should be?"

"I see where you're coming from. Maybe it shouldn't be an absolute, but more of a measure of improvement. So if a guy wasn't hitting the paper at all before, and is doing it now, that's good. If a different guy was all over the paper and is now shooting tight groups, that's better, but it's not like the first guy is now worthless. He got better too!"

"Yep, you got it. If you keep trying to get better, the standards will get surpassed sooner or later. Then you'll find yourself making a new, harder standard."

Guided Discussion Using the Vignette

The workshop leader/facilitator will stimulate discussion by eliciting examples from the workshop participants about their experiences in the OBTE marksmanship course that are reminiscent of particular moments in the vignette. Discussion will focus on what the participant thought at the time of the event, how it made them feel, how it may have influenced what they experienced later in the marksmanship course, and how it may have influenced them after the course. Participants will be encouraged to compare and contrast their respective thoughts and experiences. The intent of this discussion is to help the student remember their experience in the deeper and fuller context of a better understanding of OBTE.[8] The length of discussion will vary (30 to 45 minutes) depending on the amount of time available for the workshop and the number of sessions the leader/facilitator decides to use. Collaborative discussion about in-stride adjustments in session length and number is encouraged.

Expected Gaps and Shortcomings

It is expected that, in session 1, participants will be able to recall significant and meaningful moments in the OBTE marksmanship course that can be discussed in terms of intangibles such

as confidence, initiative, and accountability. At the same time, participants probably will have a difficult time understanding the intent of instructor and how particular actions of the instructor influenced the development of intangibles. If so, this can be addressed in Session 2, for example, by focusing that discussion on instructor behavior that can be modeled and replicated.

Participants will be able to revisit and elaborate on prior discussion points in subsequent discussions that focus on related issues in OBTE and its application to their own Program of Instruction. In this respect, gaps and shortcomings from one discussion session should influence the focus of discussion in subsequent discussions. Again, in-stride adjustments are encouraged given that observed gaps and shortcomings may be different from expectations.

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Endnotes – Appendix E

[1] OBTE is an approach developed by the Asymmetric Warfare Group (AWG) based on the experience of Special Operations personnel (Asymmetric Warfare Group, 2008). It been applied successfully to several programs of training and education in the conventional Army (e.g., Cox, 2008; Currey, 2008; Tice, 2008).

[2] This format is consistent with a problem-based method of instruction (Savory & Duffy, 1995) or could be otherwise be adapted for it. The key is that the problem for discussion should relate directly to essential concepts of OBTE and, in doing so, should be at a level of detail that provides useful examples of specific things an instructor can do to implement OBTE (Asymmetric Warfare Group, in preparation; Riccio & Darwin, 2008).

[3] OBTE is more general than a particular method of instruction or a fixed set of instructional techniques. It is an *approach* to training and education that focuses on the *development of the individual* in relation to basic needs of the individual as well as associated cultural values and objectives of the individual's occupation. OBTE is based on the recognition that competent and confidant Soldiers are developed when leaders allow subordinates reasonable autonomy to exercise individual and small-unit initiative. This requires a climate of accountability that is fostered by mutual trust among superiors and subordinates. It also requires that leaders at every level act as role models by thinking and acting flexibly based on constant awareness and adjustment to deviations from optimal or expected conditions in any situation (Asymmetric Warfare Group, in preparation).

[4] OBT&E Key Task: Develop a training plan and measures of effectiveness to achieve desired outcomes irrespective of resources or resource restraints (Riccio & Darwin, 2008)

[5] Monitoring how the student helps build confidence that is based in the student's perception of his own competence (e.g. don't let them keep shooting to the point where declining performance reduces their confidence). Focusing on the student and asking him how he feels also is a way of relating to the student and that student learning is their common task. By implying that the student's thoughts count, the instructor demonstrates that he cares about what the student thinks which helps the student take ownership of his own learning. See Deci & Ryan (2008) and Guay, Ratelle, & Chanal (2008) for scientific underpinnings of the related concepts of competence, relatedness, and autonomy and their role in motivation.

[6] According to OBTE, *pursuit of mastery* contributes to the development of intangibles such as confidence, accountability and initiative, but it also is fostered by development of these intangibles. OBTE promises to develop deep understanding and habits of learning that help Soldiers in novel situations (Asymmetric Warfare Group, in preparation; Riccio & Darwin, 2008).

[7] Individuals can find sources of motivation that range from doing only what one wants to do to doing only what one is told. Environments can be structured in ways that help individuals internalize sources of motivation instead of being reluctantly driven by external sources of motivation; that is, individuals develop an interest in an environment by helping them understand the importance of outcomes that are fostered by their participation in that environment (Gagne & Deci, 2005).

