The dL STAR

U.S.ARMY

distributed Learning Supporting Training Awareness and Readiness

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SECTION 1: LEADERSHIP

Welcome to Edition Nine of the dL STAR!

Hello, I am Helen Remily, TRADOC Capability Manager (TCM) for The Army Distributed Learning Program (TADLP) and I am excited to introduce the ninth edition of the dL STAR!

Before introducing the articles in this quarter's dL STAR, I would like to describe to you our efforts in meeting the goal of the establishing TADLP as a foundational element of lifelong learning that supports the Total Force. TRADOC Pam 525-8-2, The Army Learning Concept (ALC) for 2015, articulates key concepts that shed light on our efforts revolutionizing TADLP. The Army's dL program must transition from providing training when and where needed, via compact disc (CD), or a mailed "box of books" to delivering training anytime, anywhere using responsive, accessible, and capable means. The ALC for 2015 guides TADLP in providing a methodology that establishes a persistent learning capability (PLC) in a learner-centric environment that gives the user access to high quality training and education products. TP 525-8-2 also describes the new ALC by the mnemonic LEARN, which exemplifies the purpose of TADLP:

- **L**ifelong learning across the career span;
- **E**ngaging the Learner;
- **A**daptive Soldiers & Leaders, Adaptive development and delivery and Sustained Adaptation;
- **R**elevant & Rigorous training and education; and
- **N**etworked Technology.

The Persistent Learning Capability (PLC) aligns with the ALC by providing web-based, 24x7 accessible, full spectrum operations

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mission essential task list (FSO METL) focused learning that adapts to the learner based upon their prior training, education, and experience level. It allows students to apply current doctrine and tactics in dynamic scenarios with instructors-in-the-loop and encourages them to propose solutions to complex tactical problems. PLC coupled with the Multiuser Online Virtual Exercise (MOVE) capability enables Soldiers to access interactive multimedia instruction (IMI) courseware anytime and anyplace. Efforts supporting Tactical Operations Centers (TOCs) and Doctrine and Training, Tactics, and Procedures (TTPs) (i.e., plan, prepare, execute) include the creation and playback of tactical operations in constructive simulation environments as well as providing the means for persistent courseware discoverability, accessibility, and playability.

The dL Star provides articles that describe what is presently transpiring in the dL community. In this edition, the STAR highlights the Maneuver Center Rapid Development Suite, Reusable Content, Intelligence, Surveillance, and Reconnaissance (ISR) instruction enhancement, and Assessment and Evaluation. In addition, our desire to provide you with vital and relevant information compelled us to redesign the community website. Our new site has an innovative look and feel and provides Facebook and Intelink blog sites to allow the opportunity to present feedback on how we can better serve the community. If you have any questions about dL or desire to submit a future article for publication, please contact us at http://www.atsc.army.mil/TADLP/index.asp.

We are here to serve and support!

Helen A. Remily
TRADOC Capability Manager,
The Army Distributed Learning Program

SECTION 2: TRAINING & DEVELOPMENT

The MANSCEN Rapid Development Suite, A Viable Option for Training Developers

Do you ever get tired of doing the same thing over and over again? Your desk is piled high, you have several deadlines to meet, and yet here you are spending precious time on repetitive tasks that seem trivial but are also important and need to be done? At the Maneuver Support Center of Excellence (MSCoE) G-37, Fort Leonard Wood, Missouri, the distributed Learning (dL) team found one way to overcome that problem—with the Maneuver Support Center (MANSCEN) Rapid Development Suite, a development tool commonly called the MRDS.

As the Army developed its dL mission and vision into a TRADOC-directed dL program, Mr. Larry Helms led the Multimedia Branch of the Maneuver Support Center to be one of the first TRADOC Centers and Schools to develop dL courses, using both in-house resources and contract vehicles to complete projects. One member of the in-house development team, Mr. Marvin McFarland, who was both a training developer and a programmer, found himself battling the challenge of the repetition of similar steps in the development process. McFarland began to explore the idea of developing a database-driven tool that would automate those items that were being repeated in courseware development. With Helms' support, the MRDS training development tool was born.

