OE Conditions for Training:

A Criterion for Meeting "Objective Task Evaluation" Requirements

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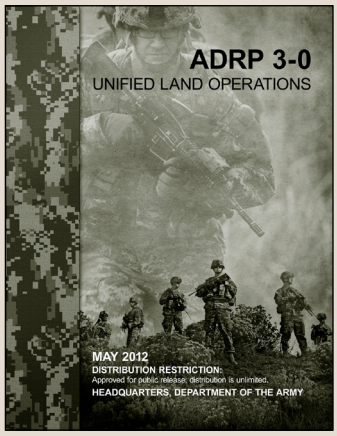
The Army Operating Concept directs us to "win in a complex world." To accomplish this directive, the Army must develop leaders who can innovate and thrive in "complex and dynamic" environments that reflect conditions we will likely face. To that end, unit commanders must ensure we also train in such operational environment (OE) conditions and against an uncooperative opposing force (OPFOR), making their scrimmage as hard, or even harder, than any anticipated real-world fight. By understanding the process of creating training conditions that introduce increasing levels of OE complexity, commanders will challenge the next generation of Army leaders to learn, be agile and adaptive, and figure out a way to win!

This article seeks to amplify the concepts established in the Army Doctrinal Reference Publication (ADRP) 3-0, *Unified Land Operations*, in easily understood language by defining terms that describe required OE training conditions (*complex, dynamic, simple* and/or *static*). Applying these definitions will help leaders present the minimal required conditions needed to develop leaders, achieve training objectives, and build unit readiness.



"For Army forces, the dynamic relationships among friendly forces, enemy forces, and the variables of an operational environment make land operations dynamic and complicated."

— ADRP 3-0, 1-16

Illustration of OE Training "Conditions"

In the early stages of the war on terrorism, a training unit conducted an out-of-sector mission at one of the Army's premier Combat Training Centers (CTCs) to destroy an improvised explosive device (IED) manufacturing facility with an insurgency training camp. The camp was located in high mountainous terrain, accessible only through a tough steep climb or via an air assault movement; the unit chose the latter. The training camp consisted of a fortified defensive position in which the training center directed the OPFOR to fight in place with no special weapons or environmental circumstances. The unit's objective provided "simple and static" training conditions in that the OPFOR and environmental circumstances were singular in nature and did not change throughout the execution of the task.

In a similar out-of-sector mission at a different CTC several years later, another training unit conducted an attack against a similar IED facility with an insurgent training camp. However, to make the objective more challenging, the OPFOR held three hostages and were equipped with man-portable air defense systems. The CTC also directed the OPFOR not to fight in place, but rather create multiple dilemmas for the training unit on and off the objective. Finally, the CTC directed the training unit to incorporate local national forces into their operations process and coordinate their plan through the replicated host-nation government. This objective presented "complex and dynamic" training conditions in that the training unit had multiple considerations to contend with while the OPFOR had the freedom to create a plan and conditions in response to anticipated training unit actions.

These actual training events serve as ideal examples of how the Army is moving to create increasingly more realistic and challenging training conditions. Within the task, condition, and standard framework for training, creating appropriate OE conditions are becoming a critical criterion for training and unit readiness reporting. These OE conditions will serve as one of several criteria for achieving task proficiency ratings of "Trained, needs Practice, or Untrained" (T-P-U).

Required OE "Conditions" for Unit Training

The Army spent several years contemplating the need for creating a more objective method for task proficiency reporting. After extensive deliberations, as part of the Army Training Summit in the summer of 2014, senior trainers from across the Army began to develop criterion-based standards for achieving task proficiency ratings with both task-dependent and independent variables. At the annual Army Training Leader Development Conference in July 2015, these were proposed to the Chief of Staff of the Army and the most senior Army leadership, who directed that these criteria be added to Army Regulation 350-1, *Army Training*.

Task-dependent criteria, defined as "plan and prepare" criteria for exercises, included three sub-components, of which the first is the OE. The OE sub-criterion is further defined by operational variables, whether the task is completed during the day or night, and whether the OPFOR features a hybrid threat or a regular/irregular threat. Each element must be defined to achieve a T, P, or U task-proficiency rating — the more complex, the higher the achievable rating if the task was completed correctly.

Defining OE Terminology

Each criterion sub-standard links its definition directly to the ADRP 3-0, which describes U.S. doctrine for unified

land operations. The ADRP dictates that it is the relationships among friendly and enemy forces, coupled with operational variables, which make land operations "dynamic and complex." Hence, ideal training conditions needed to achieve "T" proficiency ratings should also reflect dynamic and complex OE conditions. Conversely, the lack of such can be defined as "static and simple;" hence, the four terms of OE criteria are: *dynamic, complex, static,* and *simple*. But before each is defined, trainers must understand what operational variables are.