[8] This serves two purposes. It helps guide the activity of remembering in which prior events are interpreted and in which meaning of the events is actively reconstructed with respect one's current capabilities for knowing and interacting with the world (Neisser & Hyman, 2000). It also helps participants in the discussion take ownership of their own learning and teaching (Magolda, 1999). In the context of OBTE and instructor education, these are tightly interwoven cognitive and social activities.

Appendix F: OBTE Workshop: Vignette #2 in Context

This appendix presents a sample vignette in the context of its use in a workshop to help instructors connect their personal experience with instructor role models with their own approach to instruction. The context is the second session in a workshop that includes a number of sessions that build on each other and systematically provide a deeper understanding of a principled approach to instruction.

Session 2: Collaborative Reflection about Instructor Behavior

Terminal Learning Objective (TLO): Understand OBTE

The TLO is the same for all sessions in the workshop, to understand what instructors can and should do to implement Outcomes Based Training and Education (OBTE).[1]

Enabling Learning Objective (ELO): Understand Instructor Behavior

The ELO are similar for all sessions in the workshop, to guide student reflection on their experiences in the OBTE-based field course in marksmanship in a way that helps them get more out of that experience and a deeper understanding of OBTE. In session 2, the ELO will focus on a deeper understanding of the behavior of instructor through which he can influence the development of intangibles in students.

Mini-Lecture: Principles of Instruction

The workshop leader/facilitator will begin each session with a mini-lecture (15 minutes) that provides a focus for discussion.[2] In session 2, the mini-lecture will be on principles of instruction such as: (a) grow problem solving, (b) develop intangibles, (c) increase understanding, (d) increase deliberate thought, and (e) improve combat performance.[3] This lecture will set up a discussion about a vignette that gives some examples of an instructor's approach to interacting with students. Examples will be drawn from the *performance indicates* that were developed with experienced OBTE instructors.[4]

Vignette 2: Instructor Behavior Consistent with OBTE
In this vignette, we describe a set of instructional events from an instructor's perspective. The instructor describes his thoughts and actions during an instructional event with emphasis on his interactions with students. An OBTE oriented instructor should be thinking and doing these kinds of things but not necessarily the exact things described in the vignette:

We've been shooting at 200 meters for a while now. The students are getting a handle on how the minute of angle has an effect on the weapon when they're further from the target. A lot of guys' shot groups jumped from one side of the bull's-eye to the other. I could have told them that they should half their corrections as compared to 100 meters, but sometimes it's just better for them to see it. I gave a few guys a hint. Some got it, and some didn't. As I walked my part of the line, I noticed that enough guys understood it, and I overheard them re-explaining it to

their buddies.[5] That's progress. We've got the time and the bullets, so it's better to let them figure it out on their own for a bit.

We're about to go to the next exercise, where the students will shoot from the 200 meter, 150 meter, 100 meter, and 50 meter in each of the four positions. The students are going to be thinking about applying the fundamentals and where to aim on the target. Because of the 200 meter zero, they should aim a little higher when they're at 50 meters, just to keep those rounds on the center of mass. Once we're done with the four strings, I'll ask to see who remembered to do that, and then we'll look at a target of a guy who didn't. Hopefully that will drive the point home.

However, while they're focusing on the drill, I'll be looking at how safe they're being. The range we have for the number of student we have is pretty narrow, but it will give me the opportunity to check their muzzle discipline. I won't be able to see everyone at once, but I'll move up and down the line to see that everyone's got their weapon on safe when they're not actively engaging a target.[6] When we get to the end, I'll see if they clear their weapon without being told. If these guys aren't doing it, then we're not ready to start running up and down the range, that's for sure. Everybody on the range knows what safe behavior is because we've covered it in the safety briefing every morning. By making it clear to everyone, now people can correct each other. They don't have to be jerks about it; they just need to be watchful, and aware of what's going on. There's two parts to avoiding getting shot. The first is knowing what you're doing with your weapon, and the second is knowing what your buddies are doing with theirs so that you can stay out of their way if need be.

Uh, oh. That left handed shooter is flagging the guy next to him. I got to go say something to him.

