Joint Training Assessment

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ABSTRACT

The second biennial Block Assessment of Joint Training is being conducted April-October 2007. This year's effort expanded to include all Combatant Commands and the four Military Services, as well as the three pillars of Training Transformation (T2) included in the 2005 Block Assessment – Joint Knowledge Development and Distribution Capability, Joint National Training Capability, and Joint Assessment and Enabling Capability (JAEC). This paper will primarily discuss metric development, identifying and refining data elements to support the metrics, and analysis of the data in support of the 2007 assessment.

The JAEC assessments are guided by the Quadrennial Defense Review (QDR), T2 Strategic Plan, and T2 program missions and objectives. From these, the team developed the metrics and data elements that provided a large portion of the material for analysis. As in the previous block assessment, much of the information required the use of qualitative assessments and other means to provide a true picture of Joint training and support the purpose of the block assessment.

The paper will describe the project's attempts to go beyond completing an assessment, towards a goal of institutionalizing data gathering and assessment in the Joint Training Information Management System to support decision-making and joint force readiness. The paper also includes discussion of plans to use the Department's automated reporting systems and our efforts at synchronizing the developing data collection activities of different organizations.

ABOUT THE AUTHORS

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Fred Hartman is the Deputy Director, OSD Readiness and Training, and the Director, Joint Assessment and Enabling Capability (JAEC) for DoD's Training Transformation initiative, in the Office of the Under Secretary of Defense, (Personnel and Readiness), Readiness and Training Division. He graduated from the United States Military Academy and earned a Master of Science degree in Operations Analysis from the Naval Postgraduate

School. Mr. Hartman left the US Army and joined CACI International Inc in 1981, and progressively rose to the position of Executive Vice President. While there he built an analysis group with annual revenues in excess of $25 million. In 1992, he co-founded Applied Solutions International, Inc, and served as Chief Operating Officer for three years. In 1995, Mr. Hartman joined the Institute for Defense Analyses as a modeling and simulation consultant to the Deputy Under-Secretary of Defense (Readiness) [DUSD (R)], responsible for oversight and coordination of the Training Modeling & Simulation programs. Mr. Hartman led the Training Capabilities Analysis of Alternatives effort and became Director, JAEC in 2004.

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BACKGROUND

Several years after the creation of the Training Transformation (T2) program, the March 2005 National Defense Strategy and the 2006 Quadrennial Defense Review Report reaffirmed that the strategic challenges remain, and the need for the program continues.

Training Transformation can be best understood through consideration of the two missions precisely stated in its strategic plan:

- Better enable integrated operations.[1]
- Enable the continuous, capabilities-based transformation of the Department of Defense.

These missions are the starting point for assessment, the top-level aims of the program that are translated into objectives and more specific actions, and then into executable tasks. These tasks, as well as the missions and other goals, are measurable, which is important because, as stated in its strategic plan, "Training Transformation is a performance- and outcome-based program."

Every two years T2 conducts a formal assessment, termed the *Block Assessment*, to provide feedback to DoD leadership and T2 managers concerning how best to assure that forces are trained to provide needed operational capabilities, now and in the future. Each Block assessment is part of a spiral feedback mechanism to ensure lessons observed and relevant recommendations are provided to the responsible organizations in the joint training community.

Based on the strategic plan and implementation plan that guide the T2 program, the purposes of the T2 Block assessment are:

- Evaluate the effectiveness of joint training, education, and job performance aiding on integrated operations and the continuous transformation of the Department of Defense.
- Determine the effectiveness of the DoD Training Transformation Program on improving joint training, education, and job performance aiding.

- Inform DoD leadership of the assessment results, and recommend strategic and programmatic changes to improve effectiveness.