Plan and Prepare					Execute						Assess	
Operational Environment			JLTX	Training Environment (L/V/C/G)	% Leaders Present at Training / Authorized	% Present at Training / Authorized	External Eval	Performance Measures	Critical Performance Measures	Leader Performance Measures	Sub-Unit Assessment	Task Assessment
Dynamic & Complex	Night	Hybrid Threat	Yes	Proponent Establishes Training Environment Standards (FTX, STX, CPX, STAFFEX, TEWT, etc)	≥85%	≥80%	Yes	≥90% GO	All	≥90%	T	T
Dynamic or Complex					75-84%			80-89% GO		80-89%		T-
Static and Simple	Day	Regular or Irregular Threat	No		65-74%	75-79%	No	65-79% GO			T-	P
					60-64%	60-74%		51-64% GO	<All	<80%	P	P-
					<60%	<60%		< 50% GO			P-	U
Task Dependent					Task Independent							

Figure 1 — Objective Task Evaluation Criteria

Operational variables, as defined by the ADRP, include eight interrelated aspects: political, military, economic, social, information, infrastructure, physical environment, and time (PMESII-PT). What makes these variables *complex*, is when multiple variables (three or more) influence military operations or have a direct or secondary effect from the outcome of military actions. As such, both OPFOR and training unit leaders will want to positively influence their environment, or at least mitigate negative consequences of their military actions. Hence, merely fighting an opposing force without any other environmental factors bearing on the task is a *simple* environment. *Dynamic* conditions imply that one or more of the operational variables and the OPFOR disposition change (free-play) during the period of execution. In a dynamic OE, the disposition, composition, strength and/or tactics of the OPFOR might continue to develop as the unit executes its task, as opposed to a *static* OE, in which conditions do not change throughout the unit's conduct of the task.

The second primary sub-criterion, other than day or night conditions that are self-descriptive, encompasses the type of threat a unit must "spar" against. The Army Operating Concept, as well as the Army Training Strategy, spotlights the need to train against hybrid threats, which combine conventional, irregular, and criminal organizations into mutually benefiting threats to U.S. forces. The term "insurgents" is purposely not used as it represents an irregular force with ideological aims, typically focused on the overthrow of a government, but is not a separate threat category. As displayed in the Objective Task Evaluation Criteria chart (Figure 1), units seeking a "T" rating in collective training must replicate the hybrid threat. Training Circular (TC) 7-100 provides detailed information for the construct and tactics of a hybrid threat for training purposes.

Complex: *Hybrid threat/OPFOR with multiple OE variables.*
Dynamic: *Threat and OE change during task as a cause and effect.*
Simple: *Regular or irregular threat with minimal OE effects.*
Static: *Threat and OE do not change during execution of task.*

Creating OE training Conditions

The theory is simple: create increasingly complex training conditions to achieve higher objective training evaluations (Trained). To achieve objective ratings for:

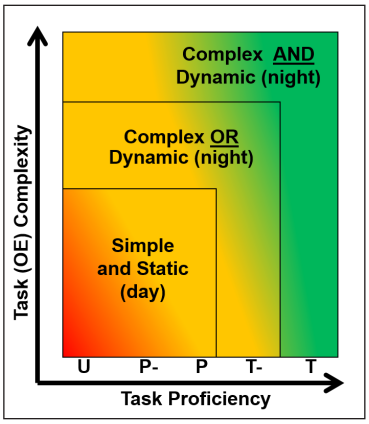


Figure 2

- **Trained:** Planners must create complex and dynamic training conditions against a hybrid threat during limited visibility (night). This is further defined as training against a regular and irregular OPFOR within an environment that consists of multiple (three or more) OE variables (PMESII-PT) which change during the task in a cause-and-effect relationship.
- **Trained (-):** Planners must create complex or dynamic training conditions against a hybrid threat during limited visibility (night). This is further defined as training against a hybrid OPFOR within an environment that consists of multiple (three or more) OE variables that do not change, OR against a regular or irregular OPFOR with minimal OE effects, but that change during in a cause-and-effect relationship.
- **Needs Practice or Untrained:** Planners can create

simple and static training conditions against a regular or irregular threat with minimal OE effects that do not change during the execution of the task (typically used during crawl-walk stages of training).

For operational variables to be relevant, they must be linked to the unit's mission variables — known as METT-TC (mission, enemy, terrain and weather, troops and support available, time available, and civil considerations). Army doctrine states that incorporating the analysis of operational variables (PMESII-PT) with mission variables (METT-TC) ensures that leaders consider their OE in relation to their mission. Hence, to create complex training conditions, operational variables must be relevant to a unit's mission or task.