Guided Discussion Using the Vignette

The workshop leader/facilitator will stimulate discussion by eliciting examples from the workshop participants about their experiences in the OBTE marksmanship course that are reminiscent of particular moments in the vignette. Discussion will focus on what the participant would have done if he were in the shoes of the instructor. For example, in the flagging occurrence at the end of the vignette: What do you think your instructor would say to this student, and how would he approach him? What could he say that would have the most impact on the student to cause the student to increase his awareness of his weapon in relation to the others around him? Participants will be encouraged to compare and contrast their respective thoughts and experiences. The intent of this discussion is to help the student remember their experience in the deeper and fuller context of a better understanding of OBTE.[7] The length of discussion will vary (30 to 45 minutes) depending on the amount of time available for the workshop and the number of sessions the leader/facilitator decides to use. Collaborative discussion about in-stride adjustments in session length and number is encouraged.

Expected Gaps and Shortcomings

It is expected that, in session 2, participants will tend to focus too much on particular techniques that they believe should be executed as a script. They will not fully appreciate the context dependence of the instructor's behavior and the subtlety in the instructor's awareness of the momentary context for instruction. If so, this can be addressed in Session 3, for example, by giving breakout groups the problem of what they think instructors should do under subtle variations in the context of this vignette that one would be likely to encounter in BNCOC.

Participants will be able to revisit and elaborate on prior discussion points in subsequent discussions that focus on related issues in OBTE and its application to other situations in their own Program of Instruction or other Programs of Instruction. In this respect, gaps and shortcomings from one discussion session should influence the focus of discussion in subsequent discussions. Again, in-stride adjustments are encouraged given that observed gaps and shortcomings may be different from expectations.

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Endnotes – Appendix F

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[2] This format is consistent with a *problem-based method of instruction* (Savory & Duffy, 1995) or could be otherwise be adapted for it. The key is that the problem for discussion should relate directly to essential concepts of OBTE and, in doing so, should be at a level of detail that provides useful examples of specific things an instructor can do to implement OBTE (Asymmetric Warfare Group, in preparation; Riccio & Darwin, 2008).

[3] Instructors must apply the principles of OBTE to their own continuing education, personal development, and pursuit of mastery as instructors (Asymmetric Warfare Group, in preparation; Magolda, 1999). OBTE is not merely something to do; it is a way of living the Army Values in the profession of teaching and influencing others.

[4] The culture of the workplace is determined by the way individuals interact with their peers, and what they talk about, in the context of their job while they are on the job and while they are not. Individuals within a work culture influence each other in subtle but potentially profound ways that are not always obvious (Bandura, 1995; Lave & Wenger, 1991; Rasmussen, 1997). If the dominant conversations are about frictions in the work environment, a culture of excuse making can develop even among well-meaning individuals. If the dominant conversations, instead, involve peer-to-peer discussions about best practices of OBTE, the relatedness established through such conversations becomes associated with and an enabler for autonomy and increased levels of motivation and vitality (Deci & Ryan, 2008).

[5] Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifest both as enhanced performance, persistence, and creativity, and as heightened vitality self-esteem, and general well-being. This is so even when the people have the same level of perceived competence or self-efficacy for the activity (see Deci & Ryan, 1998, for an overview).

[6] By identifying with a behavior's value, people have more fully internalized its regulation; they have more fully accepted it as their own (Gagne´, & Deci, 2005).

[7] However, we assert that there are not instances of optimal, healthy development in which a need for autonomy, relatedness, or competence was neglected, whether or not the individuals consciously valued these needs. In short, psychological health requires satisfaction of all three needs; one or two are not enough (Ryan & Deci, 2008).

Appendix G: OBTE Workshop: Vignette #3 in Context

This appendix presents a sample vignette in the context of its use in a workshop to help instructors connect their personal experience with instructor role models with their own approach to instruction. The context is the third session in a workshop that includes a number of sessions that build on each other and systematically provide a deeper understanding of a principled approach to instruction.

Session 3: Collaborative Reflection about Instructor Behavior

Terminal Learning Objective (TLO): Understand OBTE

The TLO is the same for all sessions in the workshop, to understand what instructors can and should do to implement Outcomes Based Training and Education (OBTE).[1]

Enabling Learning Objective (ELO): Deeper Understanding of Instructor Behavior

The ELO are similar for all sessions in the workshop, to guide student reflection on their experiences in the OBTE-based field course in marksmanship in a way that helps them get more out of that experience and a deeper understanding of OBTE. In session 2, the ELO will focus on a deeper understanding of the behavior of instructors by going into a little more depth into how and why it has influences learning.