The assessment also provides a structured appraisal of the processes being used to manage T2 and of the extent to which these processes achieve T2 program goals. The T2 strategic plan assigns responsibility for these biennial Block assessments to the Office of the Under Secretary of Defense for Personnel and Readiness (OUSD (P&R)), Joint Assessment and Enabling Capability (JAEC).[2]

Although JAEC has the lead responsibility, complete and effective assessments rely on collaboration with the joint training community: the other two T2 offices – the Joint Knowledge Development and Distribution Capability (JKDDC) and Joint National Training Capability (JNTC) – as well as the Joint Staff J7 Joint Training Division, training personnel from the military Services (including Reserve components) and the Combatant Commanders, and other organizations involved in training as it is transformed. Both the value and necessity of this collaboration have become clearly evident in preparation for, and conduct of, the 2007 T2 Block Assessment, conducted April-October 2007.

2005 T2 BLOCK ASSESSMENT – SETTING A FOUNDATION FOR RECURRING ANALYSIS

The 2005 assessment was recognized as a first step in a spiral development process, and as such it had relatively limited goals. It provided, however, a baseline of metrics, performance data, and management recommendations that serves as a firm foundation for future assessments.

The backbone of the 2005 assessment consisted of data gathered against a set of metrics that sought to characterize effective joint training. The effort to define the metrics started more than a year before the assessment was to be completed. While the assessment scope was limited, representatives from the larger joint training community (JKDDC, JNTC, Joint Staff J7, Services, Reserve component offices, and Combatant Commanders) joined JAEC analysts in developing

metrics. These representatives consisted of military officers responsible for training programs, civilians who also oversaw or supported training, and credentialed experts in assessing relevant aspects such as training effectiveness and economic considerations. This diverse group developed roughly fifty metrics. The assessment team organized these metrics into four categories, which became known as *attributes*.[3] The attributes evolved during the course of the 2005 assessment and were modified for the 2007 assessment.

For 2005, the team attempted to collect data for all fifty metrics but found that, despite the determined assistance of personnel at the JKDDC and JNTC offices and other elements of their parent command, the Joint Warfighting Center at United States Joint Forces Command, some data simply were not available. In addition, some of the original metrics proved to offer little insight that would contribute to the purposes of the T2 Block assessment. The final report in fact reflected only nineteen of the original fifty metrics. In the interest of presenting a complete picture, among the final nineteen metrics were several for which complete and accurate data could not be collected.

The 2005 assessment report included three sections in addition to the metrics-derived assessment. One section addressed the extent to which current joint training programs met the goals spelled out for them in the *Training Transformation Implementation Plan.* (The implementation plan explicitly states actions, outcomes, and timelines for JKDDC, JNTC, and JAEC.) Another section highlighted key initiatives the T2 components had undertaken to transform joint training, serving as a complementary narrative to the metrics-based assessment. A fourth section presented both positive and negative feedback on T2. The training offices of the four Services, Reserve component, and Combatant Command staffs were invited to participate.

As we shall see, the 2005 T2 Block Assessment report provided many lessons for the next spiral of development.

DEVELOPING THE 2007 T2 BLOCK ASSESSMENT

In briefings to T2 leadership and the joint training community, block assessment leaders stressed four ways the 2007 effort would be different from 2005:

- Increase in scope of assessment. As stated in the T2 strategic plan, the T2 Program's purview spans the entire set of joint training and education for individuals, units, staffs, and organizations. The assessment therefore had to expand beyond consideration of the three T2 components. In a measured step toward full operational capability, the 2007 assessment added joint training conducted by the Services and Combatant Commands.
- Improved planning. Based on experience from the initial assessment, the execution plan included a thorough plan of action with realistic milestones. When additional requirements emerged throughout the conduct of the project, the solid plan enabled the team to stay on schedule.
- Increased use of automated data sources and routinized data submission. This is a significant step toward a goal of JAEC and T2 leadership, to institutionalize the processes, metrics, and data in a "corporate" automated system.
- Increased coordination and collaboration. The T2 business model calls for open, transparent, and collaborative operations, so coordinating and collaborating with the joint training community was imperative. It was also a practical matter, in view of the expanded scope and the goal of institutionalizing the assessment.

Structure of the 2007 Report

With these factors in mind the core group of analysts planned the major structure of the 2007 assessment. They decided that its structure should be similar to that developed for the 2005 report, but not identical. The section on accomplishment of goals in the T2 implementation plan remained, as an official means of informing T2 leadership about the status of the program.