Available Resources

The U.S. Army Training and Doctrine Command (TRADOC) G2 is the Army's responsible official for understanding, describing, delivering, and assessing the OE. Leading an OE enterprise of key stakeholders to support the training, education, leader development, and concept & capability development communities, TRADOC G2 supports both the institutional and operational force. It achieves this through its Analysis & Control Element (ACE), with elements located at Fort Leavenworth, Kan., and Fort Eustis, Va., and through the OE Training Support Center (TSC), located in Newport News/Fort Eustis, Va.

The TRADOC G2 ACE provides analytical support for understanding and describing the OE and its associated threats, working closely with the Combined Arms Center at Fort Leavenworth in support of training and education, and with the Army Capability Integration Center at Fort Eustis for future concept and capability development. The ACE Threats directorate at Fort Leavenworth provides training support products, such as the TC 7-100 series of Hybrid Threat manuals, as well as the Decisive Action Training Environment (DATE) for scenario design. This element also publishes the Regionally Aligned Forces Training Environment (RAFTE), the Exercise Design Guide (TC 7-101), and the Red Diamond Magazine. The ACE-Threats also provides a semi-annual five-day course on the OE and threat tactics, and provides mobile training teams for HST upon request. The TRADOC G2 ACE-Threats information is readily available via the Army's Training Network.

The TRADOC G2 OE-Training Support Center (TSC) is the Army's primary delivery center for creating OE training conditions. The OE-TSC, a restructured organization formerly known as the Training Brain Operations Center (TBOC), now also includes delivery capabilities of the Intelligence, Surveillance, & Reconnaissance (ISR) Directorate, the OPFOR Program Directorate, and an enhanced Modeling and Simulations Directorate, bringing to bear all OE delivery capabilities within one center. The OE-TSC delivers innovative capabilities aimed at helping units to create operational manifestations of the OE at home station, particularly the information factor. These capabilities currently include those listed in Figure 4.

Conclusion

To "win in a complex world," as our Army Operating Concept directs, requires leaders who can innovate and thrive in complex and dynamic environments. Unit commanders must train in such conditions against an uncooperative and freethinking OPFOR, making their scrimmage as hard as the next fight. Understanding the aforementioned process for creating complex, dynamic, simple and/or static training conditions enables commanders to increase the intensity and realism of training, challenging the next generation of Army leaders to learn, be agile and adaptive, and figure out a way to win!

There is no cookie-cutter solution to creating complex and

Figure 3 — Examples of Relationship for Operational & Mission Variables

	Political	Military	Economic	Social	Information	Infrastructure	Physical Terrain	Time
Mission	Influence or impact on local political or tribal order	Joint or multinational partners	Impact on economic status locally & regionally	Cultural, religious, language barriers	Availability of cellular, TV, radio, news, literacy, etc.	Electricity, water, sewage, roads, transportation	Mobility, urban restriction, cover/conceal	Mission comparison to civil time consideration
Enemy	Relationship for support/control or influence on local leaders	Is it a hybrid threat with local combatants' support?	Are they dependent or negligent of local support?	Use/control of social advantage/coercion	Use of local info infrastructure for info war	Use of local infrastructure to provide cover, concealment	Use of natural & urban terrain for mobility	Use of time against US mission timeline
Terrain & Weather	Is political/tribal structure terrain implicated; control/historic?	Impact of terrain & WX on Red, Green & Blue	Trade routes, market/econo, manufacturing locations	Historic, religious & social centers; WX impacts	Restrictive or void locations for information influence	Impact on local infrastructure & vice versa	Impact to civilian use of military ops in certain terrain	Consideration for extreme or flash WX conditions
Troops & Weather	Key leader engagements, local support	Coalition implications, maintenance & supplies	Give & take battering for mutual interests	Populace support for US presence	Ability to communicate with locals via media/other	Use of local infrastructure for movement & sustainment	Choke points, limited routes vulnerability to IED ambush	Allowable time to execute sub-tasks for mission
Time	Expectation to approve and influence changes	Red versus Blue timelines, Green perception	Key events for markets, trade events, crops, herding, etc.	Holidays, special occasions & events	Activity level of social media, time needed to influence	Rush-hour traffic, high use of infrastructure resources	Seasonal terain & weather implications	Perception of time on mission vice OE
Civil Consider-ations	Strength of leadership to influence population	Civil perspective & support of Red or Blue ops	Advantages & disadvantages of US help or influence	Perception of US presence & perceived local respect	Gained or lost trust in messaging, IO influences	Damage or improvement through military presence	Impact on miliary ops on farming, ranch terrain	Perception management of available time

dynamic OE training conditions, just as there is no one "correct" solution for creating conditions necessary to achieve a "Trained" task proficiency rating. Trainers and exercise planners must understand the construct and influence of operational variables (PMESII-PT) just as they do mission variables (METT-TC). Success in training will lead to success in combat — even under complex and dynamic OE conditions.