Mini-Lecture: Principles of Instruction

The workshop leader/facilitator will begin each session with a mini-lecture (15 minutes) that provides a focus for discussion.[2] In session 3, the mini-lecture will be on ways in which instructors can take ownership of their job by pursuing mastery of teaching.[3] This lecture will set up a discussion about a vignette that gives some examples of an instructor's approach to interacting with other instructors from a mindset of perpetual AAR and sharing of lessons learned with peers. The mini-lecture will emphasize that the influence that such conversations have a strong influence on the work culture, as do all conversations among peers whether or not one is aware of this influence.[4]

Vignette N: Peer-to-Peer Interactions Among Instructors

In this vignette, we describe a set of instructional events from an instructor's perspective. The instructor describes his thoughts and actions during an instructional event with emphasis on his interactions with students. An OBTE oriented instructor should be thinking and doing these kinds of things but not necessarily the exact things described in the vignette:

When I was a new OBTE instructor, I wanted to know if I was teaching in the same way that the other, more experienced instructors were teaching. I asked one of them, "How do I know if I'm doing this right? I mean, how can I tell if this is working?"

Mainly, you watch the students. If they're excited and involved in what's going on, you're getting it right.[5] If they're asking questions or talking about shooting during breaks, it's a good indicator that the teaching is going well. If the students look authentically motivated to be in class, then it's working. True motivation is key, because it will have a big impact on what they learn and how much they incorporate into the training they conduct with their unit. Overall, if they're excited about learning what we're teaching, then they will try harder and perform better.

Also, they will be more creative—and that's where the real magic is. They will keep coming up with solutions to the problems that we give them that are new. Creativity equals adaptability, which is required in FM 1. A few classes back, I had a First Sergeant come up to me during one of the breaks. We were talking about the importance of stability. This First Sergeant was a great guy, but he had been beat up by jumping a lot. He was talking quietly to me about the fact that he wasn't very flexible, and couldn't get his butt to rest on his boot when he was shooting from the kneeling position. I asked if he stretched after PT. He said, "No way—I'm lucky to get PT in at all on most days. They're running me ragged. I get so many changes from Battalion between 0545 and 0615 that I have got to meet with the Platoon Sergeants before 0900 formation." I just kind of nodded with him. I'd been there, I knew what he was dealing with.

But then, he surprised me. He said, "You know what, I could meet the platoon sergeants after PT. I keep all of the changes on a 3x5 card. I could leave it at the CQ desk, then grab it after we're done with the run or whatever, and we'll catch up and stretch all at the same time. That way they would have the info, and we would all be setting an example about how PT helps marksmanship." Now that's what we're looking for out of these guys. They are looking for ways to get ready for combat, even though they haven't been dealt a perfect hand. That's why it's important to get them truly motivated about what they're doing out here.

I then asked, "So watching the students is how you can tell how you're doing, but what do you do if they're not truly motivated? How do we get them legitimately excited?"

He said it was easy. First, it's important that the students believe that marksmanship is important. That's not a hard sell, but it could be if it were a different subject, like NBC. Safety is important as well, but not as one might think. For example, most ranges require guys to wear the Kevlar helmet, but it doesn't necessarily make them safer. Also, weapons are supposed to be pointed up and down range at all times, but guys might flag every safety as they walk to their firing position. The students have to see the value in real safety, not just living by a bunch of rules on a range. We help them define what real safety is: treat every weapon as if it were loaded, don't point your weapon at anything you're not willing to destroy, positively id your target and what's in front, behind, to the left and right. So, assuming that the student thinks safety is important and given the tools to know what safety is, the student is able to internalize safety and incorporate it into everything they do, both during training and in combat. You know students are internalizing it when you see students pointing out unsafe acts to each other. That's an indicator that they've internalized safety and are actively and continuously evaluating their situation.[6]

If you put stuff in to the bigger context, that also helps them get motivated. When we teach the classes on how the weapon functions on Monday and then go over all the types of malfunctions,

we're not just giving a class on how to clean the weapon; we're giving a class on how the weapon works. Then the student can decide for himself what he needs to clean if he only has a few minutes for weapons maintenance.   If the weapon has a malfunction, he can tell if it's probably due to the magazine or if the weapon is really screwed. With the right knowledge that is presented in a way that the students will get it, they'll be in the position to make decisions that could, one day, save their lives. That's pretty motivating, and most students realize that.

When they understand what it takes to be a good shooter, and that they know where they need to go to get the information about the weapon, it's the difference between handing a guy a fish and teaching a guy to fish. He can feed himself.

The problems we give them are important. They've got to be challenging and new, but within reach. If it's impossible or too easy, then they'll get discouraged. If they get part of it right, but get tricked by the other part, that's great. They get some confidence, but they also realize that they have room to improve.