Helms hired a contractor to develop the tool, following guidance from McFarland and other members of the team. When the product was first completed, it was called MANSCEN-ware. It was delivered to MSCoE with all rights to the program. MANSCEN-ware included three modules: the Database Editor for Enhanced Learning (DEEL), the Publisher for Enhanced Learning (PEL), and the Comment Viewer for Enhanced Learning (CVEL). With these modules, the training developer was able to able to create course content, using drop-down menus to make choices for such things

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as page layout design and media type. They now had the ability to retrieve stored content and media into the tool and design training products. They could input and edit their content and reference the supporting lesson plan or regulations by page, and they could publish their lesson into a Sharable Content Object Reference Model (SCORM)-conformant output, CD, or web-based package. The CVEL helped developers with lesson reviews, allowing reviewers to make comments immediately and at their own computers by keying in the necessary keystrokes on the screens that required comment; doing away with external documents for comments and increasing communication between team members.

All of this was a big help, but McFarland realized something was still missing–the capability to create exams. McFarland and a coworker, Ms. Shannon Taylor, proceeded to develop a new module called the Exam Editor for Enhanced Learning (EEEL), along with the associated publisher, the Publisher for Exams for Enhanced Learning (PEEL). These modules gave developers an opportunity to publish individual exams and create test question banks or pools for use within the learning management system. Renamed the MANSCEN Rapid Development Suite, the MRDS was formalized with a Certificate of Networthiness (CON) in 2008, allowing the tool to support development on Army networks worldwide. The MRDS has proven to be a valuable courseware development suite of tools. The MRDS gives Centers and Schools the ability to rapidly update and maintain legacy courseware that has already been developed using the suite. Training developers sitting at their desks can easily add doctrinal or equipment modifications to a course, republish the lesson, and re-upload it to the Learning Management System. They can rework and republish the course, shortening development time and rapidly delivering training products to the Soldier.

The MRDS has now been used successfully within the MSCoE for several years. All MSCoE dL contracts now include a requirement to use MRDS in the development of dL courseware, and all of the current prime contractors have delivered courseware or are nearing completion of such courseware that has been developed using the MRDS.

Additionally, development teams from Fort Bliss, Fort Rucker, Fort Jackson, Fort Eustis, Fort Leavenworth, and Fort Leonard Wood as well as the Veterans Administration and the National Guard Bureau have successfully been trained to use the MRDS and have developed training products to support their missions. To date, all courseware developed using the MRDS has passed testing for the Army Learning Management System, for both BlackBoard® and Saba.

The MRDS community shares new applications, development techniques, and lessons learned. MSCoE maintains a list of needed improvements to the MRDS and updates the program as time and mission permit. They recently developed a dL course on use of the MRDS. This course reduces the need for MSCoE staff to travel to teach the course ad hoc. Also, in conjunction with the MSCoE G-37's participation in two mobile phone pilots under the Connecting Soldiers to Digital Applications (CSDA) program, MSCoE is nearing completion of a program that will pull the MRDS data into an Android template format for use in getting training to the Android Smartphone. This will be a huge added benefit for all those who use the MRDS and who want to take their training into the mobile Learning (mL) arena.

In 2010, given the success of the MRDS and the need to maintain it as a viable development tool, Ms. Helen Remily, the TRADOC Capabilities Manager (TCM) for The Army Distributed Learning Program (TADLP), agreed to partner with MSCoE for updating, maintaining, and training the MRDS. It is a partnership that institutionalizes the MRDS and opens up new doors, giving assurance that the suite will continue to remain current and available for training developers to use for a long time to come. With the support of TRADOC, the MRDS becomes a feasible option to organizations using the dL contract vehicle to create dL training products. Familiarity with the MRDS also strengthens the development community as a whole, enabling the maximum use of this government- owned asset.

Helms, McFarland, and other members of the original in-house development team at Fort Leonard Wood have retired or moved on, but their pioneering efforts have not gone unrewarded.

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In 2008, McFarland received the dL Maverick award by the Army Training Support Center TCM TADLP for his innovative efforts on behalf of training developers and the added potential to save the government hundreds of thousands of dollars using the MRDS. The MRDS will continue to evolve, keeping abreast of technology and supporting the many different training missions and needs of today's Soldiers. The TCM TADLP partnership with the MSCoE G-37 ensures that the MANSCEN Rapid Development Suite will continue to be a viable tool for rapidly delivering training to Soldiers anytime, anywhere.

Cindy Major

Chief, MSCoE, G-37 Learning Technologies

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What is this thing called reusable content and why should I care?

I admit that I am on a mission. It is one I started back in August 2009 when I was asked to come up with a proposed solution for Army Distributed Learning. I thought it best to address some of the issues we have with content development for the web. So I decided one of the biggest issues we face is the way we design courseware for the web.