The 2007 report also included the feedback section that captured comments from the joint training community. The assessment team developed questions to provide structure to phone interviews and sent them ahead of time to each organization. Each interview involved several analysts interacting with representatives from one organization, and participants were not restricted to the questions sent beforehand. The interviews proved a valuable supplement to other sources of information, adding context and insight to performance data and illuminating the processes of joint training more effectively.

A third portion of the 2007 report, known simply as "qualitative assessments," addresses topics for which

numerical data was not available, or issues that were intrinsically non-quantitative. This section essentially replaced several similar portions of the 2005 assessment in a more structured manner.

The final portion of the report is the quantitative assessments based on the performance metrics and other data collected. Development of standardized metrics is a key element of institutionalizing assessments within T2 (and ultimately DoD's entire training community). Standardized metrics approved and accepted by leadership allow comparison of performance over time so trends can be identified and corrective actions taken. They also allow comparison of outcomes against other variables, for example, whether training was live or virtual. The metrics ultimately included the most profound concern of military training – operational readiness – although they also addressed other outcomes of training efforts, program management, efficiency, and other performance of interest.

The core group of analysts started with the attributes of joint training, an organizing principle that worked well for the 2005 assessment. Thinking of the long term, they decided that the system would be more effective if revised and specified five attributes of effective training:

- **Right Audience**. Training the right audience implies that training reached all relevant echelons of all organizations - including the Reserve component, support organizations, and non-DoD organizations - and that training was received at the appropriate time.
- **Right Skills and Tasks**. Training the right skills and tasks implies that the right content is being delivered in training and that the training has met stated requirements.
- **Right Learning**. Right learning reflects whether training was actually learned by the training audience and the training improved their readiness. This includes the more difficult aspect of whether training improves operational performance.
- **Adaptable Training**. Adaptable training programs can be quickly adjusted to changes in requirements due to changes in battlefield conditions, technological advances, or other factors. This is not to be confused with training that develops adaptable individuals and organizations.
- **Efficient Training**. Efficient training implies that the program efficiently used resources to conduct training and/or deliver the training material.
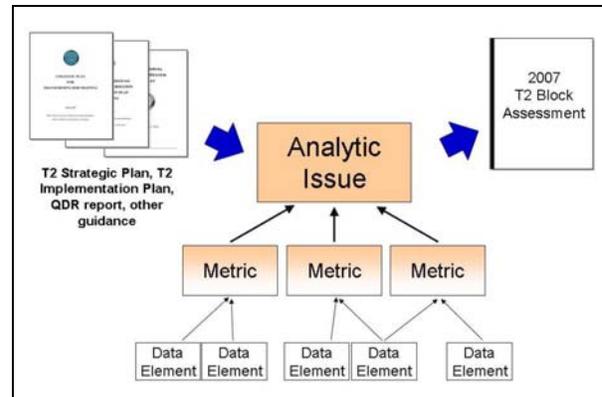

Figure 1. Issues, Metrics, and Data Elements.

The analysts then turned to the nineteen metrics reported in the 2005 T2 Block Assessment, and brainstormed to develop additional candidate metrics based on their experience. Early in the discussions of "metrics" for the 2007 assessment the analysts realized that terminology needed to be clarified, not only for internal use but also because the assessment would require the involvement of the larger group now involved – trainers from the Services, Combatant Commands, Joint Staff J7, and other organizations. The team settled on the term *data element* to describe a specific bit of data; think of it as a cell in a spreadsheet. They then defined the term *metric* to indicate data that has taken on some meaning, deciding that a metric can be a single data element but usually is two or more data elements (e.g., the dollar cost per course-hour of online instruction). Metrics were related to *analytic issues* that were derived from strategic guidance documents such as the Quadrennial Defense Review Report or the T2 strategic plan. While this taxonomy may not be universal, the assessment team found it valuable to use the terms precisely, whether working within itself or with the larger joint training community. The relationship between these terms is illustrated in figure 1. This structure also formed the basis of linking the T2 Block assessment metrics and data elements with top-level guidance.