Competition is important, and having many competitions is also important. It's important for the students to push themselves for the sake of getting better, and if it's done right, it can build camaraderie. However, if it's done to determine rewards or if guys are evaluated by the competition and don't have the opportunity to prove themselves again soon, it can break a unit apart. Easy to manage out here, because most guys come from different units and they're only here for a week. But classes that are together longer than a few weeks really have to watch it.

Positive feedback and encouragement is important. Paying attention to where they are, and then noticing when they improve really helps their confidence. It helps them feel competent at their job, and that they're more ready to go to war than they were at the beginning of the day. How many times do guys leave the office and say, "I'm more prepared for war today than I was yesterday." Not many, in most cases. It's a good feeling, and these guys should feel it more often.[7]

Discussion in Breakout Group Using the Vignette

The workshop leader/facilitator will give breakout groups the task of discussing a friction or unexpected conditions encountered on the range, such as a variation on vignettes 1 or 2. The point will be to compare their group discussion with the peer-to-peer interactions in vignette 3. Within this context, groups could be given the problem of conducting an AAR on their peer-to-peer interactions. Groups would debate over what was done well and what could have been done better. If there are no suggestions about what to improve, time permitting, the workshop leader should suggest OBTE-inspired topics of discussion that would have been more constructive.

The intent of this discussion is to help the student the experience the mindset of OBTE and its influences within a group. The length of discussion will vary (30 to 45 minutes) depending on the amount of time available for the workshop and the number of sessions the leader/facilitator decides to use. Collaborative discussion about in-stride adjustments in session length and number is encouraged.

Expected Gaps and Shortcomings

It is expected that, in session 3, participants will be able to say the right things and identify more or less obvious adjustments to frictions. At the same time, we expect that participants will not understand or believe the influence they can have over the conditions of instruction and will not understand that there are significant instructional opportunities under extremely limited conditions. If so, it could be helpful, in Session 4 for example, to give breakout groups the problem of what they think instructors should do under limited or unexpected conditions for an instructional setting with which they are less familiar.

Participants will be able to revisit and elaborate on prior discussion points in subsequent discussions that focus on related issues in OBTE and its application to other skills in their own Program of Instruction or other Programs of Instruction. In this respect, gaps and shortcomings from one discussion session should influence the focus of discussion in subsequent discussions. Again, in-stride adjustments are encouraged given that observed gaps and shortcomings may be different from expectations.

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[2] This format is consistent with a *problem-based method of instruction* (Savory & Duffy, 1995) or could be otherwise be adapted for it. The key is that the problem for discussion should relate directly to essential concepts of OBTE and, in doing so, should be at a level of detail that provides useful examples of specific things an instructor can do to implement OBTE (Asymmetric Warfare Group, in preparation; Riccio & Darwin, 2008).

[3] Instructors must apply the principles of OBTE to their own continuing education, personal development, and pursuit of mastery as instructors (Asymmetric Warfare Group, in preparation; Magolda, 1999). OBTE is not merely something to do; it is a way of living the Army Values in the profession of teaching and influencing others.

[4] The culture of the workplace is determined by the way individuals interact with their peers, and what they talk about, in the context of their job while they are on the job and while they are not. Individuals within a work culture influence each other in subtle but potentially profound ways that are not always obvious (Bandura, 1995; Lave & Wenger, 1991; Rasmussen, 1997). If the dominant conversations are about frictions in the work environment, a culture of excuse making can develop even among well-meaning individuals. If the dominant conversations, instead, involve peer-to-peer discussions about best practices of OBTE, the relatedness established through such conversations becomes associated with and an enabler for autonomy and increased levels of motivation and vitality (Deci & Ryan, 2008).

[5] Comparisons between people whose motivation is authentic (literally, self-authored or endorsed) and those who are merely externally controlled for an action typically reveal that the former, relative to the latter, have more interest, excitement, and confidence, which in turn is manifest both as enhanced performance, persistence, and creativity, and as heightened vitality self-esteem, and general well-being. This is so even when the people have the same level of perceived competence or self-efficacy for the activity (see Deci & Ryan, 1998, for an overview).

[6] By identifying with a behavior's value, people have more fully internalized its regulation; they have more fully accepted it as their own (Gagne´, & Deci, 2005).

[7] However, we assert that there are not instances of optimal, healthy development in which a need for autonomy, relatedness, or competence was neglected, whether or not the individuals consciously valued these needs. In short, psychological health requires satisfaction of all three needs; one or two are not enough (Ryan & Deci, 2008).