We still design courseware like it was 1999. We develop lessons and modules, put them all together and hope they play on the web. We don't do a good job of identifying content and developing it for reuse. To finally get to the level of reuse we need we have to rethink the way we design and develop. We have to find a way to get to the smallest piece of content that could be shared between schools and centers. A little concept I like to call, "Development of Content from the Bottom Up".

Develop Content from the Bottom Up

Most instructional designers begin with a courseware design plan that starts with a terminal learning objective. This is the end goal of the instruction under design; it is what you want the learner to know at completion of the course. To get to that end goal, the next step involves development of the learning objectives that support the goal, and the objectives that enable the learner along the way. The resources used in the courseware such as animations, graphics, video, or audio to name a few, are identified and mentioned in the storyboard for development with the appropriate objective. It is a top down approach to design that has worked well in the past and requires no modification. However, in the world of web-based content it has become necessary to think of development from another direction.

Once courseware is designed and all the objectives are presented in an instructionally sound sequence, the instructional designer can then review the content for potential reusability. For example, a lesson in brake repair may not be reusable for other proponent schools because of a graphical depiction of branch insignia, colors, or other context related material. But the animation used in the practical exercise may be context free and desired by other schools or even other services. Identification and development of this type of context

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free content is the only way to get to the decade old goal of reusable content first described in the Advanced Distributed Learning (ADL) Initiative of 1997.

Why Didn't It Work Before?
In the past, courseware was developed and delivered as one big instructional package. Using authoring tools such as ToolBook, Authorware, among others, the content was developed using a book metaphor that lent itself to a self-contained product. With the introduction of the Shareable Content Object Reusability Model (SCORM) part of the ADL initiative in 1997, pieces of the courseware could be tagged so that a user could search for and retrieve desired content. The concept was that as smaller and smaller pieces of content were tagged, the potential reuse of each piece was realized. But how small should we go? How far was too far? Who made these decisions about reusability?

In TRADOC Pamphlet 350-70-2, dated 26 June 2003 (http://www.tradoc.army.mil/tpubs/pamndx.htm), the decision about reusability and the size of content objects was left up to the instructional designer and their developer. The Army Training Support Center (ATSC) tried to assist with publication of the Army SCORM Business Rules and Best Practices http://www.atsc.army.mil/itsd/imi/regs_pams_guidance.asp) that defined this small piece of content as an enabling objective or other learning event. This definition was repeated in the standards used in contract templates (http://www.atsc.army.mil/itsd/imi/DLETPDOTemplates.asp).

Other decisions were made that precluded the tagging of content smaller than the enabling objective and business decisions specifically excluded tagging course assets such as animations, graphics, etc; a process deemed too costly. Since these objects were never tagged as potentially reusable, they were inevitably packaged deep inside the authored lesson content. This meant this content was not only invisible to the user but in most cases inextricably bound inside the programmed content with no way to pull it out with the technical assistance of a programmer.

So Why Will It Work Now?
Recent changes in the management of Army Distributed Learning have refocused on the importance of reusing content and the potential savings in development costs. To make this work a few changes have been introduced. The first of these was presented at the dL Summit II held at Ft. Eustis, Virginia 25-27 August 2009.

Developing content from the bottom up was introduced as a new paradigm for Army instructional designers. The concept is supported by new requirements from leadership to increase content reusability and facilitated in the terms of the new distributed learning contract planned for late 2010. In addition to these changes a new courseware template will guide you through the process of identifying reusable content.

Once the content is identified it will be developed independent of the lesson content. It can then be tagged for discovery and retrieval. Training and education developers can copy the reusable content into their content or learning management system so it can be used in their courseware. It can even be made available for download to mobile devices to serve as reachback or job aids.

Why Now?
Perhaps the better question is why not now. The development of reusable content is underway in small school districts, large corporations, and in online universities (see http://www.wisc-online.com/; register and login to see reusable content stored in a database repository. It is free and you can do it from the .mil domain). While the Department of Defense led the way in developing the concept we have failed in realizing its potential mostly because of the lack of a clear model for development of reusable content and the disconnect between delivery capabilities and delivery requirements (with respect to reusability).

Summary
Reusable content just makes sense. It opens the door to faster more efficient development of courseware and even facilitates in-house development. In the recent draft publication, The Army Learning Concept, 2015, digital learning objects (aka reusable content) were discussed in great detail.

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The concept of "factories" for producing digitized learning content using centers and schools was described as a way to eliminate "rigid and slow" contracting processes. It is this type of content design and development that will help us train, educate, and support the agile adaptive Soldier of the 21st century.