The number of items at each level fluctuated over several months as the analysts collaborated with the joint training community. When the data collection plan was frozen in February 2007 it included roughly 70 data elements, 33 metrics, and 15 analytical issues. The five attributes were overlaid on this structure as a means of organizing the performance data and integrating other elements of information such as the community feedback. Figure 2 shows how these components fit together.
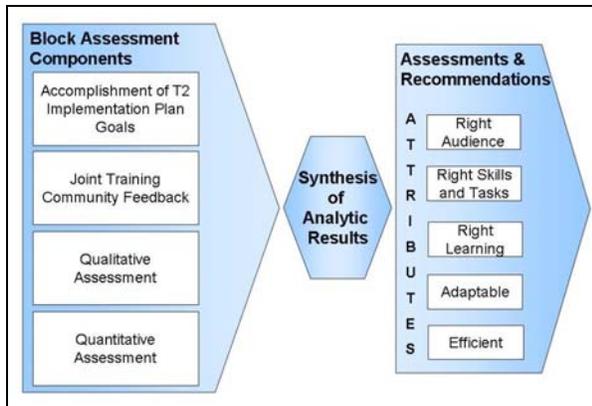
Figure 2. Overview of T2 Block Assessment Structure.

Links to the Strategic Plan

While the analytical team developed this framework, several other essential processes were taking place. Among the most important: the bottom-up effort of identifying data elements and metrics was subjected to a top-down analysis based on the T2 strategic plan. Thorough, rigorous, and approved at the highest levels of the department (signed by the Deputy Secretary of Defense), the *Strategic Plan for Transforming DoD Training* provided a solid foundation for the program and therefore a guidebook for its assessment. A team of analysts decomposed the specific tasks in the plan similar to the way military planners might conduct a mission analysis, and compared them to the metrics being developed for the block assessment. Because the strategic plan guides the program for a period of several years it wasn't necessary or possible for the 2007 Block Assessment to cover each item, so the team focused on high priority items identified by T2 leadership. This analysis revealed a handful of gaps in the metrics, which were then addressed. When complete, this analysis formed a T2 Assessment Roadmap that identified what should be assessed in accordance with the T2 strategic plan, prioritized those assessments, organized responsibilities for conducting assessments, and indicated in which two-year block they will be assessed. It will continue to serve the program beyond the 2007 Block Assessment.

Another essential process concurrent with the development of metrics was the communication and collaboration effort with the joint training community. Involvement of this community was more than a public relations effort, it was critical to the entire assessment effort. Many of the same members of this community had helped identify the metrics used for the 2005 assessment, but after that they allowed the core group

to do most of the work. This time, with their programs included in the analysis, they remained involved.

During the planning phase of the 2007 assessment, the core group of analysts went to these professional trainers with a series of products and received in-depth review. In July 2006, the analysts presented an early list of metrics and data elements, which was objectively criticized - to the benefit of the project. The trainers added a level of rigor to the data collection plan, insisting on accurate terminology and forcing the analysts to explain the value of the metrics. As will be described, in some cases the analysts pushed for certain data that would be considered a stretch by the joint training community. Meanwhile, the assessment team put the finishing touches on an assessment plan that provided objectives, context, and a more complete picture of the components, such as the joint training community feedback. This was staffed in August 2006 using the standard process, and published in September 2006 after comment adjudication. The block assessment analysts distributed a data submission tool in September in the form of an Excel spreadsheet, designed to provide quarterly inputs to an Access database under development that would provide an interim capability to handle the expected amount of data.

The ideal solution will be the automation of the majority of data collection using the existing Joint Training Information Management System[4] (JTIMS) to minimize the burden on the training community. This would make data available for decision makers as a result of queries and not only the assessment report. While realization of this and other goals is still in the future, actions taken to support the 2007 T2 Block Assessment helped the training community make significant progress toward the desired end state.

The team maintained regular communication with the joint training community during these months, including monthly higher-level briefings, twice-monthly working-level telephone conferences, and other special events to include a two-day workshop. This interaction greatly benefited the block assessment project, but also provided the community with insight into the fairly high-level concerns of the analysts. When the database configuration and data submission tool were frozen in February 2007, in conjunction with publication of a detailed execution plan for the assessment, each reflected months of dedicated exchange between the analysts and the joint training community.