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Figure 4 — Example of OE-TSC Capabilities to Support Training

Resource	Capability Description
Training Brain Repository - Exercise Design Tool (TBR-EDT)	Enables commanders and staffs to become better training managers and exercise designers. This web-based tool provides access to a growing repository of previously developed training products and scenarios for reuse, along with authoritative data sources to create new products. Next steps for the tool include integration of EDT capability into the Joint Staff J7 architecture, development of control tools to execute the training plan during the actual conduct of the exercise, and expanded data exchanges with mission command and simulation systems and architectures.
Opposing Forces Program	Provides commanders the programmatic means and expertise to "spar" against a replicated threat. This includes assistance for understanding and validating the application of threat doctrine, usage and assessment of replicated threat weapons and systems, and responsibilities of the TRADOC Project Office (TPO) for OPFOR Modernization efforts. This function, regulated by AR 350-2, also mandates the accreditation of OE/OPFOR replication at Combat Training Centers annually, Reserve Component Training Support Divisions semi-annually, and Army Centers of Excellence and Schools tri-annually.
Information Operations Network (ION)	A HST capability under development that adds realism and complexity to exercises by replicating the social media. Content from Twitter, websites, blogs, Facebook, Instagram, and YouTube, that is in context with a specific exercises, will be emulated for the training audience. Exercise designers and trainers access the ION cloud via the web, where it can also be tailored and reused for subsequent exercises. The ION data manager tool allows content to become available to training audiences at the appropriate time as content is linked to exercise storylines and threads.
Network Effects Emulation System (NE2S)	Contributes to home station training of cyberspace operations, assisting staffs to plan, coordinate and integrate these operations into exercises. NE2S emulates and replicates environmental effects on both individual machines and the network itself. NE2S emulates actions from adversaries and friendly-force insiders, as well as actions to deny, degrade or disrupt command and control of systems or networks. The OE Training Support Center/TBOC deploys the NE2S on the unit network and manages it via a master control station in the exercise control cell.
Virtual OPFOR Academy	The OPFOR Academy provides a virtual, cloud-based, interactive, multimedia, and password-enabled learning experience for OPFOR counter-tasks. It will describe the tasks, conditions, and standards associated with each of the TC 7-101 listed OPFOR counter-tasks and present such within the Combined Arms Training Strategy (CATS). It will also provide multimedia presentation to expose users to specific descriptions in how to execute OPFOR tasks at HST, and allow to experience such in various preferred methods, including video, simulations, and constructive representations.
ISR Integration	The TRADOC Intelligence, Surveillance, and Reconnaissance (ISR) Integration, also known as ISR TOP OFF, provides Joint/Theater ISR expertise to G27 OE delivery, setting training conditions by replicating Theater ISR processes, capabilities and application to OE-specific problem sets. ISR Integration also provides staff coaching and mentoring to deployed forces and at all CTCs, and as required, support home-station training requests.
Advanced Network Analysis and Targeting (ANAT)	Training simplifies analysis by enabling analysts to find quickly key nodes within a complex human network. By employing the Organizational Risk Analyzer (ORA) software tool and using the ANAT methodology, analysts are able to hone in on social networks formed by "people" nodes linked through resources, communications, or events. Analysts can apply social network analysis techniques using ORA to rapidly identify and visualize people with special characteristics that, if targeted, will affect the network based on the commander's intent.
System Integration, Modeling and Simulation (SIMS)	Visualizations and gaming products that are compliant with Army Learning Model (ALM) by replicating aspects of the OE via customization of gaming technology to fit a range of virtual, constructive, and gaming challenges. The visualizations and virtual practical exercises use real-world data to provide student-centric blended learning. Visualizations present complex information in a 3-D visual medium that is much more efficient than text or image-based media, while micro-simulations efficiently train the "walk" phase of the Army's "crawl-walk-run" paradigm.
Athena	An effects model (PMESII-PT) that assists commanders in understanding, visualizing and conducting course of action analyses of complex OEs by anticipating the likely mid-term consequences of actions, both planned and unplanned. Athena runs in a stand-alone mode on a laptop, but will likely migrate to the OE cloud. Enhancements to Athena that would enhance its usability and applicability include data exchange with mission command programs of record to facilitate course of action planning, and improvements to the user interface to increase ease of use by non-experts.