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MICCC news reels enhance ISR instruction

The U.S. Army Intelligence Center of Excellence (USAICoE), Fort Huachuca, Ariz., is out front again! The Learning Technology Office of USAICoE recently introduced the Captain's Career Course News Network to the Intelligence, Surveillance, and Reconnaissance Practical Exercise (ISR PE) of the Military Intelligence Captain's Career Course (MICCC).

MICCC B-Block Master Instructor Leo Barron is calling the new initiative a big win for MICCC and Learning Technology. Learning Technology provides institutional and operational training and self-development opportunities with the implementation of gaming and interactive multimedia instructional products and services. The organization is facilitating the U.S. Army's efforts to shift learning from the old instructor-centric paradigm to a new learner-centric paradigm by incorporating new and emerging technologies into USAICoE's existing learning infrastructure.

According to Barron, "Learning Technology re-created headline news reports similar to CNN", the well-known national news network, "and developed complete newscasts tied to MICCC's ISR PE. The C-Block instructors are using the newscasts to augment existing instruction. Instead of students receiving a newspaper, they are provided a news report from a newscast, with all of the cool background graphics that would normally be associated with a professionally-created news report," Barron elaborated. He said that some of the data that is used in the exercise is open source intelligence. "What better ways to create Open Source Intelligence (OSINT) than having actual news reports, per say," Barron said.

He added that OSINT is now primarily delivered through the TV and Internet news mediums, rather than the newspaper medium. "With the newscasts, we are able to offer students a more current, realistic way of gathering news," Barron said.

Capt. Frank Bird, MICCC unified action instructor officer in charge, is handling the ISR PE. Bird stated "The news reels are in addition to hard and soft copy reports of occurrences in the PE. "The reels are used to set the mood and offer some video feedback on the importance of the students making the right intelligence analysis," Bird added.

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Barron commented, "the Captain's Career Course News Network was initially inspired by Capt. Albert Conley, former MICCC chief, and his desire to enhance existing instruction with the introduction of new mediums into the blocks of instruction. While rewriting the ISR PE, Capt. Conley and I were initially considering the use of teletype news reports," Barron said. "However, Capt. Conley heavily promoted the idea of creating videos of simulated newscasts."

To initiate the effort, Conley contacted and collaborated with Leanne Rutherford, director of Learning Technology. "During the meeting, Capt. Conley explained MICCC's needs and ideas and Ms. Rutherford offered Learning Technology's innovative solutions, which included the development of simulated newscast," he said. Barron admitted that he was a little reluctant to pursue this type of project at first. He added that his opinion changed once he viewed Learning Technology's finished product. "The newscasts make the exercises more engaging and realistic," he said. "It's another way that the student can absorb information."

According to Barron, students are responding positively to the reels, stating that they are appreciating the new and different method of delivering instruction. Bird said that most of the students' initial comments were related to their recognizing the video actors, their fellow classmates. Following the students' initial reactions, Bird stated that he began to hear statements such as, "hey, this is cool!" "Some students also inquired if the footage used in the newscast was actual footage from the original newscasts," he added. Barron stated that the reels will be used as long as they are doing the exercise. "We purposefully left off the years in the individual news stories so the newscasts could remain timely," he added.

The project began in early 2010, with the first reels released in April 2010 and the final ones completed in August 2010. Barron said that he was very pleased with Learning Technology's performance on the project. "Learning Technology's creativity and attention to detail were phenomenal," he said. "The project was indeed a great partnership for the two organizations," Barron added.

Bird said that he plans to employ Learning Technology's services on future projects. "We are constantly reviewing our ISR PE," Bird stated. "We are wargaming some other video footage that we would like generated so it can be incorporated into the PE." He added that more Learning Technology reel projects will follow since MICCC started a new iteration in late August 2010.

To request Learning Technology's services, contact Program Manger Edwin K. Morris at 520-533-7140 or edigital@conus.army.mil.

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Is Evaluation Your Weakest Link? Even Ninety Percent Could Get Someone In Jail!

We have all at some time or another wondered how a person passed the test but could not complete the task. This brings us to the heart of the matter at hand. Passing the test is not always enough! The central and questionable factor is the thoroughness of your testing and feedback strategy. A problem that exists with most testing strategies is that the overall passing standard does not extend to the appropriate depth.