Shifting from Planning to Execution

Participating organizations – the Services and Combatant Commands – provided the first data submissions in October 2006. There were some problems. Despite the efforts of all parties, for example, misunderstandings led to some noticeable data gaps. Many could be resolved through familiar measures such as better instructions and additional discussion with those who submitted the data. A few other data gaps, however, would remain for months while organizations discovered that what seemed important to the block assessment analysts had never been accurately tabulated.

The data input spreadsheets were only one source of numerical information. Analysts mined two systems that are key to military leaders at all levels: the Defense Readiness Reporting System[5] (DRRS) and JTIMS. Both provided valuable data for the T2 block assessment in their existing forms. As a major step toward future assessments, the JTIMS program office accepted modifications that will allow it to collect data elements that will directly support future block assessments and increase the ability of leaders to assess training activity. One ancillary goal of the block assessment project is to demonstrate the value of the assessment to the joint training community, which would go far in gaining their continuing support.

Full Operational Capability

The block assessment analysts and the joint training community identified and utilized a set of metrics to support the assessment that are both meaningful and supportable. They have begun to make data collection more routine than it had been, and to make even greater progress in this regard through the use of JTIMS. In terms of assessing the full scope of joint training, the 2007 assessment can claim progress, building on the scope of the 2005 project and moving toward the end state.

At full operational capability, the block assessment will consider strategic-level recommendations identified by T2 leadership during the T2 implementation plan development process, input gathered from Combatant Command interaction, and joint and service lessons learned. It will provide feedback concerning how well the T2 program is accomplishing its two primary missions, to ensure that all individuals, units, staffs, and organizations - both military and civilian - receive the timely and effective joint education and training necessary to enable success in joint operations and in transforming the Department of Defense. It will

monitor and report the integration efforts of the Joint Training System and the Defense Readiness Reporting System. Results of the block assessment will support, form, and direct T2 Strategy development.

NOTES

1. According to the T2 strategic plan, integrated operations may involve the Department of Defense and elements of other federal, state, or local government agencies, as well as "foreign governments singularly or in alliances or coalitions, international and nongovernmental organizations, and private sector companies and individuals."

2. The Training Transformation program has three components or management offices. The Joint Knowledge Development and Distribution Capability (JKDDC) focuses on individual training. The Joint National Training Capability (JNTC) focuses on collective training. The Joint Assessment and Enabling Capability (JAEC) is responsible for assessing progress and formulating possible improvements to the T2 program. JAEC also has an enabling responsibility that is realized through personnel and systems.

3. The attributes were one product of a three-day workshop held in September 2004, "Training Transformation: Analysis and Assessment in New Operational Environments." The Military Operations Research Society (MORS) sponsored the event, which considered the problem of measuring not only the effectiveness of military training, but also how to measure the differential value of the new training transformation effort compared to previous training.

4. The Joint Training Information Management System (JTIMS) is an automated system specifically designed to assist users in developing the key products related to each of the four phases of the JTS: requirements, plans, execution, and assessments. A key function of JTIMS is the integration between training and readiness systems. JTIMS provides a Web-based, graphical user interface for developing and viewing Joint Training System (JTS) product data. JTIMS is intended to support the task-based, closed-loop features of the JTS. More specifically, JTIMS facilitates the development of an integrated, task-based, "thread" to guide the application of all four JTS phases. Requirements, plans, execution, and assessments can all be derived from, or linked to, essential mission tasks.

5. The Defense Readiness Reporting System (DRRS) establishes a DoD readiness management system

focused on assigned missions and the capabilities the organization is expected to bring to the fight using a Mission Essential Task List (METL) construct. Within DRRS, organizational resource data is fully integrated and transparent to the planning and operational communities; DRRS enables commanders and planners to look across DoD for desired capabilities. The DRRS suite provides the Commander access to near real-time assessments of an organization's ability, availability, and readiness to provide a desired capability. In the future, DRRS will be able to seamlessly integrate readiness data with planning and execution tools, providing a powerful means for rapidly assessing, planning, and executing operations.

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