Most of the time, passing is based on an overall grade on the test. On the surface, this may seem okay. I am now going to shake up your lackadaisicalness! Consider the following scenario. PFC Mason takes the Security Practices final exam and scores 90%. The exam consisted of 100 questions. He is declared an honor graduate and departs the schoolhouse. He arrives to his duty station and is assigned as a classified document custodian. Later PFC Mason goes to jail because he failed to adhere to applicable regulations regarding the handling of classified documents. Based on test results he looked good. Hmm……..

We will now engage in some serious inquiry. A closer examination of PFC Mason's test results showed that he failed the section of the test covering the handling of classified documents. The lack of understanding exhibited by PFC Mason was masked by the way the test results were read. In this instance, 90% got the student in jail and imparted a false sense of success to the schoolhouse. Additionally, the schoolhouse got a black eye, considering the fact that Mason was an honor graduate.

The siren's call is being made at this time for beefing up our testing and feedback strategies. Let's first look at testing strategy. Consider for a moment that learning objectives extend down to Enabling Learning Objectives (ELOs). A definitive test strategy must extend testing down to (ELOs). This must also include extending the testing standard down to ELOs.

Extending the testing standard down to ELO is often ignored. A more robust test strategy means that test development must not be neglected. For Interactive Multimedia Instruction (IMI) products, it means that a larger bank of test questions must be developed and strategically linked to the ELOs. Not linking the bank of test questions to the ELO means that we risk not acquiring a targeted evaluation of that ELO and skewing the scope of the valuation.

To null this out requires us to take an approach to equalize the randomness. One way is to have a number of linked banks of questions to insure balanced evaluation of the ELO. An example of this approach would be as follows: One strategy is that the student must get at least 75% on each ELO. Our schema would consist of four test banks covering that ELO. These questions cover essential aspects of the ELO. If I failed the first test, a test question would be pulled from each bank on the retest. Equalizing and linking the randomness of test question selection provides a truer measure of learning and achievement. The return for the schoolhouse is that a quality level of evaluation is achieved. For the student it means that a realistic mark of strengths and weakness is presented.

Feedback strategy is an area that has been a weak link even in conventional instruction. We now have the opportunity to enhance the performance of the student and the instructor by utilizing the technological capability within an IMI product. We are not achieving any efficiency in the testing process if the student is not given a strategy to do better in the future. The parameters of the feedback should at least encompass:

- How well the learner performed on each targeted area of the test or check on learning
- A proposed get well plan with discussion
- Additional reading assignments
- References to examine
- Retraining
- Retesting if necessary
- Follow-on discussions with instructors or subject matter experts

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The cumulative analysis of the student's performance should also include feedback for instructors and subject matter experts.

New testing and feedback metrics must be standardized and applied to all IMI products. These metrics should be considered:

- A testing strategy that goes to ELO level.
- A minimum test score of 75% that applies to each ELO. It may be higher based on the criticality of the task being tested.
- No less than 4 questions on an exit test per ELO. This allows a true 75% to be measured.
- A minimum number of questions for each test so that we can achieve some statistical significance.
- More detailed feedback to the student down to ELO level. This must address correct response for missed questions, failed ELOs, and remedial assignments.
- Adding realism to the testing methodology that is reflective of the day to day application of the skills the student needs to display.
- Designing products to expand the range of skill acquisition. Just because a product is supposed to provide instruction at a basic level does not mean it cannot contain advanced reference material. This provides additional return on the investment (ROI) and expands the usability.
- More definitive metrics regarding the provision of feedback for students and criteria.

The state of testing and feedback strategies in both the dL and institutional settings needs a thorough examination. The necessary resources need to be allocated to provide the fixes that are required. Everyone involved in training management and training development must heed the siren's call for robust and improved testing and feedback strategies. We can no longer decry that the learner cannot learn when the efficiencies and supports in the training product are not in place to support the learning process!

Andrew (AJ) Mason is an instructional systems specialist at the Signal Center. The primary focus of his job is working as a technical point of contact and managing the development of IMI products. Mr. Mason is in the Distributed Education Branch and can be reached at aj.mason@us.army.mil / Commercial: 706-791-8674, DSN 780-8674.

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dL Resources:

Program: The Army Distributed Learning Program (TADLP)

Website: http://www.atsc.army.mil/tadlp/

Program: Distributed Learning System (DLS)

Website: http://www.dls.army.mil

Program: Army e-Learning
Website: http://www.us.army.mil/ako, select "My Education"

Program: Army Training Support Center (ATSC)

Website: http://www.atsc.army.mil

Program: Soldier Training Homepage

Website: http://www.train.army.mil

Program: Army Training Help Desk
Website: https://athd.army.mil

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